69115-5

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CASE NO. 69115-5-I

COURT OF APPEALS
DIVISION I
FOR THE STATE OF WASHINGTON

REBECCA LAMONTE,

Appellant,

v.

THE ESTATE OF SHERMAN LLOYD COOK, JR. and RICHARD WESTERFIELD and JANE DOE WESTERFIELD, husband and wife and the marital community composed thereof,

Respondents.

BRIEF OF RESPONDENT

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AIKEN, ST. LOUIS & SILJEG, P.S.

By: William A. Olson
David P. Hansen
Attorneys for Respondent
801 Second Avenue
Suite 1200
Seattle, WA 98104
(206) 624-2650

ORIGINAL

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I. INTRODUCTION

This brief is filed on behalf of the respondent Richard Westerfield. This case has been pending for 13 years. It arises out of a low-impact minor automobile accident that occurred on May 30, 1997, involving no apparent injuries at the scene. The case was filed on April 14, 2000. The jury trial commenced on May 14, 2012 and concluded on June 8, 2012.

The plaintiff called 12 expert witnesses and 5 lay witnesses. The expert witnesses included 2 accident reconstruction experts, 2 experts on the fibromyalgia syndrome, 5 other medical experts with various specialties including an acupuncturist, an optometrist, an economist, and a life care planner. The plaintiff's case consumed most of the trial time. The jury returned a defense verdict.

II. COUNTERSTATEMENT OF THE ISSUES

The appeal presents two narrow issues both related to the use of requests for admissions at trial. First, when the plaintiff commenced the case in April 2000, she allegedly served Mr. Westerfield with a set of requests for admissions (along with the complaint, the summons, interrogatories and document requests). These requests for admissions essentially asked Mr. Westerfield to admit he had no defense to the action. The existence of these requests for admissions was never raised in this

lawsuit despite 12 years of contested proceedings until March 2012 when plaintiff's counsel raised the subject for the first time shortly before the trial date in May 2012.

The trial court declined to allow use of the "supposed" admissions that may or may not have ever been served. The plaintiff had several opportunities over the years to raise the issue and never did. Meanwhile, both parties prepared extensively on the trial issues related to liability, causation and damages and were fully prepared to go to trial on the merits.

The subject matter presents two issues. *First, whether the plaintiff waived any right to rely on the "supposed" admissions. Second, under Civil Rule 36(b), whether the trial court properly exercised its discretion by not permitting use of the "supposed" admissions because: (1) the plaintiff failed to show prejudice in maintaining her action on the merits; and (2) the presentation of the merits would be served by not allowing use of the admissions.*

Ms. Lamonte raises a secondary issue on appeal. Sherman Cook was initially a co-defendant in the lawsuit. He settled out of the case and was dismissed. At trial, the plaintiff sought to use what she regarded as admissions by Mr. Cook against Mr. Westerfield.

The trial court would not permit it in opening statement because they are not substantive evidence admissible against Mr. Westerfield.

However, during the plaintiff's case-in-chief, the trial court allowed plaintiff's counsel to use the admissions insofar as her accident reconstruction experts relied upon them in reaching their opinions. Plaintiff's counsel showed the admissions to the jury (on a large post-it board and projected on a screen). He also had them read to the jury during the direct examination of Bryan Jorgensen, his first accident reconstruction expert. Plaintiff's counsel also showed the Cook admissions to the jury again during closing argument to support his argument for a finding of liability against Mr. Westerfield.

The subject matter raises two issues. *First, at the commencement of trial, whether the Cook "admissions" were competent or admissible evidence against Mr. Westerfield. The second issue is whether any error related to the denial of the opportunity to use the "evidence" during opening was prejudicial given that plaintiff was allowed to present the "evidence" to the jury during her case-in-chief and argue from it during closing.*

III. STANDARD FOR APPELLATE REVIEW

Whether undisputed conduct constitutes waiver can be decided as a question of law. See, e.g., *Indoor Billboard/Washington, Inc. v. Integra Telecom of Washington*, Inc., 162 Wn.2d 59, 170 P.2d 3d 10 (2007). Whether it was err to withdraw the "supposed" admissions under Civil

Rule 36(b) is reviewed for an abuse of discretion. *Santos v. Dean*, 96 Wn. App. 849, 857, 982 P.2d 632 (1999). Ms. Lamonte acknowledges this standard of review. See Brief of Appellant at 31-32. Whether the Cook "admissions" are competent as substantive evidence against Mr. Westerfield presents a question of substantive law. Whether the Cook "admissions" may be used at trial in other ways, subject to limiting instructions, is reviewable for an abuse of discretion. The control over the presentation of evidence and argument is committed to the discretion of the trial court. *See, e.g., Sanders v. State*, 169 Wn.2d 827, 852, 240 P.3d 120 (2010).

IV. COUNTERSTATEMENT OF THE FACTS

A. *The Traffic Accident*.

The accident involved three vehicles with known drivers, and a fourth vehicle whose driver is unknown. The accident happened on southbound Interstate 405 near the interchange with I-5 at Tukwila. The date of the accident was May 30, 1997.

The plaintiff Rebecca LaMonte was in the right lane. She encountered a disabled vehicle ahead of her, with backed up traffic behind it. She braked hard and was able to bring her vehicle to a stop a short distance behind the first stopped vehicle ahead of her. After Ms. LaMonte

had brought her vehicle to a complete stop, she was rear-ended by defendant Sherman Cook. See generally RP 5/29 at 59-74; 85-88.[1]

Richard Westerfield was some distance behind in the same lane of travel. He was following a truck. The truck suddenly took evasive action into the left lane. This abrupt maneuver brought the stopped traffic into Mr. Westerfield's view. Mr. Westerfield felt he could not take evasive action because he was uncertain that it was safe to move quickly into the fast moving left lane like the truck ahead of him. He chose to stay in his lane and try to stop before the vehicles ahead. He braked hard under control. Despite his effort, he could not avoid an impact with the rear of the Cook vehicle. See generally RP 6/4 at 130-142.

Ms. Lamonte alleges in the complaint that the collision between Westerfield and Cook pushed the Cook vehicle into her a second time. (CP 383-384). Mr. Westerfield's observation was that his impact with the Cook vehicle pushed the Cook vehicle in a direction to the left and away from the Lamonte vehicle. (RP 6/4 at 138-139; 144-146). His observation was that he did not cause a second impact between the Cook and Lamonte

[1] The appellant ordered transcription of the proceedings on various dates without providing notice that on most of those dates she only ordered a portion of the day's proceedings. The respondent ordered the missing portions as necessary to complete the record. Thus, there is more than one transcript for some days covering different time periods during the day. The transcripts are consecutively paginated for the time period they cover. To reduce confusion, citation herein is to date and page number and, on occasion, the time period of the relevant excerpt as necessary to be precise.

vehicle. He observed the Cook vehicle continuing on unimpeded in one smooth continuous movement.

Ms. LaMonte was not sure what happened. (RP 5/29 at 85-86). Mr. Cook testified that he knows he was pushed into the left lane. He wanted to get out of the way of traffic. He accelerated down the road and pulled off on the shoulder. He could not testify to hitting the LaMonte vehicle a second time. He did not know. See generally RP 6/6 at 20-37; 39; 41-56 (Excerpt 2 beginning at 3:42 p.m.).

B. *Plaintiff's Alleged Injuries*.

At the scene, the parties exchanged identifying information. There was some discussion about whether anyone was hurt. (RP 6/4 at 140-141). Mr. Cook recalled that everyone appeared fine. (RP 6/6 at 39) (Excerpt 2 beginning at 3:42 p.m.). No one was hurt.

Ms. LaMonte went home following the accident. (RP 5/29 at 87-88). The next day she went to see her doctor. Her doctor diagnosed a cervical strain with right shoulder and right thigh tenderness. Plaintiff's Trial Exhibit 111.6 at page 040037-38. He advised treatment with heat and Tylenol. *Id.* In March 1999, two-years post accident; a doctor suggested to Ms. LaMonte that she may have fibromyalgia. Plaintiff's Trial Exhibit 44 at page 040078. Fibromyalgia is a term used to describe a variety of medically unexplainable symptoms such as chronic widespread pain, tenderness, fatigue, depression and cognitive problems.

Ms. Lamonte has a long and extensive medical history pre-dating the accident characterized by complaints of fibromyalgia like symptoms. Her medical records were voluminous with pain complaints involving virtually every part of her body. (RP 5/29 at 113-128).[2] She had a long history of illness behavior without any apparent physiological basis. Substantially, the same pre-accident health complaints continued post-accident.

C. *Commencement of the Action*.

Ms. Lamonte claimed that the source of her many health troubles was the trauma from this minor traffic accident. Ms. LaMonte filed her amended complaint on April 12, 2000. (CP 382-385). The defendant Richard Westerfield answered the complaint on May 4, 2000 denying the allegations. (CP 386-388). Following service, he forwarded the papers he received to his insurer State Farm Automobile Insurance Company, through his insurance agent. State Farm assigned defense counsel Charles Siljeg, and forwarded the suit papers to him. (CP 38).

On May 30, 2000, plaintiff's counsel wrote Mr. Siljeg to make inquiry on the status of the answers to the interrogatories and documents requests previously forwarded to him. (CP 64). Their letter never mentions service of any requests for admissions on Mr. Westerfield or previously forwarding them to Mr. Siljeg. The defendant Westerfield

[2] Ms. Lamonte's medical records consisted of several volumes of exhibits containing records from multiple health care providers treating multiple physical and mental health complaints pre-dating the accident. See Plaintiff's Exhibit List (CP 2309-2324).

served responses to the interrogatories and documents requests on June 2, 2000, two days after the inquiry. (CP 419).

D. *Requests for Admissions*.

Plaintiff's counsel was silent about any outstanding requests for admissions until March 9, 2012, almost 12 years after the commencement of the action, and approximately 2 months before trial. In March 2012, Plaintiff's counsel produced a Declaration of Service indicating that on April 8, 2000, Mr. Westerfield had been served with a summons, first amended complaint for personal injuries, order setting civil case schedule, interrogatories and requests for production of documents propounded upon defendants Westerfield and requests for admissions propounded to Mr. Westerfield. (CP 22).

This long delay (between April 2000 and March 2012) made it impossible to reconstruct events and determine whether these requests were actually served on Mr. Westerfield and, if they were, what happened to them.[3] However, throughout these proceedings over 12 years, the parties never relied upon or considered these requests and prepared on the merits regarding liability and damages.

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[3] Ms. Lamonte states that it is undisputed that the Requests for Admissions were served on Mr. Westerfield. Brief of Appellant at 5. The statement is inaccurate. There is dispute about whether the Declaration of Service is correct. The circumstantial evidence suggests it is incorrect because the Requests for Admissions were not among the suit papers sent by State Farm to defense counsel. Mr. Westerfield had no reason to leave them out if he received them. He either did not receive them or they were lost in the transmittal along the way from him to his insurance agent, then to State Farm and then to defense counsel. The events were impossible to reconstruct 12 years later with certainty. It might have been different if plaintiff's counsel had forwarded them to defense counsel and made inquiry about them in May 2000 when they made inquiry about the interrogatories.

The Request for Admissions address major central facts in dispute and also seek admissions on legal conclusions. (CP 10-20). For example, Request for Admission No. 14 provides admit that, "Because your vehicle collided with Sherman Cook's vehicle, Sherman Cook's vehicle collided with the rear end of Rebecca Lamonte's vehicle." Requests for Admission No. 19 asked Mr. Westerfield to admit that he was "liable for the injuries sustained by Rebecca Lamonte as a result of the rear end collision between Sherman Cook's vehicle and the Westerfield vehicle." Request for Admission No. 21 further asks him to admit that "As a result of the rear end collision between Sherman Cook's vehicle and Rebecca Lamonte's vehicle on May 30, 1997 at approximately 12:30 p.m. she developed Fibromyalgia."

These same allegations were alleged in Plaintiff's Amended Complaint and those allegations were denied in defendant's answer to the amended complaint. (CP 382-385); (CP 386-388). The plaintiff knew liability and damages was contested by the defense. There was no prior discovery motion based on any alleged failure to respond to these requests. There was no dispositive motion based on any "admissions." Both parties prepared extensively on the liability and damages issues with experts retained on accident reconstruction and fibromyalgia.

E. *Trial Preparation on the Issues*.

The case was initially set for trial on February 25, 2002 pursuant to an agreed amendment to the case schedule. The defendant Richard Westerfield designated Richard Chapman, an accident reconstruction

expert, to testify at trial to his investigation of the accident and the sequence of the impacts or alleged impacts. Mr. Chapman's report concluded that the impact between the Cook vehicle and the Westerfield vehicle did not cause the Cook vehicle to impact plaintiff's vehicle. (CP 453-465).

On December 13, 2001, Ms. Lamonte moved to exclude Richard Chapman, as an expert witness. (CP 407-412). Ms. Lamonte objected that Mr. Chapman had not been timely designated. Ms. Lamonte did not argue that Mr. Chapman's testimony was irrelevant because liability had been admitted. She never mentions any "default" admissions.

Judge Terry Lukens denied the motion to exclude Mr. Chapman on December 21, 2001. (CP 484-485). However, he extended the discovery cutoff for accident reconstruction experts to February 14, 2002. *Id.* Plaintiff's counsel took Mr. Chapman's deposition on January 10, 2002. Following the deposition, plaintiff's counsel disclosed accident reconstruction expert Bryan Jorgensen to testify for the plaintiff.

Mr. Jorgensen wrote a report, dated January 29, 2002, in which he disputes Mr. Chapman's conclusions and presents various scenarios on how he believed the accident occurred. (RP 5/31 at 28). Mr. Jorgensen, however, does not mention or rely upon any requests for admissions for his opinions. *Id.* Prior to the first trial date, in 2002, the plaintiff and defendant were prepared to present expert testimony on how the accident occurred and advocate their respective positions on the merits. The

plaintiff was not relying on requests for admissions; the defense was unaware of them.

The defendant Westerfield filed a *Frye* motion to exclude any expert medical testimony that the motor vehicle accident is the cause of fibromyalgia because there is no valid scientific evidence to support the theory. (CP 519-656). The causes of FM are not known to medical science. Moreover, there is significant dispute as to whether fibromyalgia exists because there is no physical evidence of any injury, or any physiological or biological explanation for the condition. There is medical debate about whether it really exists as a physical condition, or whether it is instead a psychological condition or personality disorder. Judge Glenna Hall granted the defense motion by memorandum opinion dated February 25, 2002 (attached in the appendix at APP 006). (CP 1043-1051). She entered an order in conformity with her opinion. (CP 1072-1074).

Significant to plaintiff's issue on appeal, Ms. Lamonte did not inform Judge Hall or defense counsel of Request for Admission No. 21 that asked Mr. Westerfield to admit or deny ". . . that as a result of the rear end collision between Sherman Cook's vehicle and Rebecca Lamonte's vehicle on May 30, 1997, at approximately 12:30 p.m., she developed fibromyalgia." There was never any mention of the subject. The plaintiff was prepared to address the fibromyalgia issue on the merits and did so very extensively, albeit unsuccessfully. (CP 657-683); (CP 684-798); (CP 799-982).

F. *Stay of Proceedings*.

This case went through prolonged periods in an inactive status while plaintiff's counsel sought to reverse the adverse ruling on the fibromyalgia issue. Plaintiff sought direct review by the Washington Supreme Court. The Washington Supreme Court denied discretionary review on October 29, 2002. (CP 1246).

Plaintiff's counsel persisted with attempts to reverse the ruling indirectly. Trial dates came and went, were set and re-set, and this matter continued on multiple occasions while he sought to get a favorable ruling on the fibromyalgia issue in other cases that he could use in this case. He received another adverse ruling on the same fibromyalgia issue before the Yakima County Superior Court in *Grant v. Boccia* on September 22, 2004. In the Yakima case, Mr. Krafchick appealed as a matter of right from a final order of dismissal to the Court of Appeals, Division III.

Meanwhile, in this case, the parties stipulated to a further stay pending the Court of Appeals decision in *Grant v. Boccia.* (CP 1274-1276). The stipulation was based on the premise that: "The decision of the appellate court addressing the issue in *Grant v. Boccia* should control the same issue in this case." (CP 1275). The Court of Appeals rendered its decision in *Grant v. Boccia*, 133 Wn. App. 176, 137 P.3d 20 (2006) on March 28, 2006 affirming the decision of the Yakima County Superior Court.

Plaintiff's counsel once more sought review by the Washington Supreme Court. He sought a further stay of the proceedings in this case until the Supreme Court ruled. "The final decision by the Washington

Supreme Court in *Grant v. Boccia* should control the same issue in this case. There is no point in going forward with this case until the *Grant v. Boccia* appeal is finally resolved by the Supreme Court." (CP 1285-1287). The Supreme Court denied review for the second time on March 7, 2007. *Grant v. Boccia*, 159 Wn.2d 1014 (2007).

The plaintiff then ignored the stipulated orders and went back to the Superior Court and moved for another *Frye* hearing to re-argue the issue. This case had been transferred to Judge Richard McDermott. On October 30, 2008, Judge McDermott granted the plaintiff's request for another *Frye* hearing. (CP 1320-1322). Another *Frye* hearing took place between February 23, 2009 and February 27, 2009. Judge McDermott ruled that he would allow plaintiff to offer expert witnesses at trial and let the jury resolve the issue. (CP 1477-1490). Again throughout these further extended proceedings before Judge McDermott, the plaintiff's counsel never mentioned the requests for admissions to the Court or defense counsel.

G. *Events Leading Up to the 2012 Trial*.

Defense counsel Charles Siljeg passed away in September 2011. Richard Chapman, the defense accident reconstruction expert, also passed away in November 2011. The defense had to re-organize with new lead trial counsel and new trial experts. David Hansen and William Olson jointly replaced Charles Siljeg as lead trial defense counsel. Charles Lewis, accident reconstruction expert, replaced Richard Chapman. Drs. Norton Hadler and Frederick Wolfe replaced the defense's previous

fibromyalgia experts who were no longer available due to the passage of time.

The plaintiff had retained Bryan Jorgensen as her accident reconstruction expert in 2002. In 2011, plaintiff designated Ward Bruington as another accident reconstruction expert. The defense deposed Mr. Bruington in 2012. On Friday, March 23, 2012,[4] the plaintiff re-designated Mr. Jorgensen as a testifying accident reconstruction who would testify together with Mr. Bruington on the same subject as to plaintiff's theory on how the accident happened. Thus, the plaintiff proposed to go to trial with two accident reconstruction experts to challenge the single defense expert. The case was finally set for trial on May 14, 2012.

H. *Plaintiff's Motion to Exclude Based on Requests for Admissions.*

On March 13, 2012, 2 months before trial in a case pending for over 12 years and after the parties had spent tens of thousands of dollars preparing the case, the plaintiff for the first time raised an issue about these supposedly outstanding requests for admissions. She filed a motion requesting that these requests be deemed admitted for failure to respond. (CP 1-3). At this time, the Honorable Leroy McCullough was the assigned judge to the case.

[4] The discovery cut-off deadline was Monday, March 26, 2012. The defense would not learn Mr. Jorgensen's revised opinions until he testified at trial because there was no opportunity to depose him and the Court allowed his testimony despite the late designation and the designation of two experts on the same subject.

Judge McCullough granted the motion with two exceptions. (CP 371-375).[5] He denied the motion as to 2 requests seeking admissions to legal conclusions: i.e., one seeking admission of liability and another that as a result of the accident Ms. LaMonte developed fibromyalgia. (CP 374). He granted the motion as to the other requests for admissions, all involving central facts at the core of the contested proceedings. These other requests for admissions address facts denied by Richard Westerfield from the commencement of the case that bear on the liability issue.

For example, these requests "deemed" admitted were (1) that there was no emergency and nothing was obstructing Mr. Westerfield's view; (2) that he struck the Cook vehicle prior to the time that Cook struck the LaMonte vehicle; (3) that his impact with the Cook vehicle caused the Cook vehicle to collide with the LaMonte vehicle; and (5) that there are no other persons liable for the injuries sustained by Ms. LaMonte. (CP 371-375).

Defense counsel opposed the motion arguing (1) that the requests sought admissions to legal conclusions and central facts that were improper under CR 36; (2) waiver; and (3) withdrawal under CR 36(b). (CP 23-35). Judge McCullough ruled before hearing argument from counsel. (RP 4/20 at 1-20). He did not address the issue pursuant to the

[5] There are two copies of Judge McCullough's order in the clerk's papers. The first one, found at CP 97-99, is missing two pages and should not be used. The accurate copy is found at CP 371-375 and included in the appendix at APP 001-005.

two-part test under Civil Rule 36(b) or make any finding of prejudice. *Id.* He did not address the waiver issue either. *Id.*

Defendant Westerfield filed a motion to withdraw or amend these "deemed" admissions pursuant to Civil Rule 36(b) and a motion in limine to preclude use of the requests for admissions at trial. (CP 153-162). On the first day of trial, the case was transferred from Judge McCullough to the Honorable Dean Lum for trial.[6] Judge Lum heard the motion on May 14, 2012. (RP 5/14 at 32-47).

He was puzzled by why the plaintiff sat on this issue for 12 years. (RP 5/14 at 42). He was also puzzled by Judge McCullough's decision. ". . . I mean how did he – how did he do that? He struck some and not [others]." (RP 5/14 at 42). "I'm having a little trouble seeing what the actual prejudice is in terms of the plaintiff's case given that you're able fully to present your case, I mean, on these disputed issues." (RP 5/14 at 44). Judge Lum took the issue under advisement. (RP 5/14 at 46-47).

He returned to the issue on May 15th . (RP 5/15 at 17) (Excerpt beginning at 10:50 a.m.). ". . . I'm a little concerned how the Court of Appeals is going to look at this, Counsel. . . . [T]he clear policy in the appellate case law favor[s] resolution on the merits – and it would be a completely different matter if somebody had affirmatively answered X, and then, you know, and then people had relied on that . . . ." (RP 5/15 at

[6] The appellant states that an affidavit of prejudice was filed against Judge Lum by Mr. Westerfield in 2001. See Brief of Appellant at 5 footnote 2. That is not true. Judge Lum recused himself in 2001 because his former law firm was representing Sherman Cook. That was not an issue in 2012.

17). "Clearly there was originally a denial on several bases in the original answer and actually motion practice and multiple instances in which the plaintiff was put on notice that liability was contested on various grounds, including possible attribution to other parties at fault." (RP 5/15 at 17-18). ". . . I get back to my original point. I have a real concern about how the Court of Appeals is going to treat the record in terms of prejudice or lack thereof and in terms of the defense not being able to present the merits of their case. Now, Judge McCullough . . . didn't say liability was deemed admitted . . . but essentially, if he allowed the other parts to stand thereby eviscerating their liability defense case." (RP 5/15 at 18-19). "And Counsel, I want to give it a little further thought, but I have some significant concerns." (RP 5/15 at 19).

Judge Lum came back to the issue on May 16th. (RP 5/16 at 5) (Excerpt beginning at 3:28 p.m.). ". . . I have a significant concern whether Judge McCullough's decision will be reversed for abuse of discretion in failing to have an adequate record of prejudice to the plaintiff, in that the plaintiff has been on notice for years about the defense theory of the case and the plaintiff is represented by two able counsel, who are obviously prepared to rebut the defense case. So it's really hard to say that the plaintiff is prejudiced . . . because they're fully prepared . . . . And I'm very concerned that we'll have to do this all over again. . . . I'm responsible for admission of evidence, and if I think there is an error of law, it is my responsibility to do something about it . . . . [I]t would be an abuse of discretion for me not to consider the prejudice issue and what I

think is an evidentiary deficiency in terms of the lack of prejudice – or lack of prejudice finding. And I am going to allow the defense to withdraw those admissions as to defendant Westerfield, and I'll grant that motion as to defendant Westerfield. " (RP 5/16 at 6-7) (Excerpt beginning at 3:28 p.m.).

I. *The Cook Admissions*.

Sherman Cook answered requests for admissions on May 8, 2000. He was asked to admit or deny that Westerfield struck his vehicle before he impacted the Lamonte vehicle. He denied this request because he was not sure of the sequence of events at the accident scene. RFA Nos. 11 & 14. (CP 355 – 356). He was also asked to admit or deny that "because Richard Westerfield's vehicle collided with your vehicle, your vehicle collided with the rear end of Rebecca LaMonte's vehicle . . . ." RFA No. 13. (CP 356). He admitted this request.[7] *Id.*

However, in answer to an interrogatory, served at the same time, he was asked to describe the collision in detail. He did not adopt the version of events set forth by Ms. Lamonte in the requests for admissions. His detailed answer to the interrogatory was as follows: "I applied my brakes. My car started sliding and slid into the back of Ms. Lamonte's car. Mr. Westerfield traveling behind me, then hit the back of my car. My

[7] It was not against his interest to adopt this version of events attributing fault to Mr. Westerfield. Plaintiff's counsel conceded that "Mr. Cook's written admissions exonerate him from fault rather than implicating fault (i.e., not against decedent's interests)." (CP 140 at line 23).

car was thrown into the next lane facing the oncoming traffic." (RP 5/31 at 94).

Counsel took his deposition on two occasions to clarify his knowledge of the events and perpetuate his testimony for trial. Mr. Cook was suffering from a terminal illness involving kidney failure and a heart condition. His videotaped depositions were taken on May 3, 2001 and December 26, 2001 and were played at trial.[8] (RP 6/6 at 19-56) (Excerpt 2 beginning at 3:42 p.m.). Mr. Cook passed away on July 19, 2004. This Court should review his live testimony. It very clearly reveals his integrity and limited knowledge.

Mr. Cook testified at deposition that he did not know what happened. (RP 6/6 at 27, 28). He has "no idea" whether Westerfield struck the rear of his car before or after he initially made impact with the Lamonte vehicle. (*Id.* at 28). It was too quick, too fast. (*Id.*). He was shoved into the left-hand lane. (*Id.* at 29). He cannot say in what sequence things happened. (*Id.* at 45). He doesn't know whether he was knocked into the car in front of him. (*Id.* at 45 & 46). When asked whether it is probable that when he was hit from behind, he hit the car ahead of him, he testified that "I can't tell you that. I don't know." (*Id.* at 52 & 53). All he remembers is he got shoved into the left land lane and had to get out of there before he got hurt. (*Id.* at 35). He remembers that everyone looked fine after the accident. (*Id.* at 39).

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[8] The CD videos are or will be made part of the appellate record.

Mr. Cook settled for policy limits of $25,000.00 in April 2001. (CP 393-403). The Court approved the settlement as reasonable in May 2001. (CP 91-92). The claims against Sherman Cook were formally dismissed prior to trial on April 20, 2012. (CP 101-102).

Two days before trial, on May 12, 2012, Ms. Lamonte filed a "memorandum of law" seeking permission to use Cook's response to RFA No. 13 against Westerfield at trial. (CP 126-129). Defense counsel objected that "Cook's admissions are not binding on Westerfield . . . . Cook's not even a party" and that it was misleading and unfair to allow use of this single answer to one request for admission given Mr. Cook's other clarifying testimony. (RP 5/15 at 20) (Excerpt beginning at 10:50 a.m.). The issues regarding the propriety of plaintiff's proposed use of admissions by a non-party or a co-party, and hearsay issues, were argued extensively on May 16, 2012. (RP 5/16 at 1-18)

Judge Lum initially ruled that the Cook admission *may* come in as rebuttal dependent upon the use of the deposition testimony by the defense. (RP 5/16 at 19) (Excerpt beginning at 3:33 p.m.). However, ". . . I don't think you get to anticipate in your case in chief what their case is until you actually hear their case. . . . [F]rankly, I think these admissions are going to come in in rebuttal anyway. . . . So I'm not going to allow it in your case in chief." (*Id.*). "That will be my ruling, Counsel." (*Id.* at 20). Plaintiff's counsel asked to use the Cook admission in opening. (*Id.*). The Court said "I don't think you can." (*Id.*).

On May 30, 2012, plaintiff's counsel sought to get it before the jury in a different way. The plaintiff was about to put her two accident reconstruction experts on the stand. Counsel argued ingenuously to the trial court that "Plaintiff's liability experts have reviewed Mr. Cook's written admissions and intend to rely upon them in their case in chief . . . ." (CP 140).[9] At the same time, plaintiff's counsel confoundedly argued that the defense could not use Cook's deposition testimony to clarify the subject because the use of the deposition is barred by the Deadman's Statute, RCW 5.60.030. (CP 141-142). Thus, the plaintiff's strategy was to lead the trial court into a ruling to get before the jury the single admission they viewed as favorable to them and exclude Cook's deposition testimony explaining his lack of knowledge. (RP 5/30 at 14-19).

Over defense objection, (RP 5/30 at 20-24), Judge Lum ruled that the Cook admission can be "presented to the jury as a basis for the expert's opinion. It can be shown to the jury as a demonstrative exhibit. It doesn't go back to the jury room, but you can mark it, you can put it up on the screen and they're, frankly, going to see it." (*Id.* at 25) ". . . I think the plaintiff is entitled to present that particular testimony in that way, but they're not allowed to actually admit it." (*Id.* at 25-26). Judge Lum also

[9] Plaintiff's counsel did not disclose to the trial court that in fact her experts did not rely on the Cook admission. Mr. Jorgensen testified on cross-examination that he had not seen the Cook admissions until 2 weeks before trial and that he did not rely upon them for his opinions. Mr. Bruington was never asked about them by counsel. In response to a juror question, he stated that he relies upon physical evidence and his computer modeling for his opinions, not upon witness statements except to the extent that they might corroborate his findings. See discussion at pages 22-23 infra.

ruled that the defense would not be allowed to cross-exam the plaintiff's expert about the deposition testimony from Mr. Cook. "[C]an Mr. Olson then show the expert the deposition testimony to contradict the judicial admission of Mr. Cook and the answer is no." (*Id.* at 26).

Judge Lum explained that he viewed Cook's response to the request for admission as "a judicial admission, that has never been withdrawn, I think that survives the dismissal of a case." (*Id.* at 27). Defense counsel asked pursuant to Evidence Rule 105 for an instruction that the jury should not use it against Westerfield. (*Id.* at 28). Judge Lum declined to give that kind of instruction at that time. (*Id.*). However, when plaintiff's counsel showed the admissions to the jury, Judge Lum asked plaintiff's counsel to clarify for the jury that these were not admissions of Westerfield. (RP 5/31 at 15).

Bryan Jorgenson, the plaintiff's first accident reconstruction expert, took the stand the next day on May 31. Under direct examination, he testified that he had reviewed the requests for admissions answered by Mr. Cook and that they were part of the basis for his opinion. (*Id.* at 10). Plaintiff's counsel had the admissions blown-up as Trial Exhibits 128 and 129 for visual effect and showed them to the jury. (*Id.* at 12-14). In addition, he asked Mr. Jorgenson to read them to the jury. (*Id.*).

On cross-examination, Mr. Jorgenson testified that his report was dated January 29, 2002. (*Id.* at 28). He formed his opinions at that time. (*Id.*). He never saw the Cook admissions until approximately two weeks before trial. (*Id.*). He never mentioned the admissions in his report

because he did not know they existed. (*Id.*). His opinions were not based on Cook's answers to request for admissions. (*Id.*).

Ward Bruington, the second accident reconstruction expert, took the stand next. Plaintiff's counsel never asked him about the Cook admission. Mr. Bruington testified to forming his opinions on the photographic evidence and the results of his computer simulation of the accident. (*Id.* at 59-160). In answer to questions from the jurors, he explained that his opinions are based on physical evidence and his computer modeling as the best evidence. He does not rely on testimony or statements of witnesses unsupported by such evidence. (*Id.* at 150).

During the presentation of the defense case, defense counsel requested permission from the trial court to play the videotaped Sherman Cook deposition testimony. (RP 6/6 at 8) (Excerpt beginning at 8:57 p.m.). The trial court had reviewed the video the prior evening in chambers. (*Id.* at 4-8). The trial court ruled that the defense could use the video depositions (redacting some parts of it) pursuant to the authority of Civil Rule 32(a)(3). (*Id.* at 9-13). However, in addition to the Cook admission already presented to the jury, the plaintiff could use statements given by Mr. Cook to the police and shown to Mr. Cook during the deposition. The trial court observed that this statement to the police probably would not get into evidence but for the defense use of the deposition. (*Id.* at 11). The Court further ruled that the defense is entitled, at the close of the case, to a limiting instruction on the use of the Cook admission against the

defendant Westerfield. (*Id.* at 13). The Court gave such a limiting instruction. Jury Instruction No. 20. (CP 2307).

During closing argument, plaintiff's counsel displayed the Cook admission to the jury again and argued from it. For example, counsel stated "[a]nd you have Mr. Cook's admission that 'I was knocked into Lamonte because Westerfield rear-ended me.'" Plaintiff's Closing (RP 6/8 at 4 (Excerpt 1 beginning at 8:56 a.m.). He re-emphasized it in rebuttal as follows: "And I want to remind you that this is Mr. Cook's admission that because Richard Westerfield collided with your vehicle – your vehicle collided with the rear-end of Becky Lamonte's vehicle, southbound I-405 at the place, signed May 8th of 2000. Admit." Plaintiff's Rebuttal Closing (RP 6/8 at 26) (Excerpt 2 beginning at 11:19 a.m.)).

V. SUMMARY OF ARGUMENT

Litigants are required to raise their objections in a timely fashion or to consider them waived. *Haywood v. Aranda*, 143 Wn.2d 231, 19 P.3d 406 (2001). Ms. Lamonte was required to timely object to a defense on the merits if she believed the "supposed" admissions were binding and conclusive. Her conduct over 12 years preceding trial is inconsistent with the assertion at trial that the "supposed" admissions are binding and conclusive.

Civil Rule 36(b) and *Santos v. Dean*, 96 Wn. App. 849, 982 P.2d 632 (1999) authorize the withdrawal of admissions pursuant to a two-part

test that focuses on serving the merits and prejudice to the party who sought the admissions. The first part of the test is satisfied because in upholding these "supposed" admissions it would practically eliminate any presentation of the merits of the case. Ms. Lamonte claims prejudice because the defendant was allowed to present his defense on the merits. This is not the prejudice contemplated by the rule. Ms. Lamonte could not show she was prejudiced in the presentation of her case on the merits because of reliance on the "supposed" admissions.

Turning to the Cook issue, the admissions of a co-party or a former co-party dismissed out of the case are not admissible as substantive evidence against Mr. Westerfield. *Jeslow v. Duncan*, 125 Wn. 492, 216 P. 868 (1923). The admissions of a dismissed co-party "went out of the case with him." *Id.* Any admissions of Mr. Cook are hearsay because they are not an admission of a party-opponent and no hearsay exception applies. Ms. Lamonte was allowed at trial to present the Cook "admissions" to the jury despite the foregoing. It was unpersuasive. Alleged error that does not affect the outcome is not prejudicial or grounds for reversal. *Reid v. M-B Contracting Co.*, 46 Wn.2d 784, 285 P.2d 121 (1955).

VI. ARGUMENT

A. The Plaintiff Waived Any Right to Use the Uanswered Requests for Admissions Allegedly Served on Westerfield By Failing to Object to the Defense on the Merits for 12 Years While Participating in Contested Proceedings.

Evidence Rule 103(a)(1) provides that "error may not be predicated upon a ruling which admits . . . evidence unless . . . a timely objection . . . is made . . . ." Throughout these proceedings, the defense presented evidence on liability and damages on numerous occasions in discovery and in motion practice without objection from the plaintiff's counsel that it was barred by these outstanding requests for admissions.

It was incumbent on the plaintiff to object before engaging in costly and contested pre-trial proceedings on liability and damages if it believed these subjects were precluded by the "default" admissions. In the absence of a timely objection, evidence may be considered on the merits by the trier of fact. The plaintiff's objections to the presentation of the defense evidence is waived if objection is not made specifically and timely. Tegland, 5 Washington Practice – Evidence Law & Practice § 103.13 at 65.

In *Haywood v. Aranda*, 143 Wn.2d 231, 19 P.3d 406 (2001), the Supreme Court explained how common law waiver can occur. First, it can occur by a party's assertion of a position in litigation that is inconsistent with its previous behavior. *Id.* at 239. Second, it can also occur if the party's counsel has been dilatory in asserting the position. *Id.* As was a similar circumstance in *Haywood*, Ms. Lamonte in this case knew or should have known of the requests for admissions and that they were

outstanding. Nonetheless, she never made inquiry about them and proceeded with the case as if they did not exist. "Unquestionably, this conduct is inconsistent with the present assertion of . . . the plaintiff [that the requests are binding and conclusive]." *Id.*

The Court of Appeals, in *Haywood*, summed it up as follows: ". . . [L]itigants are required to raise their objections in a timely fashion or to consider them waived in numerous other contexts. . . . [T]his case falls into that category." *Haywood v. Aranda*, 97 Wn. App. 741, 744-745, 987 P.2d 121 (1999). See also, *Stratton v. U.S. Bulk Carriers, Inc.*, 3 Wn. App. 790, 794, 478 P.2d 253 (1970) (the issue has been impliedly withdrawn; the waiving party's subjective intent is not material; by its manner of conduct and its briefing to the court, the court and counsel were understandably led to believe that the issue belatedly raised did not exist); *Friese v. Adams*, 44 Wn.2d 305, 307-308, 267 P.2d 107 (1954) (waiver from failure to raise issue in briefs to the court, in oral arguments to the court and in participating in court proceedings without mention of the issue later asserted).

Defense counsel argued waiver to both Judge McCullough and Judge Lum. (CP 23-35); (CP 153-162); (RP 5/14 at 32-38). Judge McCullough did not respond to or address the argument. (RP4/20 at 1-20). Judge Lum did not reach it because he determined there was no

prejudice from allowing withdrawal. (RP 5/16 at 6-7) (Excerpt beginning at 3:28 p.m.). Nonetheless, "[t]he appellate court may affirm the trial court on any ground." *State v. Gimarelli*, 105 Wn. App. 370, 376, 20 P.3d 430 (2001).

B. *The Legal Standard Under Civil Rule 36(b) Mandated the Trial Court's Ruling Precluding Use of the Allegedly Outstanding Requests for Admission.*

Judge Lum properly ruled based on the two part test under CR 36(b). In *Santos v. Dean, supra*, the Court of Appeals followed federal authority that the proper approach to the question is to apply the "two part test" under CR 36(b), rather than an excusable neglect test. "Under this test, the court answers two questions: (1) whether permitting the extension subserves the presentation of the merits of the case; and (2) whether the extension will prejudice the opposing party." *Id.* at 858-59.

The first half of the test is satisfied when upholding the admissions would "practically eliminate any presentation of the merits of the case." *Hadley v. United States*, 45 F.3d 1345 (9th Cir. 1995). See also *Pleasant Hill Bank v. United States*, 60 F.R.D. 1 (W.D. Mo. 1973) for its observation on the first part of the test that the failure to timely respond to requests for admissions should not operate to "produce an unjustified suppression of the merits, a result which we find unacceptable." *Id.* at 4.

Prejudice relates to the difficulty "caused by the unavailability of key witnesses, because of the sudden need to obtain evidence with respect to the questions previously deemed admitted." *Santos v. Dean, supra* 96

Wn. App. at 860 citing and quoting from *Hadley v. United States*, 45 F.3d 1345, 1348 (9th Cir. 1995). "The necessity of having to convince the trier of fact of the truth of a matter erroneously admitted is not sufficient." *Id.* at 859 quoting from *FDIC v. Prusia*, 18 F.3d 637, 640 (8th Cir. 1994). **"The prejudice contemplated by Rule 36(b) is 'not simply that the party who obtained the admission will now have to convince the factfinder of its truth."** *Id.* at 860 quoting *Hadley*.[10] There is no prejudice when the plaintiff did not rely on the "supposed admission." See 3A Tegland, Washington Practice – Rules Practice 778 (2006 ed.) citing *Coleman v. Altman*, 7 Wn. App. 80, 497 P.2d 1338 (1972).

Ms. Lamonte identifies the prejudice as her inability to state in opening that liability was admitted. Brief of Appellant at 24. She claims prejudice because the defendant and the defendant's accident reconstruction expert were permitted to testify in opposition to her theory of events. *Id.* She claims prejudice because the defense was allowed to argue their evidence in closing. *Id.* She claims prejudice because the trial court would not give her proposed jury instruction containing the admissions. *Id.* This is not the prejudice contemplated by the standard under Rule 36(b). Judge Lum had a proper grasp of the legal standard and properly exercised his discretionary authority in the manner directed by CR 36(b) and *Santos*.

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[10] Ms. Lamonte concedes that this is the prejudice contemplated by the rule. Brief of Appellant at 36.

In *Coleman v. Altman*, 7 Wn. App. 80, 497 P.2d 1338 (1972), this Court analyzed an inadvertent failure to respond to requests for admissions in accordance with these principles underlying Civil Rule 36(b). "Rules of court are intended to promote and not to obstruct the administration of justice and thus enable the Court to do substantial justice rather than to decide cases upon technicalities which have no relationship whatever to the rights of the parties to the litigation." *Id.* at 85 citing to federal authorities. "The admissions cannot be taken as controlling. Decisions should not be based on mere matters of pleadings or technical admission." *Id.* at 86.

Indeed, the proper focus is on the merits and prejudice not upon the reasons for why the requests went unanswered. Judge McCullough did not have that focus when he ruled.[11] Judge Lum, as the trial judge, had the authority to correct this ruling at trial.

A pre-trial ruling on the admissibility of evidence or the exclusion of evidence, by a different judge is not binding on the trial judge. The trial judge controls the trial and may reach his or her own independent opinion as to what the law permits. *State v. Kinard*, 39 Wn. App. 871, 873, 696 P.2d 603 (1985). A court's ruling on the admissibility of evidence may be changed at any time before entry of judgment. *Id.* A trial judge has authority to reconsider a prior ruling or correct a prior mistake. *In re*

[11] With a sanction as severe as deeming such requests admitted, the trial court should make formal findings on the issue of prejudice, the effect on the merits of the controversy and why an alternative sanction is not appropriate. Such findings are necessary for proper appellate review. See e.g., *Asea, Inc. v. Southern Pacific Transportation Co.*, 669 F.2d 1242 (9th Cir. 1981).

Estate of Jones, 170 Wn. App. 594, 606, 287 P.3d 610 (2012) ("Judge Peters was not foreclosed by Judge Gavin's earlier ruling.").

Ms. Lamonte argues that Judge Lum had no authority to reconsider Judge McCullough's decision. Her argument is wrong and inconsistent with the authority cited above. "A judge may reverse or modify a pretrial ruling at any time prior to the entry of final judgment. . . . When this happens, a party must demonstrate the trial ruling itself was erroneous in order to secure a reversal." *Adcox v. Children's Orthopedic Hospital*, 123 Wn.2d 15, 37, 864 P.2d 921 (1993). The trial judge has the ultimate responsibility for the fair presentation of the evidence at trial. Ms. Lamonte has the burden to demonstrate that Judge Lum abused his discretion under the Civil Rule 36(b) standard.

As Judge Lum observed, the practical effect of allowing the deemed admissions to stand was to "eviscerate" the defense. The Court of Appeals, in *Santos*, made a similar observation. The "practical effect of denying an extension for filing the admissions . . . would be equivalent to the ultimate sanction of denying . . . a defense." *Santos v. Dean, supra* 96 Wn. App. at 860. "It is not proper use of CR 36 to request an adversary to admit, in effect, the truth of the assertion that he should lose the lawsuit." *Thompson v. King Feed & Nutrition*, 153 Wn.2d 447, 460-61, 105 P.3d 378 (2005) quoting from *Reid Sand & Gravel v. Bellevue Properties*, 7 Wn. App. 701, 704, 502 P.2d 480 (1972).

This problem on similar facts was addressed by the Eleventh Circuit in *Perez v. Miami-Dade County*, 297 F.3d 1255 (11th Cir. 2002).

In *Perez*, the plaintiff served the defendant with the complaint along with requests for admissions (seeking admissions to the allegations of the complaint).[12] The defendant answered the complaint denying the material allegations, but overlooked the Request for Admissions.

The case proceeded without mention of the requests served with the complaint. Ultimately, the plaintiff moved that the matters should be deemed admitted because the defendant had not responded to the requests. The federal district court deemed many of the requested items admitted for failure to timely respond.

The *Perez* court reviewed the issue under the abuse of discretion standard and the two-part test set forth in Civil Rule 36(b). *Id.* at 1262. ***Rule 36(b) grants the trial court discretion but then specifies exactly how that discretion is to be exercised.*** *Id.* at 1265. "Rule 36(b)'s two-part test is much more than merely horatory; it emphasizes the importance of having the action resolved on the merits, while at the same time assuring each party that justified reliance on an admission in preparation for trial will not operate to his prejudice." *Id.* "We hold, therefore, that a district court abuses its discretion under Rule 36(b) in denying a motion to withdraw or amend admissions when it applies some other criterion

[12] The *Perez* court opined that it is inappropriate to serve requests for admissions with the complaint. It is too early to perceive what facts should be contested. It is inappropriate to re-serve the complaint in the form of admissions in order to require the defendant to deny every paragraph of the complaint that it has already denied. Use of the rule in this manner is harassment, in the "wild-eyed hope" that the other side will fail to answer. *Id.* at 1268-1269.

beyond the two-part test – or grossly misapplies the two-part test in making its ruling." *Id.*

"Perez unconvincingly asserts that he relied upon the admissions in his preparation for trial, ***an astonishing claim in light of the facts***. The allegations of the complaint were denied from the very beginning and throughout the proceeding. The plaintiff knew from the very beginning he would have to prove his claim and had been engaged in discovery on the issues all along. Moreover, if he was not ready to proceed to trial, the court could have extended the deadlines." *Id.* at 1267.

Ms. Lamonte's arguments on appeal and before the trial court are astonishing for the same reason given her 12 year work-up of the case with multiple experts on liability, causation and damages with never a word about the requests for admissions until the eve of trial. She knew she had to prove her claim all along, engaged in extensive discovery and was ready to go on the trial date. She never sought any extension of the trial date because she was fully ready to proceed without regard to the requests for admissions.

Ms. Lamonte claims other errors based on the "supposed" admissions. She assigns error to permitting defense testimony on the merits from Richard Westerfield and Charles Lewis (the defense accident reconstruction expert). Brief of Appellant at 2-3. She assigns error to allowing defense counsel to argue the defense evidence in closing. *Id.* She also assigns error to the trial court's failure to give her proposed jury

instruction containing the admissions. *Id.* There was no error in these particulars because there was no error in allowing a defense on the merits.

C. *The Trial Court Also Did Not Error in Precluding Mention of the Cook "Admission" in Opening Statement.*

Mr. Cook was a co-party at the commencement of the case. However, he later settled and was dismissed from the case. He was not a party at the time of trial. His admissions either as a co-party or a non-party are not admissible against Mr. Westerfield.

"Where the interest or liability of coparties is several, the admissions of one are not competent against the other." *Jeslow v. Duncan*, 125 Wn. 492, 493, 216 P. 868 (1923). If Mr. Cook had been a party at trial, his admissions were admissible against him "but the court must admonish the jury against whom the evidence may not be considered [i.e., Mr. Westerfield]." *Id.* When the suit was discontinued as against Mr. Cook, his admissions were incompetent as substantive evidence in the case. "The entry of a discontinuance as to a particular party renders his admissions incompetent." *Id.* The admissions of a dismissed co-party "went out of the case with him." *Id.*[13]

The Cook "admission" was not usable in opening for another reason. It was hearsay. "Admissions obtained under Rule 36 may be

[13] The federal rule is the same. Admissions of a party do not bind a co-party. Wright & Miller, Federal Practice & Procedure § 2264 at 580.

offered in evidence at the trial of the action, but they are subject to all pertinent objections to admissibility that may be interposed at trial. Wright & Miller, Federal Practice & Procedure at § 2264 at 571. "It is only when the admission is offered against the party who made it that it comes within the exception to the hearsay rule for admissions of a party opponent." *Id.* at § 2264 at 571-72.

Sherman Cook is not a party at trial and the admission is not offered against him. Therefore, Evidence Rule 801(d)(2) is inapplicable because it is not an admission of a party opponent and the admission is not being offered against that party. Rather, it is a hearsay statement being offered against a party who did not make the statement and it is being offered without opportunity for cross-examination.

The only potentially applicable hearsay exceptions are Evidence Rule 804(b)(1) for former testimony and 804(b)(3) as a statement against interest. Rule 804(b)(1) does not apply because the statement was not given in a deposition where Westerfield had the opportunity to develop the testimony by direct, cross, or redirect examination. Rule 804(b)(3) also does not apply because it is not against Cook's interest to admit that he collided with Lamonte because Westerfield collided with him.[14]

[14] Ms. Lamonte concedes this point. (CP 140 at line 23).

Additionally, the admissions read as a whole show that Cook is not sure what happened and this is confirmed in his deposition.

The trial court had authority under Evidence Rule 103(c) to prevent counsel from suggesting to the jury in opening facts that would otherwise be inadmissible. Tegland, 5 Washington Practice – Evidence Law and Practice § 103.22 at 96 (5th ed. 2007). In addition, counsel had a broad responsibility to keep inadmissible evidence from being suggested to the jury by any means. *Id.* at 95. "Tactics designed to reveal inadmissible information to the jury are subject to challenge under Rule 103 and may raise ethical questions as well." *Id.* at 95-96. In this case, plaintiff's counsel's tactic to reveal this inadmissible information through direct examination of his expert (who did not rely upon the information for his opinions) and then arguing it to the jury as stand-alone evidence is what Tegland describes as "borderline practice." *Id.* at 96.

Even if we were to assume any error which did not occur, it was immaterial because during the course of the trial, the plaintiff was allowed to present the Cook admission to the jury, to blow it up on post-it boards, to have it read to the jury and to argue from it during closing. The Cook "admissions" were unpersuasive and did not materially affect the merits of the controversy. Alleged error that does not affect the outcome is not prejudicial or grounds for reversal. *Reid Co. v. M-B Contracting Co.*, 46

Wn.2d 784, 791, 285 P.2d 121 (1955); *Silves v. King*, 93 Wn. App. 873, 885, 970 P.2d 790 (1999).

D. The Trial Court Did Not Err in Permitting the Defense to Present the Cook Videotaped Perpetuation Deposition.

Sherman Cook was in poor health in 2001. He was on kidney dialysis. Both kidneys had failed. He had a heart valve replaced. His ability to walk was severely limited. He had partial eyesight. Counsel in this case, for all parties, preserved his testimony by video deposition for use at trial because of his serious medical condition. All parties were represented by counsel. Mr. Cook died before trial.

Civil Rule 32(a)(3) provides that "[t]he deposition of a witness, whether or not a party, may be used by any party for any purpose if the court finds: (A) that the witness is dead . . . ." Evidence Rule 804(b)(1) provides that the hearsay rule is inapplicable to deposition testimony taken in the course of the same proceeding if the declarant is unavailable. A declarant is unavailable if he or she is dead. ER 804(a)(4).

Again, if there was any error in allowing Cook's deposition testimony (which there was not), the plaintiff invited error by presenting the Cook "admission" to the jury in her case-in-chief under the guise that it was relied upon by her experts. The plaintiff's counsel then "piled it on" by cross-examining the defense accident reconstruction expert Charles

Lewis about the Cook "admission" creating a misleading impression. (RP 6/4 at 72-73 & 94). Defense counsel objected strenuously to the one-sided use of the Cook "admission." (RP 6/4 at 64-69; 95-107).

Judge Lum reviewed the video depositions in chambers prior to trial on June 6. He then explained that these are clearly perpetuation depositions. (RP 6/6 at 4) (Excerpt 1 beginning at 8:57 a.m.). This was not clear to him before. (*Id.*). Judge Lum summarized the deposition. (*Id.* at 6-7). Defense counsel renewed their request to play the deposition testimony to balance the testimony from Mr. Cook that had only been received in the form of this admission. (*Id.* at 7). Judge Lum allowed use of the deposition testimony and, in doing so, noted that plaintiff's counsel invited use of it by their use of the admissions and cross-examining the defense expert about it. (*Id.* at 9-13).

E. The Case Authority Cited by the Appellant is Not Directly Relevant Because They Do Not Involve the Extenuating Circumstances Present Here and the Absence of Prejudice.

Cases cited by Ms. Lamonte are distinguishable for various reasons. In *Brook Village North Associates v. General Electric Co.*, 686 F.2d 66 (1st Cir. 1982),[15] the requests for admissions were served on defense counsel. The defense did not respond for 9 months. When the defense did finally respond, the plaintiff immediately moved to strike and

[15] Ms. Lamonte cites and argues from this case at pages 33, 36 – 40.

the district court granted the motion and incorporated his ruling in the pre-trial order. "This case therefore does not involve a single, technical default, or a default in which the plaintiff shares responsibility." *Id.* at 73. In this case, the plaintiffs were prejudiced from not upholding the admissions because they were not prepared to "present evidence to establish that the roof repairs described in the admission were consistent with the quality of roof called for in the contract." *Id.* at 74.

In *999 v. C.I.T. Corp.*, 776 F.2d 866 (9th Cir. 1985),[16] the defendant responded to the requests for admissions affirmatively admitting a letter constituted an agreement. *Id.* at 868. The district court denied CIT's motion to withdraw or amend its response made in the middle of trial. *Id.* at 869. CIT made the motion when 999 "had nearly rested its case." *Id.* "The record shows that 999 had relied heavily on the admission as proof of an agreement. The admission already had been shown to the jury through an enlarged duplicate with no objection made by CIT." *Id.*

In *Pedroza v. Lomas Auto Mall, Inc. et al.*, 258 F.R.D. 453 (D. New Mexico 2009),[17] the defendant USAA affirmatively admitted that it was uneconomical to repair a damaged vehicle and that it did not repair the vehicle. *Id.* at 456. The district court found prejudice from the plaintiff's reliance on the affirmative admission "because [withdrawal]

[16] Ms. Lamonte cites and argues from this case at pages at 26, 32, 33, 44, & 45.
[17] Ms. Lamonte cites and argues from this case at pages 42-44.

would come on the eve of trial, after discovery was closed, and two months after USAA had agreed that it would not withdraw the admission." *Id.* at 465. "USAA has had ample opportunity to withdraw its admission. Its decision to reverse course and seek withdrawal for a second time at the eleventh hour will cause substantial prejudice to the Plaintiffs." *Id.* at 467. ". . . [T]he prejudice the Plaintiff would suffer would effectively prevent them from presenting their case with all the evidence they might have been able to marshal had USAA not followed the course it did." *Id.* "Granting USAA's request would in fact not serve to further resolution on the merits but would instead create an artificially unbalanced scenario favoring USAA rather than the Plaintiffs. USAA made the admission and then chose a course of action that would prejudice the Plaintiffs. Any burden should therefore fall on USAA and not on the Plaintiffs." *Id.*

In *Scott v. Greenville Housing Authority*, 579 S.E.2d 151 (S.C. 2003),[18] the defendant had engaged in a practice of stonewalling discovery and not fully responding to discovery requests. The defendant was ultimately sanctioned by the lower court. With regard to the non-responsiveness to the requests for admissions, the appellate court observed that "[t]his record exemplifies a paradigm of contumacy and intransigence in the discovery arena. A review of the record does not reveal a paucity or

[18] Ms. Lamonte cites and argues from this case at pages at 46-47.

a modicum of response. The activity by GHA demonstrates a nihility in the discovery activity." *Id.* at 157. The appellate court found prejudice to the plaintiff because "[d]iscovery is the quintessence of preparation for trial and, when discovery rights are trampled, prejudice must be presumed." *Id.* at 158. The plaintiff needed the discovery to prove his case. "After the trial court allowed GHA to withdraw its admission, GHA continued to frustrate Scott's ability to present his case by first denying the existence of the hot water heater records and then surprising Scott with the records during the middle of trial." *Id.*

In *Switchmusic.com, Inc. v. U.S. Music Corporation*, 416 F.Supp.2d 812 (C.D. Cal. 2006),[19] the defendant never provided responses to requests for admissions served on counsel during the course of proceedings. The defendant took no action to move to withdraw or amend except to state in opposition to a summary judgment motion that it anticipated filing such a motion "as soon as procedurally possible." *Id.* at 818-19. The motion was not timely filed. The district court never reached any analysis under Civil Rule 36(b).

In *Coca-Cola Bottling Co. of Shreveport, Inc. v. Coca-Cola Co.*, 123 F.R.D. 97 (D. Del. 1988),[20] the defendant affirmatively responded to request for admissions with answers drafted by counsel. The district court

[19] Ms. Lamonte cites and argues from this case at pages 25 and 45.
[20] Ms. Lamonte cites and argues from this case at pages 26, 40 and 47.

declined to allow withdrawal of the admissions because the presentation of the merits would not be improved given the record as it existed supported the truth of the admissions. *Id.* at 103-106. Furthermore, the plaintiffs would be prejudiced because they do not have the means to reorganize their strategy, witnesses and documents to meet the new factual issues. Additionally, the defendant precluded the plaintiff from doing discovery into the subject matter of the admissions because the admissions rendered such discovery unnecessary. *Id.* at 106-08.

This case does not present the same situations as the foregoing cases. Both parties were fully prepared to go to trial on the merits. The plaintiff did not raise or reveal the subject matter until 2 months before trial in a case that had been pending for an incredible 12 year period. As the *Perez* court said it is just "astonishing" for the plaintiff to even bring this up in light of these facts.

F. Errors Prejudicial to Respondent on Remand.[21]

1. *Testimony Regarding Causation of Fibromyalgia (FM) Should Be Excluded as Speculative and Unscientific.*

Judge Glenna Hall ruled in 2002 that this testimony was speculative, unscientific and inadmissible under the *Frye* doctrine. Memorandum Opinion (CP 1043-1051) (copy in appendix). Judge Hall

[21] RAP 2.4(a) authorizes the appellate court to review acts in the proceeding below which if repeated on remand would constitute error prejudicial to the respondent.

observed that in reviewing the medical literature, she "was struck by the strength of the dispute in the [scientific] literature." (CP 1048 at lines 14-15). At trial in 2012, Ms. Lamonte was relying on the same expert testimony of Drs. Robert Bennett and Paul Brown that she relied on in 2002 and that was ruled inadmissible by Judge Hall. Judge Hall observed that Dr. Bennett testifies on causation to a "fifty-one percent certainty ('reasonable medical probability') . . . ." (CP 1046 at line 18-19). Judge Hall pointed out that Dr. Bennett "attempt[s] to describe a legal position, and in doing so, describe[s] it incorrectly. Dr. Bennett's declaration . . . attempts to discuss the law of causality." (CP 1048 at lines 23-24).

General acceptance is the standard of admissibility not "reasonable medical probability." "The premise that in the context of a legal setting causality entails only 51% certainty is simply incorrect." *Riccio v. S&T Contractors*, 56 Pa. D. & C. 4th 86 (2001) (copy in appendix at APP 015) cited by Judge Hall (CP 1050) and cited by the Court of Appeals in *Grant v. Boccia, supra* 133 Wn. App. at 184. Evidentiary preponderance is not a test of admissibility. *Id.* [22]

General acceptance of a scientific theory requires scientific support based on scientific studies that are generally accepted in the scientific

[22] General acceptance is a test of legal reliability based on a qualitative and quantitative review of the science to determine the level of agreement or dissension within the scientific community. *Brim v. State*, 779 So.2d 427, 434-35 (Fla. App. 2000).

community. The Supreme Court explained in State v. Copeland, 130 Wn.2d 244, 255-57, 922 P.2d 1304 (1996) how a scientific theory achieves a valid, scientific basis. The scientific process of validation of a theory requires the performance of multiple prospective epidemiological studies producing repeating results before valid scientific conclusions can be drawn. See, e.g., *State v. Copeland, supra*; *Moore v. Harley-Davidson Motor Co.*, 158 Wn. App. 407, 419, 241 P.3d 808 (2010); *Eakins v. Huber*, 154 Wn. App. 592, 605, 225 P.3d 1041 (2010) (prospective, longitudinal studies are needed to understand fully the role of hypersensitivity reactions to coronary stents). In 2006, the Court of Appeals rendered its opinion in *Grant v. Boccia, supra* 133 Wn. App. 176 (2006) concurring in Judge Hall's conclusions because there is insufficient scientific support for plaintiff's theory.

At trial, Dr. Bennett continued to offer his personal opinion, to a "reasonable degree of medical probability" without sufficient scientific support for his opinion. (RP 5/21 at 99-171). "I mean, you can render an opinion in a court of law because it's a 51 percent. It's different from a scientific study. I think I tried to explain that before." (*Id.* at 126). Dr. Bennett acknowledged that we still do not have prospective studies that scientifically establish that trauma has a causal role. (*Id.* at 114; 120-24; 130-32.). There is little evidence to support attributing symptoms to a

traumatic event based on the most recent studies – Tishler, Wynne-Jones and Gareth Jones. (*Id.* at 129-134) (copies of studies in the appendix at APP 040, 044, 047 & 052).

Dr. Norton Hadler testified at trial on the science related to this syndrome and the problems it has created for individual patients and society generally. (RP 6/6 at 18-210) (Excerpt beginning at 8:57 a.m. to 3:41 p.m.). He explained longitudinal prospective study techniques and how scientific study has established that there is little scientific evidence to support the plaintiff's theory. (*Id.* at 67-68). Dr. Hadler explained that the Gareth Jones study, published in 2011, the Wynne-Jones study, published in 2006, and the Tishler study, published in 2006 and updated in 2010, all come to similar findings that road accident trauma was not associated with an increased rate of fibromyalgia. (*Id.* at 72-85).

Dr. Frederick Wolfe testified on how the fibromyalgia diagnosis originally developed, the problems that emerged from it and the lack of good science related to it. (RP 6/7 at 4-60) (Excerpt 1 beginning at 9:11 a.m.). He explained that fibromyalgia is a somatic symptom disorder. (*Id.* at 51). What creates the disorder is debatable. (*Id.* at 54-55). He is not aware of any anatomical or biological explanation for the disorder. (*Id.* at 55). There is not any good scientific evidence for the theory that accidents cause fibromyalgia. (*Id.* at 57).

The 2011 Gareth Jones Study is perhaps the most important study. (*Id.* at 57-58). They found that people who developed these symptoms were more likely to have psychosocial problems, personal problems, educational problems, psychological problems. (*Id.* at 58-59). The authors of this study concluded that when findings are adjusted for these confounding variables, then in general the evidence for symptom onset from a road traffic accident is removed. (*Id.* at 59).

On cross-exam, Dr. Wolfe was asked about why so much insistence on science to be comfortable saying trauma causes fibromyalgia? (RP 6/7 at 132). He observed that "**it depends on what the cost of being wrong is**." (*Id.* at 132). Prematurely accepting causality can be harmful to both individuals and society. It encourages perceptions of disability without scientific basis and discourages recovery. "The hyperbole, litigation, compensation, and self-interested advocacy surrounding the functional somatic syndromes can exacerbate and perpetuate symptoms, heighten fears and concerns, prolong disability, and reinforce the sick role." Gardner, *Fibromyalgia Following Trauma: Psychology or Biology?, Current Pain and Headache Reports* 2000, 4:295-300 (copy in appendix at APP 028).[23] Furthermore, we have the

[23] "A reviewing court will undertake a searching review that is not confined to the record and may involve consideration of scientific literature." *Grant v. Boccia, supra* 133 Wn. App. at 179.

Frye doctrine because "**the cost of being wrong**" is too high to permit something as serious as legal liability to turn on scientific debate in the courtroom.

Physicians like Dr. Bennett who offer opinions on causation are giving scientific opinion, not medical opinion, without a scientific basis for the opinion. They are testifying to their belief in a yet unproven theory. The expert in the courtroom should be held to the same level of "intellectual rigor" required of a scientist in the field before being able to present his theory to a jury. *Black v. Food Lion, Inc.* 171 F.3d 308, 311 (5th Cir. 1999). The answer to the causal question has not been determined by science. *Grant v. Boccia, supra* 133 Wn. App. 176.

Ms. Lamonte contends that *Anderson v. Akzo Nobel Coatings*, 172 Wn.2d 593, 260 P.3d 857 (2011) overrules *Grant*. *Anderson* states that *Grant* is overruled to the extent inconsistent with the point made in *Anderson* that "*Frye* does not require that specific conclusions drawn from scientific data" must be generally accepted. *Anderson, supra* 172 Wn.2d at 611-12. *Anderson* merely states that an expert's conclusions drawn from a sound scientific foundation do not have to meet the *Frye* standard of admissibility.

Grant is not inconsistent with that point. The expert's conclusions on fibromyalgia rendered in *Grant* were not based on scientific data and

study. In contrast, in the *Anderson* case the potential harm from exposure to the toxic chemicals at issue was scientifically established. The only question in *Anderson* was whether the exposure caused the harm in that specific circumstance.

The *Anderson* case did not address the scientific knowledge related to fibromyalgia and its causes. *Grant* did; and, it remains the law in Washington. See *Lake Chelan Shores Homeowners Association v. St. Paul Fire & Marine Ins. Co.*, 167 Wn. App. 28, 34, 272 P.3d 249 (2011). *Grant* succinctly stated the law in this state that causation evidence in support of a fibromyalgia claim is unscientific and inadmissible. Id.. *Stare decisis* dictates that courts follow earlier decisions when the same points of law arise again. *Roberson v. Perez*, 156 Wn.2d 33, 123 P.3d 844 (2005).

An expert's self-proclaimed accuracy to a "reasonable degree of medical probability" is not sufficient. Yet, that was all Ms. Lamonte offered in this case in the form of Dr. Robert Bennett's testimony. It should not be allowed again if there is any remand in this case.

2. *The Trial Court's Instruction to the Jury on Apportionment of Fault was Error.*

Instruction No. 19 reads as follows: "*Where the negligent conduct of two or more entities have combined to bring about harm to the plaintiff,*

and one or more of the actors seeks to limit his liability on the ground that the harm is capable of apportionment among them, the burden of proof as the apportionment is upon each such entity." (CP 2306). The plaintiff proposed this instruction. (CP 2244). The defendant objected to it because it was an incorrect statement of the law, inapplicable to the case and improperly put a burden of proof as to apportionment on the defendant when there was no claim of divisible harm. (RP 6/7 at 151).

In this case, the defendant Westerfield was not contending that any harm was divisible. Accordingly, this instruction should not have been given because it was inapplicable. The instruction could mislead and confuse a jury into believing the defendant Westerfield had the burden of proof as to apportionment with the result that he is 100% liable if he cannot segregate damages between the two alleged accidents.

The jury apportions fault among at-fault entities pursuant to RCW 4.22.070. See WPI 41.04 and Instruction No. 18 (CP 2305). "The defendant does not have the burden to prove divisibility or segregation under *Tegman*." *Jane Doe v. Church of Jesus Christ of Latter-Day Saints*, 141 Wn. App. 407, 440-41, 167 P.3d 1193 (2007) citing *Tegman v. Accident & Med. Investigations, Inc.*, 150 Wn.2d 102, 75 P.3d 497 (2003). Segregation of damages is a role for the trier of fact. *Id.* at 441. Westerfield is the only trial defendant. Judgment may be entered against

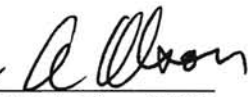
him only for his proportionate share of any damages if there is any finding of liability against him.

VII. CONCLUSION

The Court did not error in precluding use of the "supposed" admissions by Westerfield because Ms. Lamonte waived the issue and there was no prejudice to the presentation of her case on the merits. The Cook "admissions" were not admissible as substantive evidence against Westerfield. Ms. Lamonte nonetheless was allowed to use the admissions against Westerfield in direct examination of her experts, in cross-examination of the defense expert and in closing. The "admissions" were unpersuasive and immaterial to the outcome. The jury's verdict should be affirmed.

Dated this 28 day of March, 2013.

AIKEN, ST. LOUIS & SILJEG, P.S.

By 
William A. Olson, WSBA No.: 9588
David P. Hansen, WSBA No.: 10755
Attorneys for Respondent

APPENDIX

Document Name:	Pg. Nos.:
Order Granting Plaintiff's Motion to Deem Requests for Admission Propounded to Defendants Westerfield Admitted	APP 001 - APP 005
Memorandum Opinion	APP 006 - APP 014
William Riccio, v. S&T Contractors, 56 Pa. D. & C. 4th 86 (2001)	APP 015 - APP 027
Fibromyalgia Following Trauma: Psychology or Biology? Report by Gregory C. Gardner, M.D.	APP 028 – APP 039
Does physical trauma lead to an increase in the risk of new onset widespread pain? Report by G. Wynne-Jones, GJ Macfarlane, AJ Silman, et al.	APP 040 – APP 043
Neck Injury and Fribromyalgia – Are They Really Associated? Report by Moshe Tishler, Ofer Levy, Ilya Maslakov, Shmuel Bar-Chaim, and Mirit Amit-Vazina	APP 044 – APP 046
Can fibromyalgia be associated with whiplash injury? A 3-year follow-up study. Report by Moshe Tishler, Ofer Levy and Mirit Amit-Vazina	APP 047 – APP 051
Role of Road Traffic Accidents and Other Traumatic Events in the Onset of Chronic Widespread Pain: Results From a Population-Based Prospective Study. Report by Gareth T. Jones, Barbara I. Nicholl, John McBeth, Kelly A. Davies, Richard K. Morriss, Chris Dickens, and Gary J. Macfarlane	APP 052 – APP 057

FILED
KING COUNTY, WASHINGTON
NOV 30 2012
SUPERIOR COURT CLERK
BY NICHOLAS REYNOLDS
DEPUTY

THE HONORABLE LEROY MCCULLOUGH
Hearing Date: March 22, 2012
Without Oral Argument

Presented by: Moving Party

IN THE SUPERIOR COURT OF THE STATE OF
IN AND FOR THE COUNTY OF KING

REBECCA LAMONTE, a single individual, Plaintiff v. SHERMAN COOK and JANE DOE COOK, husband and wife and the marital community composed thereof, and RICHARD WESTERFIELD and JANE DOE WESTERFIELD, husband and wife and the marital community composed thereof, Defendants	NO. 00-2-06015-7KNT ORDER GRANTING PLAINTIFF'S MOTION TO DEEM REQUESTS FOR ADMISSION PROPOUNDED TO DEFENDANTS WESTERFIELD ADMITTED ~~(PROPOSED)~~ UA

This matter came before the Court on Plaintiff's Motion to Deem Requests for Admission Propounded to Defendants Westerfield Admitted. Having considered the pleadings, briefing, sworn declarations, and arguments of the parties,

IT IS HEREBY ORDERED THAT Plaintiffs' Motion is GRANTED.

IT IS FURTHER HEREBY ORDERED THAT Defendants Westerfied are deemed to have admitted Plaintiff's Requests for Admission Propounded to Defendants Westerfield and are therefore barred from denying the following: unless marked out:

ORIGINAL

KRAFCHICK LAW FIRM PLLC
100 W. HARRISON
SOUTH TOWER, SUITE 300
SEATTLE, WASHINGTON 98119
(206) 374-7370 FAX: (206) 374-7377
KLF@KRAFCHICK.COM

1. That they were the owner of a 1989 GEO Metro, Washington license plate #283DAG, on May 30, 1997 at approximately 12:30 p.m.
2. That they were the operator of the 1989 GEO Metro, traveling southbound on I-405 at or near the I-5 southbound exit ramp in King County, Washington on May 30, 1997 at approximately 12:30 p.m.
3. That on May 30, 1997 at approximately 12:30 p.m., Sherman Cook operated a 1984 Volvo 240, Washington license plate #HKB866, traveling southbound on I-405 at or near the I-5 southbound exit ramp in King County, Washington.
4. That on May 30, 1997 at approximately 12:30 p.m., Rebecca LaMonte operated a 1994 Chrysler Concord, Washington license plate #069FHX, traveling southbound on I-405 at or near the I-5 southbound exit ramp in King County, Washington.
5. That on May 30, 1997 at approximately 12:30 p.m., the southbound traffic on I-405 at or near the I-5 southbound exit ramp in King County, Washington came to a stop.
6. That on May 30, 1997 at approximately 12:30 p.m., Rebecca LaMonte's vehicle came to a stop on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.
7. That on May 30, 1997 at approximately 12:30 p.m., Sherman Cook's vehicle came to a stop on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.
8. That there was nothing obstructing your view of the stopped traffic on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington on May 30, 1997 at approximately 12:30 p.m.

KRAFCHICK LAW FIRM PLLC
100 W. HARRISON
SOUTH TOWER, SUITE 300
SEATTLE, WASHINGTON 98119
(206) 374-7370 FAX: (206) 374-7377
KLF@KRAFCHICK.COM

9. That there was nothing obstructing your view of Sherman Cook's vehicle on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington on May 30, 1997 at approximately 12:30 p.m.

10. That there was nothing obstructing your view of Rebecca LaMonte's vehicle on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington on May 30, 1997 at approximately 12:30 p.m.

11. That on May 30, 1997 at approximately 12:30 p.m., you failed to stop for stopped traffic on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.

12. That on May 30, 1997 at approximately 12:30 p.m., your vehicle struck Sherman Cook's vehicle prior to his impact with Rebecca LaMonte's vehicle on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.

13. That on May 30, 1997 at approximately 12:30 p.m., Sherman Cook's vehicle collided with the rear end of Rebecca LaMonte's vehicle on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.

14. That on May 30, 1997 at approximately 12:30 p.m., your vehicle struck Sherman Cook's vehicle, Sherman Cook's vehicle collided with the rear end of Rebecca LaMonte's vehicle on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.

15. That on May 30, 1997 at approximately 12:30 p.m., prior to Sherman Cook's vehicle striking Rebecca LaMonte's vehicle, your vehicle struck Sherman Cook's vehicle on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.

KRAFCHICK LAW FIRM PLLC
100 W. HARRISON
SOUTH TOWER, SUITE 300
SEATTLE, WASHINGTON 98119
(206) 374-7270 FAX: (206) 374-7377
KLF@KRAFCHICK.COM

16. That there were no emergent or unusual circumstances at the time of the collision between your vehicle and Sherman Cook's vehicle on May 30, 1997 at approximately 12:30 p.m.

17. That on May 30, 1997 at approximately 12:30 p.m., Rebecca LaMonte was the driver of her vehicle during the subject collision on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.

18. That on May 30, 1997 at approximately 12:30 p.m., Rebecca LaMonte sustained injuries as a result of the subject collision on southbound I-405 at or near the I-5 southbound exit ramp in King County, Washington.

19. That you are liable for the injuries sustained by Rebecca LaMonte as a result of the rear end collision between Sherman Cook's vehicle and your vehicle on May 30, 1997 at approximately 12:30 p.m. & DH

20. That as a result of the rear end collision between Sherman Cook's vehicle and Rebecca LaMonte's vehicle on May 30, 1997 at approximately 12:30 p.m., she sustained injuries to her neck and/or back.

21. That as a result of the rear end collision between Sherman Cook's vehicle and Rebecca LaMonte's vehicle on May 30, 1997 at approximately 12:30 p.m., she developed fibromyalgia. & DH

22. That Rebecca LaMonte was in no way responsible, not negligent in any manner, for the rear end collision in which you were involved on May 30, 1997 at approximately 12:30 p.m.

KRAFCHICK LAW FIRM PLLC
100 W. HARRISON
SOUTH TOWER, SUITE 300
SEATTLE, WASHINGTON 98119
(206) 374-7370 FAX: (206) 374-7377
KLF@KRAFCHICK.COM

ORIGINAL

23. That there are no other persons liable for the injuries sustained by Rebecca LaMonte as a result of the rear end collision between your vehicle, Sherman Cook's vehicle and her vehicle on May 30, 1997 at approximately 12:30 p.m.

24. That service and process were correct and proper.

DATED this 20th day of ~~March~~ April, 2012.

Presented by:

PAMELA S. VAN SWEARINGEN, WSBA #23895
Attorney for Plaintiff

Approved as to form:

David Hansen, WSBA #10755
Attorney for Westerfield

HONORABLE LEROY MCCULLOUGH

11/30/12
nunc pro tunc

KRAFCHICK LAW FIRM PLLC
100 W. HARRISON
SOUTH TOWER, SUITE 300
SEATTLE, WASHINGTON 98119
(206) 374-7370 FAX: (206) 374-7377
KLF@KRAFCHICK.COM

ORIGINAL

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KING COUNTY
SUPERIOR COURT CLERK
KENT, WA

IN THE SUPERIOR COURT OF WASHINGTON FOR KING COUNTY

REBECCA LAMONTE, Plaintiff, v. SHERMAN COOK, et al, and RICHARD WESTERFIELD, et al, Defendant.	NO. 00-2-06015-7 KNT MEMORANDUM OPINION

This court has been asked to exclude evidence regarding the causation of plaintiff's fibromyalgia on the ground that this evidence is based on a novel scientific theory not generally accepted in the relevant scientific community. In short, defendants ask this court to apply the analysis of *Frye v. United States*, 295 F. 1034 (D.C. Cir. 1923) to the proffered evidence and reject it on that basis.

A hearing was held on February 15, 2002, at which the court considered the declarations and attachments submitted by the parties, the arguments of counsel, and an additional trial-level case reviewed by the court.[1] Following the hearing, defendants submitted an additional case.[2] Upon inquiry by the court, the parties agreed that they had submitted sufficient material for the court to render a decision on the motion.

1. Opinion Evidence Offered

Plaintiffs seek to have testimony from various witnesses claiming expertise in medicine, medical research, pain disorders, rehabilitation, and the like regarding the plaintiff's diagnosed fibromyalgia, specifically, opinion testimony that the auto accident alleged in this case caused plaintiff's fibromyalgia

[1] *Riccio v. S & T Contractors*, 2001 WL 1334202 (Pa. Court of Common Pleas, June 22, 2001)
[2] *Young v. Hickory Business Furniture*, 353 N.C. 227, 538 S.E.2d 912 (2000)

syndrome. Among the listed experts is plaintiff's treating physician, a rheumatologist who has indicated he works extensively in the area of fibromyalgia syndrome.

There appears to be no dispute, at least for the purpose of this motion, that plaintiff suffers from fibromyalgia syndrome.

2. Procedural Aspects

As a motion to determine a preliminary question of admissibility, this motion is subject to the requirements of ER 104 (a). The court must therefore determine, by a preponderance standard, whether a party has met its respective burden. In this instance, the defendant must show that *Frye* is applicable to the question before the bar. If so, then the burden shifts to the plaintiff to show that the *Frye* standards have been satisfied. The court must make an additional inquiry under ER 702 regarding admissibility of the proffered evidence.

The fact that each party's burden must be met by a preponderance standard does not govern the underlying determination if *Frye* applies; *i.e.*, "general acceptance" is not found by a fifty-one percent acceptance level. Rather, the principles of *Frye* analysis as set forth in the numerous Washington cases delineating *Frye* govern this court's ruling.

3. Applicability of *Frye*

Plaintiff has argued that because, in her view, a causal link between fibromyalgia and physical trauma has long been posited, the theory on which the opinion testimony is based does not constitute novel scientific evidence.

The court finds that *Frye* does apply in this case. The proffered evidence is not merely a new application of an accepted theory or method, as in *Noltie*, nor is it based on the witness's "own practical experience and acquired knowledge" as that concept was used in the cases cited by plaintiff. Those cases involved opinion testimony not based on scientific knowledge, but rather on such areas as footprint tracking by an experienced police officer, as in *Ortiz*. Similarly, this case does not involve an opinion that an accepted treatment should have been differently applied, as in *Reese v. Stroh*.

The case at bar goes to the very heart of the questions regarding the scientific analysis of the causal relationship between physical trauma and fibromyalgia, casting much more than an "aura" of science about the question.

The court agrees with defendant that, at least as to the threshold question of *Frye* applicability, the Washington appellate decision in *Ruff v. DLI* comes closest to the mark. In that case, the plaintiff

sought to admit testimony that short-term exposure to ambient chemicals had caused her porphyria. In *Ruff*, as in this case, the gravamen of plaintiff's action was a theory of causation of a disease or condition that defendants argued was not generally accepted in the relevant scientific community. The court affirmed the trial court's exclusion of the testimony under *Frye*.

Plaintiff also argues that fibromyalgia cases involving causation issues have been common throughout the United States since 1985, compiling jury verdicts and listing cases that her counsel and others have brought before juries. Plaintiff does not, however, set forth any trial court or appellate decisions in which *Frye* or its applicability to the causation of fibromyalgia have been directly analyzed.

In *Waldorf Corp. v. Industrial Commission*, an Illinois Worker Compensation case supplied by plaintiff, the Illinois appellate court found sufficient evidence in the record to support a finding of causation in the worker compensation setting. There had been no attempt to exclude the evidence under either *Frye* or *Daubert*. A second case, this time from the U.S. District Court for the Northern District of Iowa (*Johnson v. Acting Commissioner of Social Security*) was also a benefits case, and appears to have been cited to this court merely for a footnote suggesting that fibromyalgia is "usually caused by some type of trauma," since the court itself said its scope was limited to whether the Secretary's decision was supported in the record as a whole. The source of this footnote is not evident, and this court gives this footnote little weight. Plaintiff supplied a third case, *Young v. Hickory Business Furniture*, another benefits case. The opinion of the North Carolina appellate court did suggest that an opinion that fibromyalgia was caused by workplace injury was admissible, but defendants have submitted the opinion of the North Carolina Supreme Court overturning the appellate decision on just that point, pointing out that plaintiff's rheumatology expert had based his opinion regarding causation solely on the fact that plaintiff had not suffered from fibromyalgia prior to her accident and developed it afterward.

Plaintiff has not pointed to any reported case in which a *Frye* analysis regarding an opinion concerning the causation of fibromyalgia was requested but denied on the basis that it was not a novel scientific theory.

For all these reasons, then, the court has determined that *Frye* applies, and that the burden shifts to plaintiff to show that the theory of causation by physical trauma is generally accepted in the relevant scientific community.

4. Is the Causation Theory Generally Accepted?

Both *Frye* and ER 702 require the court to act as a gatekeeper when science enters the courtroom. For example, in *Cauthron*, the court held that

> Under *Frye*, a court is to determine if the evidence in question has a valid, scientific basis. Because judges do not have the expertise required to decide whether a challenged scientific theory is correct, we defer this judgment to scientists. This inquiry turns on the level of recognition accorded to the scientific principle involved--we look for *general acceptance* in the appropriate scientific community. *See Jones v. United States*, 548 A.2d 35, 42 (D.C.1988). If there is a significant dispute between qualified experts as to the validity of scientific evidence, it may not be admitted.

State v. Cauthron, 120 Wn.2d 879, 887, 846 P.2d 502 (1993). This analysis differs from *Daubert* by not permitting or requiring the judge to evaluate the science, just to determine its validity from its general acceptance.

In the present case, defendant argues that not only does a significant dispute exist as to the causation of fibromyalgia, but plaintiff's experts have no scientific basis at this time for opining that physical trauma causes fibromyalgia. Plaintiff, on the other hand, sets forth declarations and deposition excerpts that she argues make clear that this causation theory is generally accepted in medicine.

5. Declarations of Plaintiff's Experts

Dr. Bennett's declaration states that he is a rheumatologist with a significant practice in fibromyalgia and substantial expertise in the area.. It is his view that physical trauma is "clearly" one of the major initiating causes of fibromyalgia. He bases this opinion on clinical experience, which he says "strongly supports the proposition that physical trauma can and does cause fibromyalgia to develop." He appears to differentiate between clinical knowledge regarding causation, which he indicates requires a fifty-one percent certainty ("reasonable medical probability") and scientific certainty, which requires ninety-five percent certainty. He goes on to say, "In medical science, when asking causal questions, we most frequently focus on the pathophysiology question: what is it that physical trauma does to produce fibromyalgia," but in the numerous contacts he has had with "physicians evaluating and treating fibromyalgia patients, it is [his] experience that there is a general consensus that physical trauma is one of the causes of fibromyalgia."

Although Dr. Bennett was present at the meeting that resulted in the Vancouver Consensus Report, he has testified that except for the portion labeled "Consensus Statement" the article setting forth the report does not express the consensus of the body. He was one of the endorsers of the "Additional Comments," and urges that the alternative model set forth in that document be used to determine

causation: namely, one that stresses the consistency and strength of association, dose-response relationship, and biologic plausibility. As an example, the signers of the Additional Comments cite the finding of a causal relationship between the use of NSAIDs and gastric ulcers, which used "case-control studies and biologic plausibility." Under that model, he says, there can be no doubt that fibromyalgia is caused by physical trauma. He appears to criticize the Consensus Report for its emphasis on scientific causality.

Like virtually all the other declarants proposed by plaintiff in response to defendant's motion, Dr. Bennett indicates that the Buskila study presents the "final compelling piece of evidence," and dismisses Buskila's own later reservations concerning causation as just a desire for scientific certainty. Likewise, he criticizes White as suffering from a researcher's compulsion for certainty.

Dr. Bennett, while testifying that from a clinical standpoint the causal theory is generally accepted, does concede that the pathophysiology and etiology of fibromyalgia are not yet known.

Dr. Brown, also a rheumatologist with an extensive background as a clinician in fibromyalgia, bases his opinion that fibromyalgia is commonly caused by physical trauma on his own clinical experience, the Buskila study, and consistent case reports in the medical literature going back many years. He describes his methodology in arriving at a causality opinion (on a "more likely than not" basis) as based on the Vancouver Consensus group's approach. He also appears to believe that those who disagree with the causal relationship are simply looking for scientific certainty. In his declaration he says those who disagree "are seeking a greater degree of certainty ('definitive proof') than reasonable medical probability." In an excerpt from Dr. Brown's declaration submitted by defendant, he testified that "we need more studies but that [the Buskila] study is excellent and the preponderance of evidence in the study does appear to suggest strongly that trauma can cause fibromyalgia." The later article by Buskila, he agreed, did reaffirm that the authors still could not prove that trauma causes fibromyalgia "at a scientific level, 90 percent or more."

Other declarations submitted by plaintiff take the same position. Dr. Beaton's declaration describes the methods used to evaluate the range of medical and statistical evidence use to determine the issues under investigation and sets forth the AHCPR standards for evaluating medical evidence. He characterizes the Buskila study as Type II, though Dr. Walker argues that it more accurately belongs at Level IV.

6. The Literature

Both parties have submitted copies of much of the relevant literature. The court has reviewed the following:

1. "The Fibromyalgia Syndrome: A Consensus Report on Fibromyalgia and Disability
2. Fibromyalgia Fact Sheet submitted by defendant
3. Wolfe, "For Example Is Not Evidence: Fibromyalgia and the Law," Journal of Rheumatology, May 2000
4. White, Carette, Harth, and Teasell, "Trauma and Fibromyalgia: Is There an Association and What Does It Mean?" Seminars in Arthritis and Rheumatism, vol. 29, no. 4, Feb. 2000
5. "Fibromyalgia Consensus Reports: Additional Comments," Jour. Of Clinical Rheumatology, v. 3, no. 6, Dec. 1997
6. Buskila, et al, "Increased Rates of Fibromyalgia Following Cervical Spine Injury," Arthritis & Rheumatism, v. 40, no. 3, March 1997
7. Waylonis and Perkins, "Post-Traumatic Fibromyalgia"
8. Greenfield, et al, "Reactive Fibromyalgia Syndrome" (1991)
9. Wolfe, F., "Post-Traumatic Fibromyalgia: A Case Report Narrated By the Patient" (1994)
10. Chaitow, *Fibromyalgia Syndrome: A Practitioner's Guide To Treatment*, 2000 (excerpts)
11. Bennett, "A multidisciplinary approach to treating fibromyalgia," 1992
12. Buskila and Neumann, "Musculoskeletal Injury as a Trigger for Fibromyalgia/ Posttraumatic Fibromyalgia,"2000

The court notes at the outset that none of the experts, including Dr. Walker, have testified that any rigorous studies other than Buskila exist. Moreover, little new has appeared in the literature since the publication of the Vancouver Consensus report. In reviewing the materials cited above, the court was struck by the strength of the dispute in the literature. The White article is particularly instructive in this regard. Apart from the numerous citations to articles taking disparate positions regarding the association between trauma and fibromyalgia, the authors' conclusion questions whether there is enough evidence even to conclude that an <u>association</u> exists.

The court also notes that much of the material submitted by both sides, but particularly by plaintiff, deals more with the legal dispute than with the science. The authors of the Additional Comments, for example, state that they are writing because they are concerned about misuse of the Consensus Report by readers, including compensation insurers. They attempt to describe a legal position, and in doing so, describe it incorrectly. Dr. Bennett's declaration also attempts to discuss the law of causality. While it is clear that these experts are frustrated by what they perceive as an attempt to disregard their opinions, the court can not consider those portions of the materials that are not within the expertise of the declarants or authors.

In reviewing the authorities submitted by plaintiff, the court concludes that they do not establish the existence of a general acceptance among scientists regarding the causes of fibromyalgia syndrome. Other than the Additional Comments authors, none of these articles says that scientific proof exists sufficient to state conclusively that physical trauma causes fibromyalgia. Drs. Bennett and Brown do adhere to the alternative model proposed by the Additional Comments, and indicate that they, at least, believe this model establishes causality. However, even they do not argue that the etiology and pathophysiology of fibromyalgia have been established. They base their conclusions primarily on their own clinical experience and the report of the Buskila study. That Buskila himself continues to believe the data are insufficient for a definitive conclusion carries significant weight, however, since almost all of the recent studies asserting causality rest on the Buskila study as the factor that allows them to state that a scientific basis for the theory exists.

7. Case Law

Defendant has submitted a number of cases from other jurisdictions in which courts were presented with the question of admissibility of evidence regarding the causality of fibromyalgia, all of which rejected the evidence as not meeting those standards.

Black v. Food Lion, Inc., 171 F.3d 308 (5th Cir. 1999), by virtue of having arisen in a federal court, is necessarily a *Daubert* case. Plaintiff fell in a grocery store, and sued, claiming the physical trauma of the fall had resulted in fibromyalgia. Her expert, a physician specializing in treating patients with persistent pain, diagnosed plaintiff with fibromyalgia and testified that the fall had caused the condition. The magistrate judge admitted the evidence without reference to *Daubert*, but based on the fact that the doctor had followed accepted protocol in rendering the causation opinion in terms of reasonable medical probability. On appeal, the court analyzed the issue under *Daubert*, citing, among other references, the Vancouver Consensus Report. Plaintiff's own expert acknowledged that fibromyalgia has no known etiology, and the court had no evidence before it that demonstrate a causal link. The court therefore concluded that the causation theory was not generally accepted in the medical profession. The court below, the opinion stated, had erroneously approved the expert's analysis that rested primarily on a history and ruling out prior or subsequent causes of

fibromyalgia, thereby ignoring the fact that there is no underlying scientific knowledge of the process that triggers fibromyalgia.

The *Trask* case appears to be a Maine trial court ruling. Maine, like Washington, construes ER 702 to require the court to perform a gatekeeper function. This court, like the *Black* court, reviewed the materials submitted and determined that there was no scientific basis from which the cause of fibromyalgia could be understood.

Riccio v. S & T Contractors (2001) similarly appears to be a trial court ruling, this time from Pennsylvania, a *Frye* state. The *Riccio* court had before it a substantial volume of material, much of it identical to that before this court (including the Buskila study), and concluded that the theory of causality is not generally accepted, and, indeed, that the causes of fibromyalgia are unknown. The court reasoned that whether it analyzed the question under *Frye* or *Daubert*, the evidence should be excluded:

8. Daubert Analysis

Although Washington remains a *Frye* state, the court has also examined the *Daubert* factors to a limited extent. The causation, as opposed to the diagnosis, of a medical condition is appropriate for such an analysis, as it requires scientific information (if it did not, then the testimony of plaintiff's experts could be considered irrelevant). After reviewing the articles and literature presented by both sides, there appear to have been no full-scale tests of the causal link; the closest any researcher has come has been Buskila, who has reported a single case-control study. At this point, it appears that the entirety of the information regarding the hypothesized causal link is based on clinical experience. The *Joiner*[3] decision is instructive in this regard. In that case, the disputed testimony concerned the "promotion" of plaintiff's cancer by exposure to PCBs and their derivatives. The trial court excluded the testimony because it was not supported by epidemiological studies, and the animal studies on which the expert relied was not sufficiently similar. (Plaintiff did submit epidemiological studies, but the court had adjudged them insufficiently reliable.) In upholding the district court under an abuse-of-discretion standard, the U.S. Supreme Court reaffirmed that "nothing in either *Daubert* or the Federal Rules of Evidence required the admission of opinion evidence which is connected to existing data only by the *ipse dixit* of the expert.

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[3] *General Electric v. Joiner*, 522 U.S. 136 (1997)

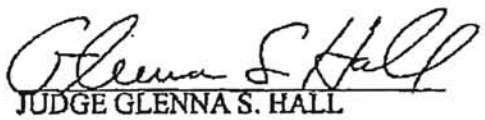
9. Evidence Rule 702

No issues have been brought to the court's attention for the purpose of this motion regarding the qualifications of plaintiff's experts, although defendant did have some problems concerning the areas of expertise of some. Nor is there any question that, if the proffered evidence qualified under *Frye*, it would assist the trier of fact. Indeed, the evidence is central to plaintiff's case. However, there is also nothing in ER 702 that renders the evidence admissible over a disqualification under *Frye*.

10. Conclusion

The evidence sought for admission does not satisfy *Frye*, as it does not appear to be generally accepted in the relevant scientific community. Even under a *Daubert* standard, it does not appear to be grounded in reliable scientific analysis or methodology, and may not be admitted. The defendant's motion is granted.

DATE: February 19, 2002



JUDGE GLENNA S. HALL

Only the Westlaw citation is currently available.

Pennsylvania Court of Common Pleas.

William R. RICCIO, et al.
v.
S & T CONTRACTORS, et al.

Nos. 98-07740, 98-07741, 99-05984, 99-06295, 99-06359.

June 22, 2001.

James M. Holston, and Scott M. Brevic, for Plaintiffs Carla and Henry Ramos.

Philip G. Kircher, for Plaintiff William R. Riccio.

William J. Weber, Jr., for Plaintiff Norman Stephen.

Joseph M. O'Neill, and Gino Mecoli, for Defendants Norman Stephen and Roslyn N. Stephen.

Kimberley J. Woodie, for Defendant Modern Exterminating & Termite Control Co.

James K. Fetter, for Additional Defendants Richard Cassidy and Custom Contracting.

MAHON, J.

*1 This *22nd* day of June, 2001 on consideration of the Motions in Limine of Defendants Modern Exterminating and Control Co., Inc. ("Modern") and Norman and Rosyln Stephen ("Stephens") seeking preclusion of evidence of a causal link between a deck collapse on July 25, 1997 and Plaintiff Carla Ramos' (now Carla Cruse) fibromyalgia syndrome or its aggravation we enter the following:

OPINION

The factual and procedural history of these consolidated matters is described in detail in our prior orders and will not be repeated here. In particular, the parties, their claims, and the manner of consolidation are described in our Order of June 29, 2000. [FN1] As a précis, "in these consolidated civil actions sounding in negligence, breach of contract, breach of the warranty of habitability, strict liability, and loss of consortium, a homeowner [Norman Stephens] and his guests [William Riccio, Dianne Dryer, Henry Ramos, and Carla Cruse] injured on July 25, 1997 when an elevated wooden deck, attached to [the Stephens'] single-family home in Easttown Township, Chester County, collapsed during a social event; seek damages from the home's general contractor, the construction superintendent, the deck sub-contractor, the homeowners at the time the deck was constructed, the homeowners at the time the deck collapsed, and an exterminating company which was retained more than a year prior to the collapse to inspect the deck...." [FN2] This description of the litigation at the juncture of initial consolidation includes parties, claims, and issues since dismissed from the matter as a consequence of voluntary discontinuance and our Orders resolving a series of preliminary objections, motions for judgment on the pleadings, motions for summary judgment, and motions in limine. As the litigation is presently constituted, only the Stephens as the homeowners at the time of the collapse and Modern remain as Defendants.

FN1. See, particularly, marginal note 1 thereof.

FN2. Order of June 29, 2000 at pages 1-2.

By these motions in limine, both Defendants seek to limit the compensable injuries of Plaintiff Carla Cruse and, specifically, to preclude the introduction of evidence in support of her claim that the deck collapse and resulting trauma either caused *ab initio* or aggravated a medical condition with which she has been diagnosed: fibromyalgia syndrome. [FN3] Defendants contend that there is no general consensus in the relevant scientific community that fibromyalgia syndrome is causally related to trauma and, therefore, that evidence of such a relationship, in the form of expert medical testimony or otherwise, is inadmissible.

FN3. Occasionally also referred to hereinafter (especially in the excerpted authorities cited) as "fibromyalgia", "fibrositis", "fibrositis syndrome", "FM" or "FMS").

There can be no doubt that among the duties of this Court is the performance of its function as a "gatekeeper" whenever science enters the courtroom and, particularly, when expert testimony relying upon

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novel scientific evidence is offered. As the Pennsylvania Superior Court explained in Blum v. Merrell Dow Pharmaceuticals, Inc., 705 A.2d 1314, 1322 (Pa.Super.1997) *aff'd* ___ Pa. ___, 764 A.2d 1 (2000):

> *2 [I]n dealing with complex scientific theories, cross-examination is not the appropriate tool to test the speciousness or accuracy of the expert's testimony where the evidence on which that testimony is based is not deemed reliable.... [T]he judge as gatekeeper decides whether the expert is offering sufficiently reliable, solid, trustworthy science. The question is: is the science good enough to serve as the basis for the jury's findings of fact, or is it dressed up to look good enough, but basically [is] so untrustworthy that no finding of fact can properly be based on it. If the latter is true, the integrity of the trial process would be tainted were the jury to consider it.

The United States Supreme Court discussed the necessity of this judicial role in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 592 (1993) in the following terms:

> Unlike an ordinary witness ... an expert is permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation.... Presumably, this relaxation of the usual requirement of firsthand knowledge—a rule which represents "a 'most pervasive manifestation' of the common law insistence upon 'the most reliable sources of information' ", ... is premised on an assumption that an expert's opinion will have a reliable basis in the knowledge and experience of his discipline.

Id. (Citations omitted).

In this Commonwealth, a determination of the reliability and, therefore, admissibility of scientific evidence requires the proponent to establish that the evidence concerns a matter which "has achieved 'general acceptance' in the relevant scientific community." Blum v. Merrell Dow Pharmaceuticals, Inc., 564 Pa. 3, 764 A.2d 1 at *2 (Decided December 22, 2000). [FN4] As the Court explained in *Frye:*

> FN4. Declining (as unnecessary in the particular case which involved evidence inadmissable under either standard) to adopt in Pennsylvania the less restrictive standard determined by the United States Supreme Court in *Daubert* to be mandated in federal jurisprudence by Fed. R. Civ. Pro. No. 702 and refusing to overturn the rule of Frye v. United States, 293 F. 1013 (D.C.Cir.1923) adopted as this Commonwealth's governing principle by Commonwealth v. Topa, 471 Pa. 223, 369 A.2d 1277 (1977).

> The rule is that the opinions of experts or skilled witnesses are admissible in evidence in those cases in which the matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment upon it, for the reason that the subject-matter so far partakes of a science, art, or trade as to require a previous habit of experience or study in it, in order to acquire a knowledge of it. When the question involved does not lie within the range of common experience or common knowledge, but requires special experience or special knowledge, then the opinions of witnesses skilled in that particular science, art, or trade to which the question relates are admissible in evidence.
>
> Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

*3 *Id.* 293 F. at 1014.

There is some uncertainty as to whether it is the witness' *conclusion* or *methodology* or both which must have achieved general scientific acceptance as a precondition to evidentiary admissibility. See, for example, the dissenting Opinion of Mr. Justice Cappy in *Blum* which includes the following discussion:

> The Superior Court is correct that this court has long interpreted *Frye* as requiring that the *methodology* employed by the testifying scientist be generally accepted in the scientific community. *See e.g.* Commonwealth v. Blasioli, 552 Pa. 149, 713 A.2d 1117, 1119 (1998). Yet, we have not stated that the *conclusion* reached by the scientist regarding causation must also be generally accepted in the scientific community.
>
> As noted by the Superior Court, this additional step in the *Frye* test-- requiring that the conclusion also be generally accepted by the scientific community--was added by the Commonwealth Court in McKenzie v. Westinghouse Electric Corp., 674 A.2d 1167 (Pa.Commw.Ct.1996). I cannot find that this court, however, has endorsed this interpretation of the *Frye* test.

764 A.2d at 5 (Emphasis in the original). But

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compare the decisions of the Pennsylvania Superior Court reported as Thomas v. West Bend Co., Inc., 760 A.2d 1174, 1177 (Pa.Super.2000) (approving the trial court's conclusion with respect to the proffered expert witness that "[n]either his exemplary qualifications, nor his extensive experience, nor the soundness of his methodology is sufficient to overcome the novelty of his scientific advance."); Wack v. Farmland Industries, Inc., 744 A .2d 265 (Pa.Super.1999) *appeal denied* 2001 WL 355678 (Pa. April 10, 2001) (Superior Court's decision in *Blum* "recognized admissibility requires both the causal relationship and the methodology to be generally accepted by the scientific community."); Checchio v. Frankford Hospital–Torresdale Division, 717 A.2d 1058, 1060 (Pa.Super.1998) ("[T]his court, following *Topa*, ruled that the analysis to be applied in answering the question of whether the *Frye/Topa* admissibility criterion had been met was two pronged: acceptance in the scientific community of first the causal; and then the methodological relationship alleged.").

Whatever its intellectual interest and present indeterminacy in the decisions of our Supreme Court, the distinction between conclusory and methodological acceptance is of no moment here because: (1) the parties have neither raised nor briefed the issue; (2) the Superior and Commonwealth Courts (decisions of which are here controlling) have each clearly stated that general scientific acceptance must be an attribute of both; and (3) for the reasons discussed at length below, neither the method nor the causal conclusion proffered by the Plaintiff have achieved the consensus requisite to testimonial admissibility.

We note in closing on this preliminary issue that in those cases, like that here presented, which turn on scientific causation, the authorities are clear and uniform that the causal conclusion itself must be accepted as a general matter in the relevant scientific community before expert testimony of the existence of causality in the particular case may be properly admitted. See, for example, *Blum*, (causal relationship between ingestion by the mother of the prescription drug Bendectin and fetal abnormalities i.e. teratogenic property of Bendectin); Commonwealth v. Dunkle, 529 Pa. 168, 602 A.2d 830 (1992) (causal connection between sexual abuse and a syndrome of child behaviors); *Thomas* (causal relationship between low voltage shock and cardiomyopathy); *Wack* (causal relationship between ingestion of benzene contaminated drinking water and rare salivary gland cancer); *Checchio* (causal relationship between neonatal respiratory distress and autism); *McKensie* (causal connection between mother's exposure to gasoline additive contaminated groundwater and neonatal cardiac abnormalities), Commonwealth v. Miller, 367 Pa. Superior Ct. 359, 532 A.2d 1186 (1987) (causal connection between alcohol consumption and horizontal gaze nystagmus). See also *Wimberly v. Wyeth Laboratories, Inc.*, 48 Leh.L.J. 47 (1998) (causal connection between use of Norplant contraceptive and patient's stroke); *Trach v. Thrift Drug, Inc.*, 46 D. & C. 4 th 231 (Lehigh County 2000) (causal relationship between ingestion of Doxepin, an antidepressant, and the patient's glaucoma and cognitive difficulties). As the Commonwealth Court explained in *McKensie:*

> *4 In order for scientific testimony indicating that an event causes a particular result to be admitted, there must be a showing not that the studies establishing the causal relationship follow generally accepted methodologies, but that the existence of the causal relationship is generally accepted by the relevant medical community.

Id. 674 A.2d at 1172.

In the matter *sub judice*, a causal relationship is alleged between the physical injuries received by Plaintiff Ramos/Cruse when the deck collapsed [FN5] and either the onset or aggravation of her fibromyalgia syndrome. Expert testimonial evidence of the existence of such a causal relationship in the particular circumstances of this case is admissible under *Frye/Topa* only if a causal potential as a general matter between trauma of the type suffered by the Plaintiff in the incident and the fibromyalgia syndrome has "gained general acceptance in the relevant scientific community." Commonwealth v. Blasioli, 552 Pa. 149, 153, 713 A.2d 1117, 1119 (1998). [FN6]

FN5. In the immediate aftermath of the deck collapse, an ambulance was summoned; the Plaintiff, complaining of severe pain in her ankle and posterior, was transported to the Paoli Memorial Hospital where she was admitted for examination including x-ray studies which, in the end, revealed no fractures and established that the Plaintiff's immediate injuries were limited to an ankle sprain and bruising of the affected areas.

FN6. Concerning the admissibility of statistical probabilities in DNA forensic analysis the court noting that "[t]his Court has generally required that both the theory and technique underlying novel scientific evidence must be generally accepted." Id. at

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153, 713 A.2d at 1119.

There is no present dispute concerning Plaintiff Ramos'/Cruse's diagnosis of fibromyalgia, a syndrome typically described as "a chronic, widespread musculoskeletal pain and fatigue disorder for which the cause is unknown...." [FN7] Specific diagnostic criteria for fibromyalgia were accepted and published in 1990 by the American College of Rheumatology. [FN8] It is estimated that up to two (2) percent of the general United States population, primarily adult women, is affected with fibromyalgia. [FN9] "Syndromes" differ from "diseases" in that the former are purely descriptive of an association of symptoms and signs that occur together while the latter possess an understood origin, cause and mechanism of action; known as an etiology or pathogenesis.

FN7. "Syndrome Description" contained in the political case statement of The Fibromyalgia Network; URL: *http://www.fmnetnews.com.* See also the materially identical formulation contained in, Buskila, D. et al. "Increased Rates of Fibromyalgia Following Cervical Injury", 40 Arthritis and Rheumatism page 446, March, 1997, an authority on which the Plaintiff chiefly relies in resisting the instant Motions: "Fibromyalgia Syndrome (FMS) is a chronic, painful musculoskeletal disorder of unknown etiology.".

FN8. See Wolfe F., Smythe HA., Yunus MB., et al. "The American College of Rheumatology 1990 Criteria for the Classification of Fibromyalgia. Report of the Multicenter Criteria Committee." Arthritis Rheum 1990: Vol. 33; Wolfe F., et al., "The ACR Criteria/Classification of FMS", Arthritis & Rheum, Feb. 1990.

FN9. Wolfe F., et al., "Prevalence and Characteristics of FMS in the General Population," Arthritis & Rheum, Jan. 1995.

As principal support for their Motions in Limine, Defendants offer a document published in 1996 and styled: "The Fibromyalgia Syndrome: A Consensus Report on Fibromyalgia and Disability" ("Consensus Report") which appeared in Volume 23 of The Journal of Rheumatology. Among the conclusions voted upon and approved by "a committee of fibromyalgia (FM) experts .... [FN10] are the following:

FN10. Convened at the University of British Columbia, Vancouver, Canada and organized by the Physical Medicine Research Foundation in association with the Division of Rheumatology and the Division of Infectious Diseases. University of British Columbia with Dr. Frederick Wolfe, M.D., Clinical Professor of Internal Medicine and Family and Community Medicine, University of Kansas School of Medicine, as the lead researcher and author.

While the association between work disability or compensation and FM is well established, data regarding causality are largely absent.
* * *
Overall, then, data from the literature are insufficient to indicate whether causal relationships exists between trauma and FM. The absence of evidence, however, does not mean that causality does not exist, rather that appropriate studies have not been performed. [FN11]

FN11. *Id.* at pages 534-35.

The "Consensus Statement" concerning causality is as follows:

Causality. The cause(s) of FM are incompletely understood. There may be events reported by the patient as precipitating and/or aggravating, including physical trauma, emotional trauma, infection, surgery, and emotional or physical stress. In determining the relationship between FM and antecedent events, the physician should consider the patient's opinion, and review the events and pertinent collateral information, including current and past medical and psychosocial history. The chronology of symptoms should be documented. [FN12]

FN12. *Id.* at page 536.

*5 Defendants additionally rely on a report dated December 31, 2000 prepared by the Consensus Report's lead researcher, Dr. Frederick Wolfe, on the basis of a review of Carla Ramos/Cruse's medical records and the transcript of her deposition taken in

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this case. Dr. Wolfe's statement of his qualifications and introductory remarks concerning fibromyalgia syndrome generally is followed, in part, by the following conclusions concerning causation:

> Causation. In general, physicians have only an incomplete understanding of the mechanisms by which fibromyalgia develops. There are several settings in which fibromyalgia develops: 1) Some individuals appear to develop pain problems in childhood or adolescence and continue those problems through most of their life; 2) Some develop gradually increasing pain or fatigue problems in adult life--this is the largest and predominant group of fibromyalgia patients; 3) Some develop pain and fatigue problems suddenly in adult life; 4) a group appears to develop fibromyalgia after some sort of trauma, usually physical trauma, but occasionally after illnesses or surgery; and 5) with the advance of fibromyalgia into the medico-legal setting, almost any stressful or adverse event can be causally associated with fibromyalgia *by the patient*. (Emphasis in the original).
>
> ...
>
> It is possible that causes might differ from individual to individual, or might be multiple. *But the answer to the causal question has not been determined by science. Epidemiological studies that might be able to unravel causal issues in fibromyalgia that follows upon trauma or other events have not been performed.* [FN13] (Emphasis supplied).

FN13. December 31, 2000 Wolfe Report at page 5.

With respect to Plaintiff Carla Ramos/Cruse, Dr. Wolfe first agrees with the fibromyalgia diagnosis and then concludes, on the basis of a detailed review of the Plaintiff's medical records which include fibromyalgia diagnoses as early as 1995 [FN14] and related diagnoses of chronic myofascial pain in 1994 [FN15] that the Plaintiff's fibromyalgia "was present prior to the [1997 deck collapse] accident." [FN16] Finally, Dr. Wolfe opines that:

FN14. See DeKalb Clinic History Sheet # 94243 dated November 10, 1995.

FN15. See office visit note of Gary S. Skaletsky, M.D. dated December 30, 1994.

FN16. December 31, 2000 Wolfe Report at page 7.

> [b]ased on these data one cannot conclude that the accident caused an exacerbation of her fibromyalgia; only that it was a component of her total illness. There is no reason to expect that she should not have healed almost completely from the accident; particularly in view of the fact that she suffered almost no injury. It is likely that other factors contributed to the worsening of her illness, and that these factors were the pre-existing psychological and behavioral factors that can be seen to be developing in the decade before the accident.
>
> With reasonable medical certainty, I conclude that the accident of July, 1997 did not cause the subsequent illness of which she now complains, nor did it exacerbate it.

December 31, 2000 Wolfe Report at page 8.

Thus, the Defendants, as proponents of the Motions in Limine have presented compelling evidence to support their contention that the causal relationship between trauma and fibromyalgia has not gained acceptance among the relevant scientific community as a general proposition and, as a consequence of this general lack of causal consensus as well as the particular absence of causal indicia in Plaintiff's medical history, that evidence of such a relationship in the particular circumstances of the Plaintiff's claim would be inadmissible.

*6 To this end, Defendants further submit and request this Court to notice as a judicial determination, the ruling of Judge (now President Judge) Riley of this Court in the case captioned *Adrienne J. Karr v. Paoli Memorial Hospital*, docketed to No. 97-0023 in which the Court granted a motion in limine precluding evidence of a causal relationship between trauma and fibromyalgia following extensive argument and a review of the Consensus Report and eight (8) articles from medical journals presented by plaintiff Karr's counsel in response to the Consensus Report and in opposition to the motion. Defendants have presented the transcribed record of the judicial proceeding conducted by Judge Riley on January 4 and 5, 2000 including the ultimate ruling of the Court granting the Motion in Limine on the ground that there is no general agreement in the relevant scientific community as to a causal relationship between trauma and fibromyalgia. [FN17]

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FN17. See *Karr v. Paoli Memorial Hospital*, No. 97-0023; Notes of Testimony, January 5, 2000 at pages 12-13.

In *Yudacufski v. Commonwealth Department of Transportation*, 499 Pa. 605, 612, 454 A.2d 923, 926 (1982), involving a landowner's appeal from the denial of a request for a change of venue supported by allegations of local prejudice materially identical to allegations which had induced a different judge of the same court in a prior case to grant a venue change, our Supreme Court held that

> a decision of a judge of this court "establish[es] the law of [the] judicial district...." It is well-settled that, absent the most compelling circumstances, a judge should follow the decision of a colleague on the same court when based on the same set of facts.

Id. See also *Commonwealth v. Starr*, 541 Pa. 564, 664 A.2d 1326 (1995) and *Commonwealth v. McCandless*, 2001 Pa.Super. 168, 2001 WL 611467 (decided June 6, 2001) ("Law of the case" doctrine "embod[ies] the concept that a court involved in the later phases of a litigated matter should not reopen questions decided by another judge of that same court ..."); *Zane v. Friends Hospital*, 770 A.2d 339 (Pa.Super.2001); *Klein v. Weisberg*, 694 A.2d 644 (Pa.Super.1997). On these authorities alone we would be compelled to grant the instant motions in the absence of persuasive evidence of a pertinent scientific development in the period since Judge Riley's ruling. [FN18]

FN18. We emphasize that the present inquiry is limited to the existence of a consensus among pertinent practitioners *at this time*. We have no doubt that medical science in general and its understanding of chronic pain syndromes including fibromyalgia will continue to develop. At some time in the future the precise mechanism by which fibromyalgia is caused and the course of the syndrome can be altered may well be a subject concerning which the relevant scientific community has reached consensus. It may even be likely that such a consensus will arise in the near term. That is beside the present point which has to do only with whether such a consensus has been shown to exist *today*.

In response to the Motions in Limine Plaintiff submits more than one dozen documents purporting to establish a consensus as to the causal role of trauma in the onset or aggravation of fibromyalgia. We will consider these authorities below seriatim but we note at the outset that none purports to represent a scientific advance either in the period since this Court's ruling in *Karr v. Paoli Memorial Hospital* or in the period since the Consensus Report. More pointedly, these authorities fail to support, much less persuasively establish, the existence of a consensus among scientists as to the cause of fibromyalgia syndrome.

First and in our view most weighty, is an article apparently published in the Journal of Clinical Rheumatology, Vol. 3, No. 6, December 1997 entitled "Fibromyalgia Consensus Report: Additional Comments" ("Additional Comments"). On the specific subject of causality, the Additional Comments authors first note that "[c]ausal propositions are rarely established with absolute certainty in the realm of medicine" and then propose "[a]n alternative (and better known) model [of causality i.e.] the consideration of consistency of association, dose-response relationship, and biologic plausibility." [FN19]

FN19. *Id.* at 324.

*7 Notably, however, the authors of Additional Comments do not assert either that the alternative causal model is generally accepted in the relevant scientific community or that this community, when utilizing the alternative model, arrives (or has arrived) at a consensus as to the causal role played by trauma in the onset or course of the fibromyalgia syndrome. Instead, the Additional Comments authors continue with the following argument:

> In the context of a legal setting (where the Consensus Report is likely to be used), causality entails only 51% certainty, usually stated in terms of reasonable medical probability. Based on a consistent clinical pattern .... case-control or descriptive studies .... and biologic plausibility of central nervous system plasticity .... it seems more than 51% likely that trauma does play a causative role in some FMS patients, as agreed by other independent observers....

Id. at 325.

In our view this syllogism misses the mark. The premise that "[i]n the context of a legal setting ... causality entails only a 51% certainty ..." is simply incorrect. As we have explained, in order to survive a motion in limine brought pursuant to *Frye/Topa* the proponent of evidence of scientific causality must

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establish general agreement in the relevant scientific community that the causal proposition is true. At trial, medical opinions must be given by the expert witness to a reasonable degree of medical certainty. [FN20] The issue of evidentiary preponderance (i.e. "fifty-one (51%) percent") is one for the fact finder in reaching a verdict after all questions of the admissibility of evidence have been resolved, the evidence has been adduced, and the fact finder has determined what evidence to credit and the evidentiary weight to be assigned. Evidentiary preponderance is not a test of admissibility and the conclusion derived from this premise by the authors of the Additional Comments must be disregarded.

FN20. See, for example, *Michaelson v. Workmen's Compensation Appeal Board*, 126 Pa.Commonwealth Ct. 542, 548, 560 A.2d 306, 309 (1989) for the proposition that "a reasonable degree of medical certainty" is equivalent to a statistical probability of eighty (80%) percent or more.

Plaintiff also submits a study published in Volume 40 of Arthritis and Rheumatism, March, 1997 entitled: "Increased Rates of Fibromyalgia Following Cervical Spine Injury--A Controlled Study of 161 Cases of Traumatic Injury." The conclusion supported by the study as summarized by its authors, including the Defendants' expert Dr. Frederick Wolfe, is that "FMS was 13 times more frequent following neck injury than following lower extremity injury." [FN21] The authors further opine that "[d]espite extensive research, the etiology and pathophysiology of FMS are still unclear.... Evidence that trauma can cause FMS comes from a few case series or case reports and is *insufficient* to establish causal relationships." [FN22] The slight support provided by this numerically limited study bolsters the Defendants' position. [FN23]

FN21. *Id.* at 446.

FN22. *Id.* (Emphasis supplied).

FN23. We also note in this regard that the deck collapse caused injury to the Plaintiff's lower extremity (that is, an ankle sprain) and was not reported as having injured her neck.

The third authority advanced by Plaintiff, another article by Dr. Wolfe entitled "Post-Traumatic Fibromyalgia: A Case Report Narrated by the Patient," published in 1994 by the American College of Rheumatology, predates the Consensus Report and draws no general conclusions as to causality.

*8 The fourth authority is the report of Plaintiff's expert Dr. Lawrence J. Leventhal dated December 23, 1999, in which the physician concludes:

> Based on careful scrutiny of medical records preceding the accident of July 25, 1997, I conclude that Ms. Ramos' current medical condition is a direct result of the deck collapse accident of July 25, 1997. Although Ms. Ramos was involved in 2 prior accidents resulting in transient myofascial pain, she fully recovered from these injuries. Additionally, Ms. Ramos was successfully being treated for depression prior the accident. Her resultant pain and decreased function as a result of the deck collapse led to an exacerbation of her previously controlled depression. *The close temporal relationship between the deck collapse and onset of her fibromyalgia indicate a direct cause and effect relationship.* [FN24]

FN24. Leventhal Report dated December 23, 1999 page 5 (emphasis added).

Dr. Leventhal does not assert the existence of a scientific consensus as to the causal relationship between trauma and fibromyalgia. The particular causal conclusion expressed in the Report and quoted above is, by its terms, an example of the classic logical fallacy of concluding causation from chronology alone known generally as *non causa pro causa* and more particularly as *post hoc ergo propter hoc*. We agree with the Court of Appeals' holding in *Black v. Food Lion, Inc.*, 171 F.3d 308, 312 (5 th Cir.1999) [FN25] that this fallacy "is as unacceptable in science as in law."

FN25. This authority is discussed in greater detail below.

The fifth through eight documents submitted by Plaintiff are excerpts from the transcribed deposition testimony of Carla Cruse taken on August 17, 2000 and January 14, 1999, and of Henry Ramos taken on February 2, 2000 and January 14, 1999; neither of these deponents has been offered as an expert witness. Therefore, neither of these witnesses is

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capable of supporting by their testimony the existence of a consensus among relevant medical practitioners concerning the cause(s) of fibromyalgia. These documents are not relevant to the issue raised by the instant motions in limine.

The ninth document proffered by the Plaintiff is a Center Report dated December 22, 1999 prepared by Nathan M. Smukler, M.D. Dr. Smukler concludes from an evaluation of Plaintiff performed at Thomas Jefferson University Fibromyalgia Center:

> [T]hat at the outset, Ms. Ramos experienced pain induced by the accident; however, over time (weeks or months) the affective (emotional-motivational) component became prominent resulting in anxiety, depression and pain vigilance and subsequently, these feelings were expressed as pain hyper-sensitivity (fibromyalgia). It may be reasonably speculated that her time away from work, inability to participate in her favorite activity, walking, decreased income and possibly factors in her psychological composition contributed to an affective component of her pain which ultimately resulted in fibromyalgia.

Smukler December 22, 1999 Report at page 3. This report lends no support to the existence of the necessary scientific consensus. Moreover, the expert's description of his opinion as a "reasonable speculation" demonstrates the lack of the required certainty. The substance of the opinion—that the Plaintiff's fibromyalgia may have been the direct consequence of anxiety, depression, pain vigilance, time away from work, inability to participate in favorite activities, decreased income, and "possibly" psychological factors and an "affective component of her pain" lends scant support to the existence of a causal connection between the deck collapse trauma and fibromyalgia even in the particular case.

*9 The tenth authority submitted is the December 31, 2000 Report of Dr. Frederick Wolfe which we have previously described in some detail and which, in fact, is one of the central authorities supportive of the Defendants' position that no scientific causal consensus presently exists. As we have noted, Dr. Wolfe's conclusion with respect to the central issue now before us is that "physicians have only an incomplete understanding of the mechanisms by which fibromyalgia develops." [FN26] Indeed, in this expert's considered view, no uniform consensus presently exists even as to the legitimacy of fibromyalgia as a diagnosis. "[A]ll physicians do not agree with the legitimacy of fibromyalgia as a medical concept...." *Id.* at page 6. Finally, as we have discussed in some detail above, Dr. Wolfe's particular conclusions with respect to the Plaintiff include "that fibromyalgia was present prior to the [deck collapse] accident" [FN27] and "that the accident of July, 1997 did not cause the subsequent illness of which [the Plaintiff] now complains, nor did it exacerbate it." *Id.* at page 8.

FN26. Wolfe Report of December 31, 2000 at page 5.

FN27. *Id.* at page 7.

The eleventh authority submitted by the Plaintiff is an undated article of undisclosed provenance entitled "Chronic Pain Solutions" apparently authored by a Mark J. Pellegrino, M.D., including the statement that:

> Doctors that treat large numbers of fibromyalgia patients report that the majority of patients say that their fibromyalgia was caused by an injury. In my own private practice, I analyze patients with the diagnosis of fibromyalgia to determine the cause. From 1990 to 1995, 2,000 records of fibromyalgia patients were reviewed. Of those, 65% reported the onset of their symptoms of fibromyalgia after a trauma event. Of this group, 52% of them were involved in a motor vehicle accident, 31% had work injuries, and the remaining 17% had another type of trauma; included in this category were sports injuries, recreational injuries, fractures, surgical procedures, head injuries and pregnancy. Of the post-traumatic patients involved in motor vehicle accidents, whiplash injury was the most common type of trauma.

Id. at unnumbered page 1. Of course, a catalog of patient self-reports does not constitute an epidemiological study and is insufficient to demonstrate anything more than temporal coincidence.

Dr. Pellegrino goes on to describe the study of Dr. Buskila et al. concerning 161 patients (the report of which study published in Vol. 40 of the Journal Arthritis & Rheumatism in March, 1997 was the Plaintiff's second authority submitted in opposition to the motions in limine) and concludes "[t]his study shows that fibromyalgia is caused by trauma." *Id.* at unnumbered page 2. For the reasons we have discussed above, the study, in fact, demonstrates no such causal connection. Dr. Pellegrino does not assert the existence of a scientific consensus as to the causal relationship between trauma and fibromyalgia, the only issue raised by the instant motion.

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*10 The twelfth authority submitted by the Plaintiff purports to be the 80 th chapter of the 11 th edition of a text entitled *Arthritis & Allied Conditions--A Text Book of Rheumatology*, published in 1989 by Lea & Febiger, Philadelphia, Pennsylvania. The excerpted chapter, entitled "Non-Articular Rheumatism and Psychogenic Musculoskeletal Syndrome" and is authored by one Hugh A. Smythe (the author is otherwise unidentified), includes the initial observation that "[f]ibrositis syndrome is one of the most common conditions diagnosed in new patients seen by practicing rheumatologists"; notes that "[a] scientific basis for the study of these patients is rapidly evolving, based on data from well-designed prospective studies ...", and discusses and distinguishes related conditions or diagnoses including "masked depression", "fibrositic personality", various forms of hysteria and hypochondria, referred pain syndrome, and pyschogenic musculosketal syndromes including: psychosomatic production of symptoms or disease, exaggeration (or denial), subconscious use of existing disease for secondary gain, conversion reactions, [FN28] and malingering. As to these conditions, the author concludes that "[t]he clinical presentation differs from the fibrositis syndrome." *Id.* at page 1251.

FN28. That is, pyschogenic regional pain and hysteria.

The author concludes in a section entitled "Trauma and Occupation" that "[t]ramua may initiate a chronic fibrositis syndrome, with a frequency of 24% in one study of 95 patients." [FN29] Among other potential causes, the author lists "[e]xposure to cold, wet, drafts and sudden changes in weather", depression, myalgia following unaccustomed exercise, viral infection, and sleep disturbance. [FN30] In the section of the chapter entitled "Pathogenesis" [FN31] the author describes a study in which "many features of the [fibromyalgia] syndrome" were reproduced by experimentally induced sleep disturbance; and opines that these "findings ... are crucial to developing a theory of pathogenesis. If these results are verified, the syndrome must be essentially a neurologic phenomena--in these authors' terms, a 'pain-modulation' disorder involving subcordical and spinal gating mechanisms." [FN32]

FN29. *Id.* at page 1249.

FN30. *Id.*

FN31. Meaning the origin and development of a medical condition.

FN32. *Id.* at page 1247.

In the absence of information concerning the author of this portion of the text or of the standing of the text itself among practitioners in the field, it is not possible to assess the weight of this evidence or its ability to overcome any of the force of the authorities presented by the Defendants. More importantly for our present purposes, the views of this author, appearing in a text published in 1989, do nothing to cast doubt on the continuing correctness of the Consensus Report or of this Court's ruling in *Karr v. Paoli Memorial Hospital.* This author does not assert the existence of a scientific consensus as to causality and we certainly could not conclude that such a consensus exists from the fact that this one author has been so persuaded.

*11 The last authority submitted by the Plaintiff is a letter evidentially appearing in Vol. 159, No. 20 of the Archives of Internal Medicine, November 8, 1999 entitled "Patients With Fibromyalgia Must be Treated Fairly". The letter comments on an article which appeared in a prior issue of that publication entitled "Fibromyalgia Syndrome a Decade Later: What Have We Learned?" Arch. Intern. Med.1999; 159: 777-785, and takes issue particularly with the statement contained in the earlier article that "[e]vidence to determine whether there is a causal relationship between trauma and FM is currently inadequate." The letter author, Thomas J. Ramano, M .D. PhD (whose background and expertise is otherwise unrevealed) describes the study of Buskila D, et al. of 161 patients experiencing traumatic injury--which study has been twice the subject of comments herein--and opines that: "[e]very study that has examined the relationship between trauma and fibromyalgia has revealed that trauma can indeed be a potential cause of this painful and frustrating problem." [FN33] This authority, while insufficient to support any judgment concerning the expertise or standing of its author, effectively memorializes as of the date of its publication; November 8, 1999, the *absence* of scientific consensus. The author is responding by letter to an article that appeared in publication earlier that same year and which asserted the inadequacy of experimental evidence to support a causal conclusion.

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The fact that the letter author cites a number of studies having, arguably, the opposite import, establishes only that there was at the time of the letter substantial disagreement on this point among practitioners in the field. Under *Frye/Topa*, the existence of such disagreement precludes the admission to the fact finder of expert evidence of causality.

FN33. Thomas J. Ramano, Arch. Intern. Med.1999; 159: unnumbered page 1. Modification of the causal assertion both by the adjective "potential" and by the use of the auxiliary verb "can" constitutes a degree of equivocation unacceptable in this context.

In sum, none of the authorities presented by the Plaintiff has the effect of refuting those marshaled by the Defendants and persuasively establishing the absence of a consensus in the relevant scientific community as to the cause [FN34] of fibromyalgia syndrome generally or *a fortiori* the particular causal role of trauma in the onset or development of fibromyalgia. Under *Frye/Topa*, the existence of such a consensus is a necessary precondition to admissibility of expert evidence that Plaintiff's trauma following the deck collapse caused her fibromyalgia.

FN34. Etiology or pathogenesis.

Although not brought to our attention by the parties, we note that our conclusion is also consistent with that reached by those courts in other jurisdictions which have considered directly and specifically the admissibility of evidence of a causal connection between trauma and fibromyalgia. In the most significant of these, *Black v. Food Lion, Inc.*, the plaintiff was injured in a slip and fall accident in the grocery store and won a substantial monetary award before a federal magistrate judge "principally because she had been diagnosed with fibromyalgia syndrome, an illusive but debilitating affliction." [FN35] The appellate court describes the issue on appeal as "[w]hether [the plaintiff] produced reliable expert evidence that her slip-and- fall injury caused fibromyalgia...." [FN36]

FN35. *Id.* 171 F.3d at 309.

FN36. *Id.*

*12 The appellate court then analyzes the magistrate's rationale for admission of expert evidence of causality; an evidentiary ruling on which the verdict largely depended. This analysis, involving the meaning and effect of the Consensus Report, is equally persuasive in the present context [FN37] and includes the following:

FN37. And, particularly, in assessing the opinions of Plaintiff's experts Leventhal and Smukler.

Thus, the magistrate judge read the [Consensus Report] to approve "an accepted protocol in rendering an opinion in terms of reasonable medical probability." He then found that [the treating physician] followed this protocol by (a) taking a medical history for [the plaintiff], (b) ruling out prior or subsequent "causes" of fibromyalgia, (c) performing or reviewing physical tests [which all turned up negative], and (d) deducing that the Food Lion fall was the only possible remaining cause of fibromyalgia that appeared nine months later.

This analysis amounts to saying that because [the treating physician] thought she had eliminated other possible causes of fibromyalgia, even though she does not know the real "cause", it had to be the fall at Food Lion. This is not an exercise in scientific logic but in the fallacy of *post-hoc propter-hoc* reasoning, which is as unacceptable in science as in law. By the same "logic," [the treating physician] could have concluded that if [the plaintiff] had gone on a trip to Disney World and been jostled in a ride, that event could have contributed to the onset of fibromyalgia. See, e.g. *Allen v. Pennsylvania Eng'g Corp.*, 102 F.3d 194, 195-96 (5 th Cir.1996) (expert evidence suggesting connection between exposure to ethylene oxide and brain cancer insufficient under *Daubert*).

The court's task was to determine whether [the treating physician]'s methodology tied the fall at Food Lion by some specific train of medical evidence to [the plaintiff]'s development of fibromyalgia. No one doubts the utility of medical histories in general or the process by which doctors rule out some known causes of disease in order to finalize a diagnosis. But such general rules must, under *Daubert*, *Kumho Tire [Co., Ltd. V. Carmichael*, 526 U.S. 137 (1999)] and *Moore [v. Ashland Chemical*, 151 F.3d 269 (5 th Cir.1998) (en banc)], be applied fact-specifically in each

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case. The underlying predicates of any cause-and-effect medical testimony are that medical science understands the physiological process by which a particular disease or syndrome develops and knows what factors cause the process to occur. Based on such predicate knowledge, it may then be possible to fasten legal liability for a person's disease or injury.

In this case, neither [the treating physician] nor medical science knows the exact process that results in fibromyalgia or the factors that trigger the process. Absent these critical scientific predicates, for which there is no proof in the record, no scientifically reliable conclusion on causation can be drawn. [The treating physician]'s use of a general methodology cannot vindicate a conclusion for which there is non-underlying medical support.

*13 Black v. Food Lion, 171 F.3d at 313.

Of course, as we discussed briefly above, the standard of admissibility at issue in *Black v. Food Lion, Inc.* under Fed. R. Civ. Pro. No. 702 and *Daubert v. Merrill Dow Pharmacies, Inc.*, is significantly less demanding than that which controls our decision under *Frye/Topa*. Specifically, the federal evidentiary standard specifically permits the admission of expert scientific testimony in the absence of a relevant consensus if certain tests of scientific reliability described in *Daubert* are met. In Pennsylvania, in contrast and as we have discussed at length above, the Supreme Court has not decided the issue of the admissibility of novel scientific evidence in the absence of a relevant consensus and governing authorities require general agreement among the particular scientific community. *Frye/Topa*.

With this background, the Court of Appeals in *Black v. Food Lion* considered the admissibility of evidence of a causal connection between trauma and fibromyalgia and concluded as follows:

While the medical profession has made significant advances in the diagnosis and treatment of fibromyalgia, experts have recognized that the evidence that trauma actually causes fibromyalgia is "insufficient to establish causal relationships." [Citing the Consensus Report]. The [Consensus Report] states,

Overall ... data from the literature are insufficient to indicate whether causal relationships exist between trauma and [fibromyalgia]. The absence of evidence, however, does not mean that causality does not exist, rather that appropriate studies have not been performed.

Id. at 535. At least one other commentator has also recognized the severe difficulties associated with identifying the cause of a given patient's fibromyalgia. See Geoffrey Littlejohn, *Medico-Legal Aspects of Fibrositis Syndrome*, 16 Journal of Rheumatology 169, 171-172 (Supp.1989) ("[T]here is no scientific evidence to suggest that the injury itself results in the pathophysiology of fibrositis syndrome.").

Black v. Food Lion, 171 F.3d at 312-313. After examining the evidence presented by the plaintiff's treating and examining physicians, the Court of Appeals concludes that, even under the less restrictive federal standard, evidence of scientific causality between trauma and fibromyalgia is inadmissible.

To the same effect, in Wynacht v. Beckman Instruments, Inc., 113 F.Supp.2d 1205 (E.D.Tn.2000) the court held to be unreliable and, therefore, inadmissible, expert testimony of a causal relationship between a chemical spill at the defendant laboratory and the plaintiff's medical conditions including fibromyalgia and chronic fatigue syndrome. The court's discussion of the distinction between diagnostic and causal opinions is particularly helpful in the present context:

First and foremost, there is a fundamental distinction between [the treating physician]'s ability to render a medical diagnosis based on clinical experience and her ability to render an opinion on causation of [the plaintiff]'s injuries. [The defendant] apparently does not dispute, and the court does not question, that [the treating physician] is an experienced physician, qualified to diagnose medical conditions and treat patients. The ability to diagnose medical conditions is not remotely the same, however, as the ability to deduce, delineate, and describe, in a scientifically reliable manner, the causes of those medical conditions.

*14 Id. 113 F.Supp.2d at 1209.

In Gross v. King David Bistro, Inc., 83 F.Supp.2d 597 (D.Md.2000) testimony of a causal relationship between infection from a food borne pathogen and fibromyalgia syndrome was held to be insufficiently reliable for admission into evidence under *Daubert* and Fed.R.Civ.Pro. No. 702. The trial court there writes:

At this time the empirical data is simply too nascent and tepid to support [the causal] conclusion. The medical studies themselves acknowledge that the causes of fibromyalgia are unknown. At best, these studies only suggest that there is an association between infections and fibromyalgia. [FN38]

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FN38. *Id.*

Finally, we do not derive any contrary import from those case authorities including Nelson v. Hines, 539 Pa. 516, 653 A.2d 634 (1995); [FN39] Robinson v. Newple, 750 A.2d 339 (Pa.Super.2000); Condran v. Workmen's Compensation Appeal Board (H.B. Reese Candy Co.), 721 A.2d 1133 (Pa.Cmwlth.1998); and *The Bachman Company v. Workmen's Compensation Appeal Board (Spence)*, 683 A.2d 1305 (Pa.Cmwlth.1996) in which a causal connection between trauma and fibromyalgia syndrome is described either in a context in which causality appears not to have been challenged or in which a lessor standard of evidentiary admissibility is applicable. For the same reasons we do not derive additional support from such cases as Livelsberger v. Kreider, 743 A.2d 494 (Pa.Super.1999); Cittrich v. Workman's Compensation Appeal Board (Laurel Living Center), 688 A.2d 1258 (Pa.Cmwlth.1996); and Coffey v. Coffey, 394 Pa.Super. Ct. 194, 575 A.2d 587 (1990) which failed to find a causal relationship between trauma and fibromyalgia under the evidence applicable to the particular cases involved.

FN39. Here relied upon by the Plaintiff in opposition to the Motions.

We note in this regard that medical testimony of causation in cases involving compensation under the Pennsylvania Workmen's Compensation Act, the Act of June 2, 1915, P.L. 736, as amended, 77 P.S. § § 1 et seq. requires only that the testimonial evidence be unequivocal. [FN40] Lewis v. Commonwealth, 508 Pa. 360, 498 A.2d 800 (1985); Giant Eagle, Inc. v. Workmen's Compensation Appeal Board (Thomas), 725 A.2d 873 (Pa.Commw.Ct.1999); Cittrich, 688 A.2d at 1259; *Buczynski v. Workmen's Compensation Appeal Board (Richardson-Vicks, Inc.)*, 133 Pa.Cmwlth. Ct. 532, 576 A.2d 421, 423-424 (1990). As to medical causation generally, in contrast, this Commonwealth uniquely requires definite, affirmative expert testimony of the existence of the causal relationship. See, for example, Nestor v. George, 354 Pa. 19, 24, 46 A.2d 469, 472 (1946) in which the Court held to be inadmissible the treating physician's testimony to the effect that the plaintiff's condition "could have originated in the accident" and wrote the following:

FN40. For this reason we do not find to be helpful in our analysis the opinion of the Kansas Supreme Court reported as Gleason v. Samaritan Home and Church Mutual Ins. Co., 260 Kan. 970, 926 P.2d 1349 (1996) on which Plaintiff here relies and which concerned an ultimate appeal from that state's workmen's compensation authorities.

> The witness would have to testify, not that the condition of claimant might have, or even probably did, come from the accident, but that 'in his professional opinion the result in question came from the cause alleged'; for, according to our latest pronouncement on this subject, a less direct expression of opinion would fall below the required standard of proof, and therefore would not constitute legally competent evidence.

*15 *Id.* (Quoting Vorbnoff v. Mesta Machine Co., 286 Pa. 199, 206, 133 A. 256, 258 (1926)).

To the same effect, the Court in McMahon v. Young, 442 Pa. 484, 485, 276 A.2d 534 (1971) held to be inadmissible testimony that the injury "is consistent with" the accident; that "there is probably a cause and effect relationship", and that the patient's arthritic condition "is consistent with traumatic arthritis." The Court explains the necessity of a stringent standard of proof in the following terms:

> The issue is not merely one of semantics. There is a logical reason for the rule. The opinion of a medical expert is evidence. If the fact finder chooses to believe it, he can find as fact what the expert gave as an opinion. For a fact finder to award damages for a particular condition to a plaintiff it must find as a fact that the condition was legally caused by the defendant's conduct. Here, the only evidence offered was that it was "probably" caused, and that is not enough. Perhaps in the world of medicine nothing is absolutely certain. Nevertheless, doctors must make decisions in their own professions every day based on their own expert opinions. Physicians must understand that it is the intent of our law that if the plaintiff's medical expert cannot form an opinion with sufficient certainty as to make a medical judgment, there is nothing on the record with which a jury can make a decision with sufficient certainty so to make a legal judgment.

Id. at 486, 276 A.2d at 535. See also 31 Am.Jur.2d *Expert and Opinion Evidence* § § 258 and 260 (1989). [FN41] The expressed concerns of the court in *McMahon v. Young* are equally pertinent here.

FN41. Marginal notes 25 and 38 discuss the

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unique stringency of Pennsylvania's evidentiary requirement.

For all of these reasons and on the basis of these authorities we conclude that evidence of a causal relationship between trauma and the onset or course of fibromyalgia would be inadmissible under *Frye/Topa* or under the less restrictive test of *Daubert;* and we enter the following:

ORDER

AND NOW, this *22nd* day of June, 2001 on consideration of the Motions in Limine of Defendants Modern Exterminating and Control Co., Inc. ("Modern") and Norman and Rosyln Stephen ("Stephens") seeking preclusion of evidence of a causal link between a deck collapse on July 25, 1997 and Plaintiff Carla Ramos' (now Carla Cruse) fibromyalgia syndrome or its aggravation; Plaintiff's initial response thereto; Modern's reply to Plaintiff's initial response; and Plaintiff's sur- reply in opposition to the Motion; it is hereby ORDERED that the prayer of the Motions in Limine is GRANTED. Plaintiff Carla Ramos/Cruse shall adduce at trial no evidence of a causal relationship, either direct or indirect, between the deck collapse and her fibromyalgia syndrome or any aggravation or exacerbation thereof.

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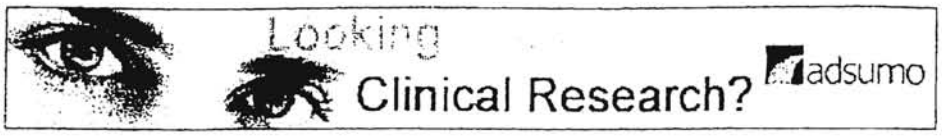

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Report

Fibromyalgia Following Trauma: Psychology or Biology?

Gregory C Gardner MD
Division of Rheumatology, Box 356428, , Seattle, WA, 98195, USA

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Abstract

The concept that fibromyalgia may follow trauma is currently an area of intense debate within the medical field and is driven to a large extent by social and legal issues. This article questions whether the current literature supports the notion that trauma may cause fibromyalgia and explores the relative contribution of biology and psychology in the development of and sense of disability from fibromyalgia.

Outline

Abstract
The Debate
The Literature
Psychology
Biology
Is Fibromyalgia a Disabling Disease?
The Legal Process and Fibromyalgia
Conclusions
References

The Debate

During the 1990s, fibromyalgia following trauma became an important topic of debate in both the medical and legal arenas. The belief that 'posttraumatic fibromyalgia' actually exists is due to a variety of reasons. These include the 1990 American College of Rheumatology's Criteria article that made fibromyalgia an officially recognized illness, physicians who feel they are helping patients by supporting their claims of injury causing illness, a legal profession that sees lucrative gains in an illness that cannot be proven or disproven, the stigma applied to individuals with psychologically mediated illness, and by a vacuum of good scientific data regarding trauma and fibromyalgia [1]. The term 'posttraumatic fibromyalgia' has not been sanctioned by the American College of Rheumatology, and it was recommended in the 1990 fibromyalgia criteria article that such descriptors not be used. This stance was reiterated in the 1994 Vancouver Consensus statement on fibromyalgia and disability due to the lack of evidence for cause and effect [2]. As of 1999, there was no new information to suggest that such a stance should be changed [3].

The 1990s also saw the emergence of the concept of the biopsychosocial model of illness in which psychology and biology combine to cause illness and disease. The debate regarding psychology versus biology for fibromyalgia is actually not new and has been going on for decades [4]. Rheumatologists at one time were quite

comfortable understanding fibromyalgia and trauma via a psycho-logical construct, though currently there are two camps in rheumatology, one espousing psychology as the more important component and the other claiming that biology plays the bigger role [4]. One of the best discussions of the psychology versus biology debate underlying fibromyalgia is contained in two recent letters [5,6]. Each point of view is presented without rancor, a feature too often seen in this debate, and a succinct overview of the differing standpoints can be gained from reading these letters.

Over the years, we have seen a parade of various biologic explanations for fibromyalgia following trauma, ranging from deposition of amorphous material following trauma, to abnormal lactase dehydrogenase levels, to current theories regarding central nervous system sensiti-zation [4,7]. All theories have to date failed to explain fibromyalgia in biomedical terms, and unfortunately, theory is being converted to 'proof' by the legal profession in which 'it is my opinion' and 'more likely than not' are the standard of certainty. The literature on fibromyalgia and trauma is generally quite sparse and consists of a few notable case reports and case series. There is really a dearth of actual hard data to support cause and effect. There are considerably more letters to the editor, editorials, reviews, speculations, personal experience, and so forth, than useful data. There is one and only one study that attempts to case control the issue of fibromyalgia developing post trauma that is used by both sides in this debate to prove their point.

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The Literature

One of the few case reports regarding fibromyalgia and trauma was published by Wolfe in 1994 [8]. He described the downhill spiral into pain and disability of a 37-year-old woman following a minor injury at work [8]. She developed irritable bowel syndrome in addition to 'disabling' fibro-myalgia from lifting a heavy box. The patient's self report of the process convinced the author (at least at the time) of the existence of posttraumatic fibromyalgia.

One often cited case series on posttraumatic fibro-myalgia is by Greenfield *et al.* [9] who reported in 1992 that 14 of 127 patients seen over a 4-year period self reported the onset of their fibromyalgia following a traumatic event. These patients were more likely than those not reporting trauma to be receiving disability payments. The authors termed this form of fibromyalgia 'reactive fibromyalgia.' A total of 70% of those employed prior to the development of reactive fibromyalgia stopped working compared with only 5% of those labeled with primary fibromyalgia. The authors did not provide any data to suggest that the reactive group were objectively more ill than the primary group nor do we know anything about their pre-injury health status.

Another frequently cited case series is by Goldenberg *et al.* [10] from 1995. These authors reported that 33% of 332 patients seen during a 4-year period with fibromyalgia felt that the onset of fibromyalgia occurred following trauma. The authors reported that items such as not working, reported pain levels, elevated levels of psycho-logical distress, a sense of helplessness, poor coping skills, less education, and pending litigation all contributed to a sense of disability in patients with fibromyalgia.

The most recent case series on initiating events and fibromyalgia is by Aaron *et al.* [11] who reported that 21% of their 76 patients with fibromyalgia reported illness onset as a result of physical trauma, whereas 26% reported emotional trauma as a cause of symptoms. The other 46% had what was called gradual onset fibromyalgia, as no initiating event was self reported. Fifty percent of the physical trauma patients were on disability payments primarily from workers' compensation programs, whereas only 20% of the emotionally traumatized patients and 15% of the patients with gradual onset fibromyalgia were on disability payments. Of interest, Fibromyalgia Impact Questionnaire scores and Fatigue Severity Scale scores were significantly higher for the emotional trauma group when compared with the physical trauma group, yet one half of the trauma group were receiving disability whereas only one fifth of the emotional trauma group were receiving disability payments. In a follow-up letter, Aaron *et al.* [11] noted that the difference was caused by the availability of worker's compensation funds for the trauma group.

The one and only case control study of trauma and fibromyalgia is by Buskila *et al.* [12] titled 'Increased rates of fibromyalgia following cervical spine injury: a controlled study of 161 cases of traumatic injury' published in 1997. The authors reviewed the records of 102 Israeli patients with neck injuries, 74 with motor vehicle accidents (67 are said to have fulfilled criteria for whiplash), and 28 with industrial neck injuries. They used as a control group 59 people with lower extremity fractures occurring in all but one person from workplace injuries. The demographics of the two groups were similar except that the neck group subjects were on average 4 years younger than those in the leg group. They reported that 21.6% of the neck injuries developed fibromyalgia during an unspecified follow-up period whereas 1.7% of the leg fractures developed the illness. Insurance claims were similar for both groups. One of the criticisms of this study is the fact that 12 of 18 fibromyalgia tender points are above the waist. The neck injury group in general did not differ from the fracture group with regard to the number of lower body tender points, which makes one wonder if we are really seeing fibromyalgia or just sore neck, back, and shoulder muscles. Of great interest, nobody stopped working due to the diagnosis of fibromyalgia, and the rate of fibromyalgia in the leg fracture group was similar to the general United States population rate for fibromyalgia [13]. What we do not know is the denominator for either automobile accidents or leg fractures in the catchment area of the occupational clinic. Although the authors stated a 100% ascertainment, there is no independent confirmation of this. In addition, the evaluators were not blinded to the grouping (difficult to do with orthopedic treatment for fracture) and this is particularly important because it was the authors' hypothesis that neck injuries lead to fibro-myalgia introducing a possible source of bias. It would be interesting to do a similar study in countries such as Lithuania or Greece where whiplash injury is uncommon due to lack of cultural support for such an illness [14].

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One of the inherent weaknesses of most of the data surrounding this issue is that it is based on self report. Self report of illness onset should only arouse suspicion of but not be the scientific proof for cause and effect. Recall of past events is influenced by factors such as current knowledge, feelings, beliefs, and expectancies often leading to recall bias and is an issue well recognized by social psychologists [15]. This is particularly true for those involved in litigation in which

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litigants tend to overestimate pre-injury function and underestimate levels of current function compared with those with a similar type of injury but not involved in litigation [15]. Dr Wolf [15], the author of the above-cited case report on fibromyalgia and trauma and the lead author on the 1990 American College of Rheumatology Criteria for fibromyalgia, has since rethought his position on the issue of posttraumatic fibromyalgia. In a 1997 editorial, he has questioned the relevance of self report and has written that on review of many cases of supposed posttraumatic fibromyalgia that patients often have long histories of pre-trauma fibro-myalgia symptoms.

Other important information we would like to know about such individuals is not available in most of the literature on fibromyalgia and trauma. There is a wealth of knowledge and experience from other chronic pain states in which it has long been recognized that issues such as local unemployment rates, job satisfaction, mood, past life experience, anticipated consequences of the injury, and environmental reinforcers are more powerful predictors of a sense of disability than the actual injury [17]. Tender points, which are part of the diagnostic criteria of fibro-myalgia, have in fact been shown to be markers of psychological distress and somatization independent of widespread pain [18,21]. Wolfe [18] has equated the tender point count to the sedimentation rate of distress, *ie*, the higher the tender point count the more distressed the individual. The report by McBeth *et al.* [21] is particularly interesting in this regard. He and his colleagues evaluated 289 people, who demonstrated psychological distress on the General Health Questionnaire, with tender point examination and in-depth psychological testing [21]. A tender point count of 5 or greater was associated with a greater number of somatic symptoms, increased medical visits, fatigue, and a past history of adverse childhood events such as loss of a parent or abuse. Childhood victimization is an increasingly recognized issue in people with somatic illness, including fibromyalgia [22].

In 1994, an international group of clinicians and researchers met in Vancouver, Canada, to discuss issues of disability in fibromyalgia [2]. The consensus report mentioned previously was published in 1996 and with regard to trauma the group statement read, 'Overall, then, data from the literature are insufficient to indicate whether a causal relationship exists between trauma and FM (fibromyalgia). The absence of evidence, however, does not mean that causality does not exist, rather that appropriate studies have not been performed.' As noted above, nothing much has changed since 1994 in this regard. Is there danger in assuming cause and effect before there is data? The recent 'epidemic' of post-silicone implant illness is a case in fact. Cause and effect were assumed based on a few case reports and case series of women with implants developing illnesses such as scleroderma or lupus. Then Surgeon General, David Kessler, suggested removal of implants from the market in 1992. Soon thereafter, legal firms were advertising for clients who had been 'injured' by their implants, the media had stories of people 'ruined' by silicone implants, rheumatologists were involved in screening women with implants for serious connective tissue disease, and diagnostic labora-tories offered multi-item autoimmune panels searching for hidden illness. As science has caught up with the hyperbole, no evidence has been found to confirm that silicone implants have a causal link with serious connective tissue disease, and in fact, a meta-analysis of the data suggests a mild protective effect [26,27]. The authoritative institutions, namely the medical, legal, and the media, in our culture had made thousands of women 'ill' by telling them that their implants might cause serious illness. This is a critical lesson that unfortunately we appear to be repeating with regard to fibromyalgia and trauma due to the lack of reasonable scientific evidence regarding the issue.

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How does an injury, often mild, which should normally heal in a few weeks to a few months become a diffuse pain syndrome that may be described by the patient as a 'life-ruining' event? Advocates for the concept that fibromyalgia and trauma are linked cite the previously discussed self report medical literature and the theory of central nervous system plasticity and central sensitization to explain why focal pain becomes widespread [28]. The possible role of neuroplasticity and other neuroendocrine abnormalities in fibromyalgia are discussed by Pillemer *et al.* [29]. Basically, central sensitization is felt to occur because peripheral tissue or nerve injury may result in hyperalgesia, in which innocuous stimuli such as light touch may be perceived as painful. Hyperalgesia is felt to be related to changes at the site of the injury as well as to central nervous system hyperexcitability that leads to long-term changes in the nervous system, referred to as neuroplasticity.

One of the weaknesses of the neuroplasticity argument is that it requires an initiating painful stimuli that then leads to central sensitization and does not explain fibromyalgia reportedly caused by emotional trauma or those cases of fibromyalgia without any obvious initiating painful event. It also does not explain why leg fracture trauma isn't the 'right kind' of trauma, especially since the painful stimuli applied to the animal models of this phenomenon are applied to the extremities. It also does not account for the observations that patients who report the development of fibromyalgia after injury are generally accident victims rather than accident causers [30]. Neuroplasticity is not unique to pain experience. Neuroplasticity has been observed in animal studies due to other sensory and behavioral inputs, including learning. What is pointed out in the Pillemer article [29] is the fact that pain inputs end in the limbic system, an area of the brain critically important in human emotion, and inhibitory pathways for control of central sensitization that begin in the frontal lobe, which is important for the organization of behavior, as well as the limbic system. Thus, psychology or emotion appears as a potentially important issue in the interpretation and control of chronic pain. Finally, central sensitization is still at the level of theory, not fully understood in animals and certainly not proven in patients with fibromyalgia [30].

Other interesting biologic observations in patients with fibromyalgia includes neuroendocrine abnormalities, particularly the hypothalamic-pituitary-adrenal axis and stress response system dysregulation [29]. This finding is not unique to fibromyalgia and has been observed in chronic fatigue syndrome, forms of depression, in people with posttraumatic stress disorder, and in women with chronic pelvic pain and a history of childhood abuse [29,31]. Of interest, stressed neonate rats (maternal separ-ation or repeatedly subjected to pain) also develop stress response dysregulation and the victimized rats also have an abnormal sensitivity to painful stimuli as adults [29]. As noted previously, there is a growing body of literature regarding childhood and adult victimization and adult chronic pain states. This together with the data regarding tender points as a marker for underlying psychological distress suggests the role of psychology as a cause for the observed biology. In support of this contention, it has been noted that the most effective forms of therapy are those that address the psychosocial aspects of the illness, namely cognitive behavioral therapy [32,33].

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Is fibromyalgia a disabling disease? Self report of function using questionnaires such as the Health Assessment Questionnaire suggest that fibromyalgia has an impact similar to rheumatoid arthritis on the lives of the people afflicted. Report of function and actual level of function do not necessarily coincide in patients with fibromyalgia. Hidding *et al.* [34] observed discordance between what patients with fibromyalgia reported they could do and what they could actually do when observed when compared with patients with rheumatoid arthritis or ankylosing spondylitis. The authors discussed these findings as important components of the illness experience and issues to address when treating people with fibro-myalgia. In addition, there are currently no valid instruments to assess disability in patients with fibromyalgia because symptoms and limitations are self reported [3]. The Vancouver Consensus conference statement on work and fibromyalgia reads 'Most (people with fibromyalgia) are capable of work, often with job modifications. Changing a job to suit the patient's abilities helps maintain employability. Only a minority of patients are unable to work' [2]. Kennedy and Felson [35] reported that 66% of patients with fibromyalgia indicated improvement after a 14-year follow-up compared with initial presentation, and 75% of these same people had little or no interference from fibromyalgia in their work.

In the Buskila *et al.* study [12], the Israeli patients who were felt to develop fibromyalgia post-neck injury did not stop working in spite of their diagnosis, underlining the lack of evidence for the notion of posttraumatic fibro-myalgia as a disabling illness [12]. Robert Bennett [36] summed up the issue of disability when he responded to a letter to the editor regarding an editorial he wrote on fibromyalgia and trauma: 'I certainly agree that telling patients (with fibromyalgia) that they can no longer work does more harm than good. I don't do this, and I suspect that most rheumatologists don't convey this message to their patients with FM. disability is not the same as impairment, and the critical link between impairment and disability is motivation. The components of motivation are very complex and include genetic influences, childhood experiences, social class, earning power, job satisfaction, psychosocial stresses, and age.' Thus even someone who has generally supported and promoted the suggestion that fibromyalgia may follow trauma recognizes the importance of psychosocial factors on issues of disability.

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What impact does the legal process and compensation have on our patients with fibromyalgia? As noted above, in the courtroom where many of the issues have been played out by dueling expert witnesses, the requirement for causality is only 51% certainty ($P = 0.49$) or 'more likely than not.' In science and medicine we require a 95% certainty ($P = 0.05$) that A and B are causally related. The danger of using the legal system to decide scientific issues has already been cited. With regard to compensation and illness, the Vancouver Consensus agreement states, 'In the setting where compensation is widely available, illnesses similar to FM (fibromyalgia) have been shown to increase in apparent prevalence, as measured by physician visits, then fall when compensation availability declines' [2]. This notion is well illustrated by the epidemic of forearm pain that occurred in Australia in the mid 1980s that suddenly disappeared when objective evidence of injury was required and compensation rules became more stringent [37]. Did workers simply

suffer in silence or was illness actually prevented by removing secondary gain? In an article titled, 'Compensation neurosis: financial reward for illness as nocebo,' Bellamy [38] discusses the literature on the role that financial compensation has on illness and illness behavior; it is well referenced, and well worth reading.His conclusion on review of the literature is that judging disability and work capacity is an unscientific process and that an adversarial system that rewards permanent illness or injury, particularly self-reported pain, is often permanently harmful to the patient.

Wolfe [16] has stated that we should not be providing compensation for patients based on the diagnosis of fibromyalgia due to the potential negative impact compensation may have on our patients. Halleck [39], a forensic psychiatrist, discusses the stresses inherent in being a plaintiff and the role this has on illness in an article titled 'Perils of being a plaintiff.' He gives examples of adverse reaction suffered by plaintiffs in personal injury cases and suggests some ways to minimize such stresses and thus illness behavior. There is evidence for other work-related situations that compensation or the promise of such may increase self-reported pain, depression, and encourage unemployment [40,41]. Barsky and Borus [42] in their recent review of the literature on functional somatic syndromes including fibromyalgia state: 'The hyperbole, litigation, compensation, and self interested advocacy surrounding the functional somatic syndromes can exacerbate and perpetuate symptoms, heighten fears and concerns, prolong disability, and reinforce the sick role.' Finally, Hadler [43] succinctly summed up the process that our patients are subjected to when they seek redress via the legal system when he said, 'If you have to prove you are ill, you can't get well.'

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In summary, I have presented data to argue for the preeminence of psychology as the driving force in fibro-myalgia, both for symptoms and for self-reported disability. The current state of the literature does not allow the conclusion that trauma and fibromyalgia are causally associated. Some though, have in a sense judged trauma 'guilty' before there is any evidence that a crime has been committed and certainly before a fair trial has taken place. There is only one prospective study suggesting an association between selective trauma and fibromyalgia and the authors themselves state that 'The present data in the literature are insufficient to indicate whether causal relationships exist between trauma and FMS' [12]. In addition, as Bennett [7] has implied, disability in fibro-myalgia is based on patient motivation, and the work of Aaron *etal.* [11] underlines the issue of disability and illness, *ie*, disability rate has less to do with the level of symptoms than the availability of compensation. The Goldenberg article [3] reminds us of some of the important issues with regard to a sense of disability in people with fibromyalgia. Patients who feel disabled are those who feel most helpless, most distressed, have low job satisfaction, have poor coping skills, and have involved themselves in litigation.

These issues need to be addressed more effectively in clinical practice to keep our patients from developing a sense of disability. Further work will need to be done to explore and implement therapeutic interventions such as cognitive behavioral therapy, which addresses somatic illness in a holistic way. We also need to take note of Australia's political solution to the forearm pain epidemic and consider such a solution for fibro-myalgia and trauma in the United States, because it appears

that such a solution my actually prevent illness. Finally, Sir William Osler stated, ' It is more important to know what sort of patient has a disease than what sort of disease a patient has.' Nothing is more important to remember when trying to help a person with fibromyalgia.

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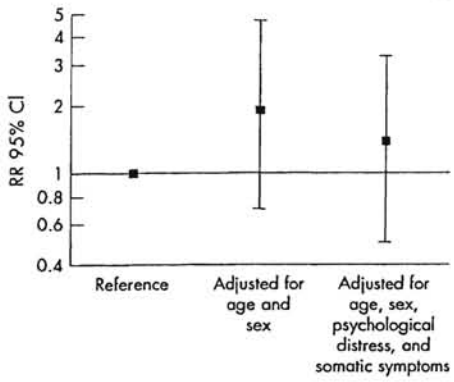

Figure 1 Risk of new onset widespread pain at six months: accident v non-accident cohort. CI, confidence interval; RR, relative risk.

pain at six months. Results are expressed as relative risks (RR) with 95% confidence intervals (CI).[14]

RESULTS

We invited 1178 individuals to participate in the study, of whom 896 consented to receive a postal questionnaire. Questionnaires were returned by 597 (51%) of those invited to participate. They comprised 465 individuals in the crash cohort, mean age 42.0 years, 59% female; and 132 individuals in the non-crash cohort, mean age 42.0 years, 60% female. The prevalence of WP in the month before the incident was 4% (n = 20) and 6% (n = 8) in the crash and non-crash cohorts, respectively. These individuals were excluded from follow up, and thus 569 were eligible for follow up.

In all, 517 (87%) of these individuals completed the six month follow up questionnaire, of whom 490 provided complete pain data: 376 individuals in the crash cohort (81%) and 114 in the non-crash cohort (86%). The prevalence of new WP was 8% (n = 31) in the crash cohort and 4% (n = 5) in the non-crash cohort (RR = 1.9 (95% CI, 0.8 to 4.8, adjusted for age and sex)). Further adjustment for GHQ score (high *v* low distress) and somatic symptom reporting (0 *v* 1 or more symptoms) attenuated this risk (RR = 1.4 (95% CI, 0.5 to 3.2)) (fig 1). Adjustment for SF-8 mental and physical scores did not further alter the risk of new WP.

Although this study was not designed to have sufficient power to examine risk separately in men and women, the data suggest that there may be differential effects by sex, with a slightly higher risk in women (RR = 1.5 (95% CI, 0.5 to 5.1)) compared with men (RR = 1.1 (95% CI, 0.3 to 4.3)) (table 1).

Table 1 Comparison of new onset WP between males and females

	New onset widespread pain n (%)		Adjusted RR (95% CI)
	Crash group	Non-crash group	
All subjects	31 (8.2)	5 (4.4)	1.4 (0.4 to 4.9)
Male	12 (6.9)	2 (2.9)	1.1 (0.3 to 4.1)
Female	19 (9.5)	3 (4.2)	1.5 (0.5 to 5.1)

*Adjusted for age, psychological distress, and somatic symptom reporting.
CI, confidence interval; RR, relative risk.

DISCUSSION

This is the first study to examine prospectively the rate of onset of widespread pain after physical trauma, namely a motor vehicle crash. It suggests that the rate of onset of WP after a motor vehicle crash is low and at most there is a modest increase in risk, particularly after adjusting for levels of psychological distress.

There are several caveats that need to be considered to put this study into context.

First, although the study was large, the number of new onset pain episodes was small. This is interesting as an observation in itself but does limit the power of the study.

Second, the initial response rate was low; of those invited to participate just over 50% returned a questionnaire, raising questions about the external validity of the study. The available data on those who did not return a questionnaire are limited; however, there were no significant differences in either age (Z_{M-W}; p = 0.08) or sex (χ^2; p = 0.08) between those who returned a completed questionnaire and those who were invited to participate but refused to or did not reply. It is also unlikely that those subjects who had experienced a crash but did not take part would be at a greater increased risk of developing WP, thus causing us to underestimate the risk.

Third, the precise role of psychological distress is difficult to determine in this study. It could be hypothesised that psychological distress is a pathway variable, that trauma leads to distress and then WP, and therefore should not be adjusted for. However, the measure of psychological distress used was before the trauma. Therefore psychological distress could lead to an increased likelihood of experiencing a motor vehicle crash, in addition to being associated with the onset of pain. In a recent study,[15] Lagarde *et al* found that stressful life events were associated with a subsequent increase in serious motor vehicle accidents, lending support to this hypothesis. Adjusting for psychological distress does attenuate the relation between trauma and WP, but we do not know the extent to which the reporting of pre-crash psychological distress was influenced by the post-crash psychological distress experienced. Current work has suggested that prior distress, in particular depression, leads to a poor adjustment to stressful events[16]; additionally there are interactions between affective states, stressors, and pain.[17] It will be important for future studies to explore not only the effect of trauma but modifiers of its effect.

This study does have several strengths. The design is prospective and therefore we have been able to determine the new onset of WP in persons who were initially WP-free. An inherent problem of prospective studies is loss to follow up; however, loss in this study is minimal. Further, it may be expected that any such loss to follow up may result in an overestimation of the new onset of widespread pain. The setting was population based, thus overcoming the potential issue of selection bias associated with samples selected from clinic populations.

Our study suggests that the new onset of widespread pain after a motor vehicle crash is uncommon and only marginally above that experienced by a non-crash group. The rate of new onset over a six month period in the non-crash group (4%) was very similar to the rate reported (6%) over a 12 month period in a study of 1658 adults in the general population of one area of north west England.[18] This provides additional support for the study's external validity.

Previous studies have reported that trauma is associated with WP[7-9]; however, methodological limitations, such as recall bias and the inability to measure the onset of pain, have restricted the interpretation of these findings. We have added to the literature by demonstrating a weak relation between trauma and the onset of WP. Studies have suggested that prior trauma is reported by 23%[7] and 39%[8] of fibromyalgia patients. These studies, however, have been conducted in specialist clinics among a selected population of fibromyalgia patients. Nevertheless the latter study,[8] although showing an association between fibromyalgia and trauma, found that in both case and control subjects the

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report of a motor vehicle crash was uncommon. It is possible that an association does exist but with other and more severe forms of trauma.

In summary, the results of this preliminary study do not provide strong support for physical trauma (at least as exemplified by a motor vehicle crash) having a large impact on the new onset of widespread pain. It suggests a more modest estimate of the effect of trauma than those previously reported.

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Authors' affiliations

G Wynne-Jones, A J Silman, Arthritis Research Campaign, Epidemiology Unit, Division of Epidemiology and Health Sciences, University of Manchester, Manchester, UK
G J Macfarlane, G T Jones, Epidemiology Group, Department of Public Health, University of Aberdeen, Aberdeen, UK

Correspondence to: Dr Gareth T Jones, Epidemiology Group, Department of Public Health, University of Aberdeen, Polwarth Building, Foresterhill, Aberdeen AB25 2ZD, UK; gareth.jones@abdn.ac.uk

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Neck Injury and Fibromyalgia — Are They Really Associated?

MOSHE TISHLER, OFER LEVY, ILYA MASLAKOV, SHMUEL BAR-CHAIM, and MIRIT AMIT-VAZINA

ABSTRACT. ***Objective.*** To investigate whether whiplash injury may be a trigger for the onset of fibromyalgia (FM).

Methods. One hundred fifty-three patients presenting to the emergency room with the diagnosis of whiplash injury were examined. The control group included 53 patients hospitalized with fractures of the limbs, spine, and ribs due to road accident. The study and control groups were interviewed shortly after presenting and then followed prospectively. Patients complaining of musculoskeletal symptoms during followup were examined and a count of 18 tender points was conducted. FM was diagnosed if the patient fulfilled currently accepted 1990 American College of Rheumatology criteria.

Results. The mean followup period for the study and control groups was 14.5 months (range 12-18) and 9 months (range 6–14), respectively. There were no differences between the groups with regard to age, sex, marital, education, or employment status. During the followup period only one patient in the study group and no patients in the control group developed signs and symptoms of FM. Three patients in the study group (2%) and 15 patients in the control group (16%) filed insurance claims; none was associated with FM.

Conclusion. Whiplash injury and road accident trauma were not associated with an increased rate of FM after more than 14.5 months of followup. (First Release May 1 2006; J Rheumatol 2006;33:1183–5)

Key Indexing Terms:
FIBROMYALGIA WHIPLASH INJURY TRAUMA

Fibromyalgia syndrome (FM) is a chronic musculoskeletal condition with a prevalence of 2-4% that occurs mainly in women[1]. This disorder is characterized by widespread nonarticular pains, generalized tender points, and no evidence of inflammatory abnormalities. It is usually accompanied by fatigue, sleep disturbances, headaches, gastrointestinal symptoms, and behavioral changes[2]. The etiology and pathophysiology of this disorder remain unclear, although many triggering factors such as stressful conditions[3], hormonal changes[4], disturbances in non-rapid eye movement sleep[5], and infectious agents[6] have been suggested and studied. Another etiological factor recently proposed as a trigger for the onset of FM is physical trauma. The role of physical trauma as a risk factor preceding other rheumatological conditions such as rheumatoid arthritis[7], psoriatic arthritis[8], and ankylosing spondylitis[9] remains debatable. However, in FM it seems that this association has a more solid basis. Although most studies are retrospective, they have shown that 25 to 50% of patients with FM recall a physical trauma immediately preceding the onset of their FM symptoms[10-12]. The only prospective study of a causative link between trauma and FM is that of Buskila, *et al*[13] who found a 10-fold risk of developing FM in adults with neck injury compared with patients having lower extremity fractures. The absence of similar studies and the increasing medico-legal issues and ramifications of this problem prompted us to test this hypothesis.

From the Asaf-Harofe Medical Center, Zrifin and the Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel.

M. Tishler, MD, Head, Department of Medicine B, Asaf-Harofe Medical Center, Associate Professor of Medicine, Sackler School of Medicine; O. Levy, MD, Senior Physician; I. Maslakov, MD, Resident, Department of Medicine B; S. Bar-Chaim, MD, Head Department of Emergency Medicine; M. Amit-Vazina, MD, Deputy Head Department of Medicine B, Asaf-Harofe Medical Center.

Address reprint requests to Dr. M. Tishler, Department of Medicine B, Asaf Harofe Medical Center, Zrifin 70300, Israel.
E-mail: tishler@asaf.health.gov.il

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MATERIALS AND METHODS

Patients. One hundred and fifty-nine patients discharged from the Emergency Room at Asaf-Harofe Medical Center between August 2003 and January 2004 with the diagnosis of whiplash injury were recruited for the study. One hundred and fifty-three patients (96%) agreed and served as the study group. Patients were informed that the primary objective of the study was to determine musculoskeletal problems following their accident. All patients were involved in car accidents and were diagnosed with whiplash injury without evidence of fractures, dislocations, or spinal subluxations on cervical rediographic studies. None of these patients had a head injury or brain concussion.

The control group comprised 53 patients hospitalized in the orthopedic, surgery, and neurosurgery wards of the hospital during this period because of severe trauma following a car accident. Of these 48 (91%) agreed to participate in the study.

Methods. All patients gave informed consent and were interviewed and followed by the same observer who was not blinded to the type of injury. A detailed questionnaire containing demographic as well as socioeconomic and clinical data was filled out by every participant on discharge from the Emergency Room. The time elapsed from injury to study enrollment was 6.2 ± 2.7 hours (range 3.5–9.5 h). Patients were followed by telephone calls after the first week and every 5 months thereafter. The interview included questions about joint pains and tenderness as well as questions about dizziness, sleep disturbances, headaches, and concentration problems. The questionnaire also included questions about quality of life (QOL), physical functioning, employment status, and insurance claims. QOL assessment was done using the Arthritis Impact Measurement Scales (AIMS 2) validated Hebrew language form[14] and physical functioning was assessed by the brief 10-item Fibromyalgia Impact Questionnaire (FIQ) validated Hebrew language

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form[15]. Patients who complained of symptoms or signs suggestive of FM were invited for further evaluation that included a complete physical examination with special emphasis on examining the specific 18 tender points needed for fulfilling accepted criteria of the American College of Rheumatology (ACR) for FM[16].

Statistical analysis. Student's t test for independent samples was used to compare quantitative variables. The chi-square test or Fisher's exact test (in small samples) was performed to compare proportions.

RESULTS

Baseline characteristics of the study and control groups are presented in Table 1. Demographic and socioeconomic characteristics were similar in both groups. The followup period for the study group was longer than that of the control group (14.5 ± 1.1 vs 9 ± 2.2 months, p = 0.035).

Six patients of those eligible to participate in the study group were not enrolled in the study: 2 refused on the advice of their lawyer, another moved to another town 2 weeks after the accident, and 3 others refused to participate for no obvious reason. In the control group 7 patients eligible for the study refused to participate or stopped followup shortly after inclusion: one patient refused due to an insurance claim that was filed in court, 2 others dropped out shortly after inclusion due to medical causes (leukemia and renal failure), and 4 patients refused to cooperate because of various irrelevant reasons. A total of 12 patients who complained of musculoskeletal symptoms were recalled for detailed physical examination.

Clinical details of the control group are presented in Table 2. Patients were hospitalized for a mean of 5.6 ± 7.2 days and most (75%) had fractures in various sites.

Prevalence of FM and various symptoms of patients as well as measures of QOL, FIQ, and litigation status at the end of the followup period are presented in Table 3. Only one patient in the study group but no patient in the control group developed symptoms and signs that fulfilled the 1990 ACR criteria for FM. Study patients had significantly more impaired QOL (p = 0.043), but no differences were noted between groups with regard to physical function. Headache was statistically more prevalent in the study group (p = 0.025), while regional pain (usually at the site of the fracture) was statistically more prominent in the control group (p = 0.001). There were no differences in other symptoms such as dizziness, sleep disturbances, fatigue, and concentration problems between the 2 groups. Employment rate was the same in both groups at the end of the study, although it decreased compared to baseline. In the study group the decrease was mainly due to national economic reasons, while in the control group the decrease was a consequence of the accident. Insurance claims were more prevalent in the control group, most of them against private insurance companies and only a minority for Social Security.

Table 1. Demographic, clinical, and socioeconomic data for the study and control groups. Values are expressed as mean ± standard deviation unless otherwise defined.

Variable	Study Group, n = 153	Control Group, n = 48	p
Age, yrs (range)	47.5 ± 10.3 (27–76)	42.5 ± 13.1 (21–83)	NS
M/F ratio	93/60	30/18	NS
Followup, mos (range)	14.5 ± 3.1 (12–18)	9 ± 2.2 (6–14)	0.015
Marital status			
Single (%)	17 (11)	6 (13)	
Married (%)	136 (89)	42 (87)	
Education, yrs (range)	12.3 ± 2.4 (8–16)	11.6 ± 3.1 (8–17)	NS
Employed (%)	107 (70)	38 (79)	NS

NS: not significant.

Table 2. Clinical data of the control group.

	Control Group, n = 48
Hospitalization days, mean ± SD (range)	5.6 ± 7.2 (3–15)
Blunt trauma with no fractures (%)	12/48 (25)
Trauma with fractures (%)	36/48 (75)
Type of fracture	
Neck and shoulder	8/36 (22)
Upper limbs	10/36 (28)
Lower limbs	7/36 (19)
Chest and ribs	2/36 (6)
Multi-trauma	9/36 (25)

Table 3. Prevalence of FM and symptoms, and measures of QOL, FIQ, and litigation status at the end of the followup in study and control groups.

	Study Group, n = 153	Control Group, n = 48	p
FM (%)	1/153 (0.6)	0/48	NS
QOL ± SD	5.2 ± 0.7	4.2 ± 1.2	0.043
FIQ ± SD	0.3 ± 0.8	0.4 ± 0.7	NS
Symptoms (%)			
Dizziness	32/153 (21)	8/48 (17)	NS
Fatigue	2/153 (1.3)	1/48 (2)	NS
Sleep disturbance	20/153 (13)	5/48 (10)	NS
Headaches	35/153 (23)	3/48 (6)	0.025
Concentration problems	10/153 (6.5)	2/48 (4)	NS
Diffuse pain	1/153 (0.6)	0/48	NS
Regional pain	3/153 (2)	25/48 (52)	0.001
Insurance claims	3/153 (2)	8/48 (16)	0.001
Employed	95/153 (52)	29/48 (60)	NS

QOL: quality of life, mean of 16 subitems (scale 0–7); FIQ: measurement of physical function (10 subitems, scale 0–3).

DISCUSSION

The issue of trauma and FM remains controversial. As rheumatologists we are frequently asked by patients and/or lawyers to clarify the clinical and medicolegal situation of physical trauma preceding chronic pain disorders. The answers to such questions are complex and problematic and must be based on solid epidemiologic and controlled prospective studies. Several studies in the past, most of them retrospective, have reported that up to 50% of patients with FM

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can recall an event, most often physical trauma, that immediately preceded their symptoms[11,17-19]. An extensive review of the literature failed to yield solid conclusions concerning this issue[12]. The only prospective study that found a causative link between trauma and FM is by Buskila, *et al*[13]. In this study, which was not followed by others, the authors found that 21.6% of patients with neck injury developed FM shortly after a work accident. These data are impressive since in their control group of patients with leg fractures, the rate of FM was much lower (1.7%, $p = 0.001$). We could not confirm these earlier findings; after a mean followup of 14.5 months, only one out of 153 patients with whiplash injury developed FM. We believe our study is more accurate and its methodology makes our results more solid. We chose a group of patients diagnosed with whiplash injury after a car accident and followed them prospectively starting immediately after discharge from the emergency room. This is in contrast to patients chosen by Buskila, *et al* who were attending an occupational injury clinic, a fact that can bias the results, since these people were already claiming their insurance/social security and were not representative of the whole injured group. Our study group did not include patients with various occupational injuries as in the previous study, but only those diagnosed with whiplash injury following a road accident. Furthermore, our results were strengthened by the absence of FM in our controls, despite their severe injuries and hospitalization.

The cultural and socioeconomic background of our study population was not different from the group studied by Buskila, *et al* and thus could not be responsible for the differences between our 2 studies. Moreover, our control group issued more insurance claims (16%) than the study group (2%), none of which was associated with FM. Only one patient refused to cooperate on the advice of his lawyer.

In conclusion, the results of our prospective study do not support earlier observations about a link between neck trauma and FM. Because of its wide medicolegal implications, well controlled multinational studies with large cohorts of patients are needed to resolve this complex issue.

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ORIGINAL ARTICLE

Can fibromyalgia be associated with whiplash injury? A 3-year follow-up study

Moshe Tishler · Ofer Levy · Mirit Amit-Vazina

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Abstract The objective of this study is to assess the long-term outcome and natural history of a cohort of patients with whiplash injury regarding the development of fibromyalgia. Of the 153 patients who were admitted to the emergency room after whiplash injury in 2004, 126 were reassessed 3 years later. Also, 33 of 53 patients from the original control group of hospitalized patients with fractures were reevaluated. Patients were interviewed by phone and by written forms using a detailed questionnaire. Patients who complained of musculoskeletal symptoms were invited and examined. The study group included 68 men and 58 women, with a mean age of 50.1 ± 9.7. The control group included 19 men and 14 women with a mean age of 44.2 ± 10.3. Follow-up period did not differ significantly between the groups 38.3 ± 2.3 vs. 36.4 ± 4.2 months. At the end of the follow-up period, three patients in the study group compared with one patient in the control group were diagnosed as having fibromyalgia; all of them were women. The rate of new onset widespread pain increased with time in both groups. Symptoms of dizziness, headaches, fatigue and sleep disturbances improved, as well as the quality of life (QOL) and the Fibromyalgia Impact Questionnaire (FIQ) scores. Insurance claims continued to be more prevalent in the control group. The results of this extended follow-up study confirm previous short-term results showing that whiplash injury and road accident trauma are not associated with an increased risk of fibromyalgia.

Keywords Whiplash injury · Fibromyalgia · Trauma

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M. Tishler (✉) · O. Levy · M. Amit-Vazina
Department of Medicine B, Asaf Harofe Medical Center, 70300 Zrifin, Israel
e-mail: tishlerm@netvision.net.il

M. Tishler · O. Levy · M. Amit-Vazina
Rheumatology Unit, Asaf Harofe Medical Center, Zrifin, Israel

M. Tishler · O. Levy · M. Amit-Vazina
Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel

Introduction

The aetiology and pathophysiology of fibromyalgia (FM) still remain unclear, although many factors, including stress, hormonal changes, genetic predisposition and infectious agents have been proposed [1]. The role of physical trauma as a triggering factor for FM has been debated in the last years as new data have been published. The only partially prospective study linking trauma as a causative factor for FM was published in 1997 by Buskila et al. [2], but has not been supported by other studies since.

A recent study published by our group in 2006 did not find an increased rate of FM following whiplash injury and road accident trauma after more than 14.5 months of follow-up [3]. In parallel with our study, a similar study assessed the role of new onset widespread pain after a motor vehicle crash. The findings of this study suggested that after 6 months, a motor vehicle crash is unlikely to have a major impact on the new onset of widespread pain [4]. Another lately published study from Canada investigated the incidence and course of widespread pain in subjects with whiplash-associated disorders. The results of this study revealed that although the cumulative incidence of widespread pain following whiplash injury was 21%, it

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occurred early after injury, and its continuity after 12 months was rare [5].

The aim of the present study was to investigate whether experiencing a whiplash injury is associated with an increase in the prevalence of FM. This study is an extension of the original prospective study with a 3-year follow-up of patients described by us previously [3].

Patients and methods

Patients

In our original study [3], we investigated 153 subjects diagnosed as having whiplash injury, who served as the study group, and 48 patients with severe trauma who were hospitalised in different hospital wards following a car accident that served as the control group. Patients who, according to the clinical judgment of the clinician in the emergency room, had been injured by a mechanism of whiplash were eligible for recruitment. All patients in the study group had normal spinal X-rays examination, and all of them reported symptoms of localised neck pain and dizziness. The study group patients were followed for a mean of 14.5 ± 1.1 months as opposed to the control group, who were followed for a mean of 9 ± 2.2 months. The analysis of the data at the end of the follow-up period that included 147 patients in the study group and 41 patients in the control group revealed only one patient in the study group that developed FM.

More than 3 years later, during the year 2007, we tried to contact by telephone all patients both in the study group and in the control group, whose data were analysed in the original study.

One hundred fifty-nine patients agreed to participate in the follow-up study—126 (86%) patients from the original study group and 33 (80%) patients from the control group.

All patients who agreed to participate in this follow-up study were interviewed by phone using a detailed questionnaire [3] and were sent forms to be filled. The interviewer was blinded to the patients' status at the end of the first follow-up period 2 years earlier. Patients who complained about pain or other symptoms that might be related to the accident they sustained 3 years earlier were invited and examined carefully.

Patients who had any type of musculoskeletal symptoms were also evaluated by using a tender joint count, except the Visual Analogue Scale (VAS), quality of life (QOL) assessment and physical functioning forms that were filled by the entire study group.

The tender joint count was performed manually by thumb palpation of the 18 FM tender points and control sites similarly. Patients were diagnosed as having FM if they fulfilled the 1990 criteria of the American College of Rheumatology [6].

A VAS of 100 mm was used to assess the severity of musculoskeletal pain, depression, fatigue and global well-being. The QOL was determined using a QOL scale that was previously validated for Hebrew-speaking patients with FM [7].

Physical functioning was assessed by the brief Fibromyalgia Impact Questionnaire (FIQ-physical component) that was translated and validated in its Hebrew version [8].

This study was approved by the local ethics committee of Assaf Harofe Medical Center.

Statistical analysis

Comparison of group means was carried out using the Student's *t*-test for independent samples. Chi-squared test or Fisher's exact test for small samples was performed to compare proportions.

Results

The demographic data of the present study group and the control group are presented in Table 1. The study group consisted of 126 patients; there were 68 men and 58 women whose mean age was 50.1 ± 9.7. The control group included 19 men and 14 women with a mean age of 45.2 ± 10.3. The follow-up period from the traumatic event did not differ significantly between the two groups—38.3 ± 2.3 vs. 36.4 ± 4.2 months. Twenty-seven patients out of the original study group that were eligible to participate in the follow-up study were not enrolled: 20 refused for no obvious reason, five patients could not be reached and two others refused on the advice of their lawyer. In the control group, 15 patients eligible to enter the follow-up study were not enrolled—seven refused for no obvious reason, four patients could not be reached and four others refused due to an insurance claim filed at court. Following the telephone interview, 12 patients of the study group and six patients of the control group were recalled for evaluation.

The prevalence of FM and related symptoms in patients and controls as well as the QOL, FIQ scores and the litigation status in 2004 and 2007 are presented in Table 2.

At the end of the follow-up, three patients in the study group were diagnosed as having FM compared with one patient in the control group. All four patients found to fulfil the 1990 ACR criteria for FM were women.

The QOL and FIQ scores of both the study group and the control group improved on 2007 compared to 2004, and they were not significantly different from each other. Symptoms of dizziness, headaches, fatigue, sleep and

Table 1 Demographic, clinical and socioeconomic data of the study and the control group

Variable	Study group $n = 126$	Control group $n = 33$	P
Age in years (range)	50.1 ± 9.7 (31–69)	45.2 ± 10.3 (25–76)	NS
M/F ratio	68/58	19/14	
Follow-up period in months (range)	38.3 ± 2.3 (36–41)	36.4 ± 4.2 (24–38)	NS
Marital status			
Single (%)	13 (10)	4 (12)	
Married (%)	113 (90)	29 (88)	NS
Education years (range)	11.7 ± 2.3 (9–15)	12.1 ± 2.7 (10–16)	NS
Employed (%)	83 (66)	25 (75)	NS

Values are defined as mean: SD

NS not significant

Table 2 Prevalence of FM, symptomatology and measurement of QOL, FIQ and litigation status in 2004 and 2007

	2004		2007	
	Study group $n = 153$	Control group $n = 48$	Study group $n = 126$	Control group $n = 33$
FM (%)	1/153 (0.6)	0/48 (0)	3/126 (2.5)	1/33 (3%)
QOL ± SD	5.2 ± 0.7	4.2 ± 1.2	5.9 ± 1.1	5.5 ± 1.2
FIQ ± SD	0.3 ± 0.8	0.4 ± 0.7	0.1 ± 0.3	0.2 ± 0.4
Symptoms (%)				
Dizziness	32/153 (21)	8/48 (17)	12 (10)	4 (12)
Fatigue	2/153 (13)	1/48 (2)	1 (1)	1 (3)
Sleep disturbances	20/153 (13)	5/48 (10)	12/126 (10)	3 (9)
Headaches	35/153 (23)	3/48 (6)	21/126 (17)	4 (12)
Concentration problems	10/153 (6.5)	3/48 (4)	3/126 (2.5)	1 (3)
Widespread pain	1/153 (0.6)	0/48	6/126 (4.8)	3/33 (9)
Regional pain	3/153 (2)	25/48 (52)	12/126 (9.5)	6/33 (18)
Insurance claims (%)	3/153 (2)	8/48 (16)	2/126 (1.5)	6/33 (18)
Employed (%)	95/153 (52)	24/48 (60)	83/126 (66)	25/33 (75)

QOL quality of life (scale 0–7), *FIQ* measurement of physical function (scale 0–3)

concentration disturbances improved in 2007 when compared to 2004 and did not differ between the two groups. The rate of new onset widespread pain increased in both the study and control group of patients when compared to the rate recorded after the first year of follow-up ($P < 0.01$).

Employment rate improved between 2004 and 2007, but no differences were noted between the study and the control groups.

Only two patients in the study group and one patient in the control group were still undergoing psychological treatment 3 years after their traumatic event.

At the end of the follow-up period, insurance claims continued to be more prevalent in the control group compared to the study group. All claims were filed against private insurance companies.

Discussion

The results of this long-term follow-up study of patients involved in a car accident who suffered a whiplash injury show that the rate of FM developing after such injury did not differ between the study and the control groups. This traumatic event had no major impact on the new onset of FM syndrome although the rate of new onset widespread pain increased with time. These findings confirm our previous observation published in 2006 [3].

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Whiplash injury has been found to be a common sequelae after traumatic events, such as falls, bicycle accidents and motor vehicle collision [9]. This frequent diagnosis is associated with many medico-legal problems and claims in court for compensation [10]. The relationship between physical trauma and the development of musculoskeletal pains has been a matter of debate in the last years. Early studies, all of them retrospective, found that up to 39% of patients with FM reported some traumatic event in the 6-month period preceding the onset of these symptoms [11, 12].

In 1997, Buskila et al. [2] published a study that included 102 patients with neck injury, of whom 74 were involved in road accidents. Patients that were referred to an occupational clinic were assessed 6–18 months later for symptoms and signs of fibromyalgia. The findings of this study revealed that 21.6% of those with neck injury developed FM within 1 year of the event, when compared to 1.7% of the control group who suffered from lower extremity fractures. The results of this study were not validated by any other prospective study since. In 2006, our group published the results of a prospective study that followed 153 patients who arrived at the emergency room with the diagnosis of whiplash injury [3]. Our results were in contradiction with those of Buskila et al. [3], and we showed that whiplash injury and trauma resulting from road accident were not associated with increased rate of FM. The results of our study were supported by two other studies assessing the association of widespread pain with physical injury caused by a motor vehicle collision. In the first study, Wynne-Jones et al. [4] followed a cohort of subjects registered with an insurance company for 6 months using questionnaires. They found that a motor vehicle crash is unlikely to have a major impact on the new onset of widespread pain. A later study conducted by Holm et al. [5] assessed a group of 266 patients out of a cohort of 7462 claimants, who reported some type of whiplash-associated disorder after motor vehicle collision. The finding of this study disclosed that although the cumulative incidence of widespread pain was 21%, it occurred early after injury and was rare 12 months after the injury. On the other hand another study by Wynne-Jones et al. [13] reported later on that the rate of a new onset widespread pain in a cohort of 695 patients who answered their questionnaire after 12 month of a motor vehicle collision was 7.8%. The authors identified five factors that independently predicted the onset of widespread pain in their patients. These included post-collision physical symptoms, pre-collision health-seeking behaviour, pre-collision somatisation, initial injury severity and older age. Somewhat similar results were found by Atherton et al. [14] who followed 480 patients after a motor vehicle collision for 12 months. They concluded that the greatest predictors of persistent neck pain following such collision relate to psychological distress and aspects of pre-collision health rather to various attributes of the collision itself. An interesting observation noted by us is the increase in the rate of both regional and widespread pain in our patients both at the study and at the control group which are similar to those observed by other authors [5, 13].

It is important to remember that widespread pain is not synonymous with FM nevertheless its existence is a prerequisite for the diagnosis of this syndrome, and pain is an important part in the symptom of these patients. Nevertheless, although there was an increase in the prevalence of pain in our cohort, only a minority of patients fulfilled the criteria for FM. On the whole, the prevalence of FM in our study group at the end of 3-year follow-up is similar to that reported by Neumann et al. [15] from Israel who estimated a rate of 0.5 up to 5% of the general population.

As stated in our earlier study, we believe that the methodology of choosing new patients right from the emergency room immediately after the accident and following them for a period of more than 3 years is more accurate than other studies and represents the "real life".

Furthermore, the fact that about 80% of the original group took part in the follow-up study in contrast to much lower rates reported in other studies helps to validate our results and minimises data bias.

In our study, there were more men than women and one might speculate that this fact can interfere with data interpretation, since FM is mainly a disease of women. Nevertheless, the study population represents the population seen in the emergency room, whereby men are more involved than women in car accidents.

Another important factor, which was not a primary outcome of this study but came out as a consequence of the results, is the patients' well-being and cumulative injury following a whiplash injury. This is mainly important due to the increasing rate of lawsuits filed in such cases in all parts of the world. The issue is too complex, was not in the scope of our study and will not be discussed here. Nevertheless, our observation following this study was that although the rate of local and widespread pain increased with time it did not affect the improvement in quality of life, physical functioning and the rate of employment which increased. Similar data can be found in the study of Buskila et al. [16] that although finding increased rate of FM following cervical spine injury noted also an improvement in the quality of life in his patients after 3 years of follow-up and specifies that all patients returned to work and were still employed 3 years later.

We are aware that the small number of patients and controls can limit the interpretation of our data and believe that in order to solve and finalise this important medico-legal issue large prospective studies with an appropriate

sample size calculations and multivariant analysis are needed.

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ORIGINAL ARTICLE

Role of Road Traffic Accidents and Other Traumatic Events in the Onset of Chronic Widespread Pain: Results From a Population-Based Prospective Study

GARETH T. JONES,[1] BARBARA I. NICHOLL,[2] JOHN McBETH,[2] KELLY A. DAVIES,[2] RICHARD K. MORRISS,[3] CHRIS DICKENS,[2] AND GARY J. MACFARLANE[1]

Objective. **To determine the relationship between physically traumatic events and the onset of chronic widespread pain (CWP).**

Methods. **This was a case–control study nested within a large prospective cohort. CWP was determined, by questionnaire, as per the American College of Rheumatology fibromyalgia classification criteria. Data were also collected on psychological health, health behavior, and sleep problems. Participants without CWP were then followed up at 4 years, and (new-onset) CWP was determined in the same manner. At followup, participants were also asked to report whether they had experienced any of a series of physically traumatic events between baseline and followup.**

Results. **A total of 2,069 individuals (46.6%) participated at followup, and 241 of these individuals (11.6%) reported CWP. More than one-third of the study population reported at least 1 physically traumatic event; although these individuals were more likely to develop CWP, this relationship was completely attenuated after adjustment for confounding (odds ratio 1.01, 95% confidence interval 0.73–1.40). However, there was some evidence to suggest that involvement in a road traffic accident, specifically, may confer an increase in the risk of CWP onset.**

Conclusion. **This study provides support for the "at risk" phenotype hypothesis, where individuals characterized by poorer health and psychological variables may be predisposed to develop CWP following a traumatic trigger. However, although this has been seen with road traffic accidents, it is not the case with other events. Future research should examine what is peculiar about an accident, or about one's reaction to it, that confers this increase in the risk of CWP onset.**

INTRODUCTION

Chronic widespread pain (CWP) is defined by the American College of Rheumatology (ACR) as pain present for 3 months or longer, above and below the waist, on both the left and right sides of the body, and in the axial skeleton (1). It is a common and frequently disabling condition, and prevalence studies have provided consistent findings. In the UK, authors have reported prevalence rates of 11.2% (2) and 12.9% (3), with similar levels in Sweden (4), the US (5), and Germany (6). CWP increases with age, until ages 60–70 years, and is more common, at all ages, in women than in men (2–4,5). Along with widespread tenderness, CWP is the principal feature of fibromyalgia, one of the most common reasons internationally for consultation with a rheumatologist (7).

Although the literature examining the etiology of CWP highlights the role of work-related postures/manual handling activities (8), psychological distress (9), features of somatization (10), and workplace psychosocial factors (8), individuals with CWP often attribute symptoms to a precipitating physically traumatic event, e.g., a surgical operation or road traffic accident (RTA) (11). However, there is little robust epidemiologic evidence to support this. Buskila et al (12) conducted an examination for fibromyalgia among 161 patients with traumatic injuries who were attending a clinic. These authors report that individuals

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Gareth T. Jones, PhD, Gary J. Macfarlane, MD, PhD: Arthritis Research UK Epidemiology Unit, University of Aberdeen, Aberdeen, UK; Barbara I. Nicholl, PhD (current address: Arthritis Research UK Primary Care Centre, Keele University, Keele, UK); John McBeth, PhD (current address: Arthritis Research UK Primary Care Centre, Keele University, Keele, UK); Kelly A. Davies, PhD, Chris Dickens, PhD: University of Manchester, Manchester, UK; Richard K. Morriss, MD: University of Nottingham, Nottingham, UK.

Address correspondence to Gareth T. Jones, PhD, Epidemiology Group, Institute of Applied Health Sciences, University of Aberdeen School of Medicine and Dentistry, Foresterhill, Aberdeen, AB25 2ZD, UK.

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presenting with neck injuries were 13 times more likely to meet the ACR criteria for fibromyalgia than those with leg injuries (12). However, this might have been expected since the major distinguishing feature between the 2 groups was not pain but tender point count, and 10 of the 18 fibromyalgia tender point sites are found in the area of the neck and shoulder (1). Al-Allaf et al (13) demonstrated that individuals with fibromyalgia were twice as likely to report a traumatic event in the 6 months prior to survey (odds ratio [OR] 2.1, 95% confidence interval [95% CI] 1.2–3.4). In particular, those with fibromyalgia reported an excess of injuries at work, fractures, and surgery.

Recently, several studies have demonstrated that among persons experiencing an RTA, the greatest predictors of widespread pain are individual-level factors and the psychological milieu, rather than aspects of the trauma itself. Wynne-Jones et al demonstrated prospectively that motor insurance claimants who had been involved in an RTA experienced approximately a doubling in risk of future widespread pain (albeit nonsignificant) compared with claimants not similarly involved in an RTA (risk ratio [RR] 1.9, 95% CI 0.7–4.8) (14). However, this was largely explained by levels of preaccident psychological distress and somatic symptom reporting (adjusted RR 1.4, 95% CI 0.5–3.2). The same authors, in a second study, identified 5 independent risk factors (older age, preaccident adverse health behavior and somatic symptoms, postaccident symptom count, and perceived injury severity) for the onset of widespread pain among 695 individuals involved in RTAs. In combination, these risk factors discriminated between different groups of individuals whose risk of widespread pain onset varied 18-fold, and of the 5 factors, none were accident-specific (15).

However, all of the previous work in this area has identified study participants after the traumatic event. Therefore, even in those that have attempted to adjust for preaccident factors, all have had to rely on all measurements being taken postaccident. It is possible, therefore, that various factors related to the trauma, such as the psychological response to the accident, may have influenced the reporting of preaccident health, pain, and distress. As such, it is not possible to disentangle the potential confounding effect of preaccident versus postaccident distress.

We hypothesize that there are persons defined by prior physical and psychological health who, in the event of a traumatic trigger, are particularly likely to develop CWP. Under this hypothesis, the precise nature of the traumatic event may even be immaterial. The aim of the current study was to examine, prospectively, the relationship between a number of different physically traumatic events and the onset of CWP among persons already well characterized for aspects of physical and psychological health.

MATERIALS AND METHODS

The Epidemiology of Functional Disorders Study is a large prospective cohort study in Northwest England, the design and primary results of which have been published previously (16,17). Briefly, at baseline, 6,290 individuals were recruited from 3 general practices in Northwest England and were sent a self-completion questionnaire. Of these, 6,244 participants answered the question: "Thinking back over the past month, have you had any pain that has lasted for one day or longer?" Those answering positively were asked to shade in the location of their pain(s) on a 4-view body manikin. These manikins, widely used in epidemiologic studies of pain, were then scored in accordance with the definition of CWP in the 1990 ACR classification criteria for fibromyalgia (1).

Potential confounding variables that were measured in the baseline questionnaire included psychological distress (General Health Questionnaire) (18); depression and anxiety (Hospital Anxiety and Depression Scale) (19); illness behavior and illness attitudes (Illness Attitudes Scale) (20); sleep problems (Sleep Problem Scale) (21); and somatic symptoms (Somatic Symptoms Scale) (22).

Persons without CWP were followed up 4 years later by self-completion questionnaire, when the occurrence of (new-onset) CWP was assessed in the same manner as at baseline. Data were also collected concerning the recent experience of 6 physically traumatic events: RTAs, workplace injury, surgery, fracture, hospitalization (for any reason other than the above) and, in women, childbirth. We were interested in traumatic events occurring after the baseline survey; participants were asked about traumatic events in the previous 6 years and were asked to provide the date of these events (or the date of the most recent event in instances where participants had 2 events of the same type [e.g., 2 RTAs]). Events occurring prior to the baseline questionnaire completion were then excluded post hoc.

Statistical analysis. The association between traumatic events and CWP was examined using logistic regression; therefore, results are expressed as ORs with 95% CIs. All analyses were conducted using Stata, version 10 software. Initially, the relationship was examined (unadjusted) between exposure (traumatic event) and outcome (new-onset CWP). Thereafter, results were adjusted where appropriate for age, sex, general practice, baseline pain status, and other potential confounding variables. The latter were variables assessed at the time of the baseline survey that were associated with both the exposure and outcome with a P value less than 0.25 (by chi-square test). This high cutoff value was chosen to allow adjustment for variables with even a modest potential confounding effect on the relationship of interest.

Ethical approval. The study received ethical approval from the South Manchester and East Cheshire Local Research Ethics Committees. Approval was also granted from the University of Manchester Ethics Committee.

RESULTS

Of the 6,244 participants at baseline, 5,181 were without CWP and therefore were eligible for followup. Of these, 737 were known to have died or moved away and, of the remainder, 2,069 were successfully followed up at 4 years and provided pain data (adjusted response rate 46.6%).

Table 1. Description of study population

Characteristic	No. (%)
Men	881 (42.6)
Women	1,188 (57.4)
Age range, years	
25–34.9	250 (12.1)
35–44.9	514 (24.9)
45–54.9	639 (30.9)
55–65	663 (32.1)
General practice	
1	383 (18.5)
2	463 (22.4)
3	1,223 (59.1)
Baseline pain status	
None	881 (42.6)
Regional	1,149 (55.5)
Widespread (nonchronic)	39 (1.9)
New-onset chronic widespread pain (primary outcome)	
No	1,828 (88.4)
Yes	241 (11.6)

Basic descriptive characteristics of the study population are shown in Table 1. Of the responders, 241 (11.6%) reported new-onset CWP. There was no significant difference between CWP onset in men and women ($\chi^2 = 0.25$, $P = 0.62$) or with age ($\chi^2_{trend} = 1.16$, $P = 0.28$). However, there was a statistically significant difference in the prevalence of new-onset CWP between the 3 general practices (range 8.9–17.5%; $\chi^2 = 25.3$, $P < 0.001$) and also between individuals of different baseline pain status: 4.5%, 16.9%, and 17.9%, for those with no pain, regional pain, and widespread (but not chronic widespread) pain, respectively ($\chi^2 = 75.4$, $P < 0.001$).

A total of 684 participants (37.2%) reported at least 1 traumatic event in the period between baseline and followup, and there was no difference in the proportion of men (36.3%) or women (37.8%) reporting an event (Table 2). However, men were more likely than women to report an injury at work (4.1% versus 2.4%) and less likely to report surgery (14.6% versus 18.5%). Men were also slightly more likely to report involvement in an RTA (7.2% versus 5.2%), although this was only of borderline significance. In women, 5.0% (n = 59) reported childbirth by either natural or assisted delivery.

Table 2. Self-reported traumatic events during 4-year followup

Traumatic event	Men, no. (%)*	Women, no. (%)*	P†
Any event‡	283 (36.3)	401 (37.8)	0.51
Road traffic accident	62 (7.2)	61 (5.2)	0.06
Injury at work	35 (4.1)	28 (2.4)	0.03
Fracture	33 (3.9)	50 (4.3)	0.61
Surgery	117 (14.6)	198 (18.5)	0.03
Hospitalization	174 (21.3)	266 (24.3)	0.12
Childbirth	–	59 (5.0)	–

* Denominator differs depending on nonresponse to specific questions.
† By chi-square test.
‡ Only includes individuals answering "yes" to ≥1 exposure or "no" to all exposures.

Participants with new-onset CWP were approximately one-third more likely to report a traumatic event in the 4-year period since baseline than other individuals (OR 1.34, 95% CI 0.996–1.80). This association was largely driven by RTAs, fractures, and injuries at work. In contrast, no association was found with hospitalization, surgery, or (in women) childbirth (Table 3). However, after adjustment for baseline psychological variables and sleep problems, no association was seen between the reporting of a traumatic event and the onset of CWP (OR 1.01, 95% CI 0.73–1.40).

After adjusting for age, sex, general practice, and baseline pain status, those who reported an RTA experienced an 84% increase in the likelihood of new-onset CWP (OR 1.84, 95% CI 1.10–3.11). This relationship remained, although was no longer significant, after further adjustment for other potential confounding variables (OR 1.50, 95% CI 0.89–2.52). Whereas, although modest associations were initially observed between CWP and fracture, and with workplace injury (Table 3), these were greatly attenuated after multiple adjustment (OR 1.22, 95% CI 0.64–2.33 and OR 1.03, 95% CI 0.47–2.24, respectively).

DISCUSSION

We have demonstrated that the onset of CWP over a 4-year period is ~12%. Further, we have shown that persons exposed to an RTA, but not those exposed to other traumatic events, experienced an increase in the likelihood of CWP onset.

There are a number of methodologic issues to consider in the interpretation of these results, with the first being sample attrition. Of the 4,444 baseline participants eligible for followup and not known to have died or moved away, only 46.6% were successfully followed up at 4 years. Loss to followup results in a smaller sample size, decreasing the likelihood of observing statistically significant findings and widening CIs around the OR. Also, in the current study, participants lost to followup were more likely to be young and male, and there was some evidence to suggest that they were more anxious and more depressed at baseline but reported fewer sleep problems. The key issue, however, is whether selective attrition could have introduced a bias to our results. If sample attrition has compromised the internal validity of the study, one would have to argue that the relationship between trauma(s) and CWP onset is different among persons who did, versus did not, participate at followup. We consider this to be unlikely. However, it is possible that those with a prior trauma and potentially with CWP are less likely to be followed up due to their pain levels. Alternatively, one could reasonably propose that the group least likely to participate at followup is the healthy nonexposed (i.e., the nontrauma, non-CWP group). In either instance, our results will be biased toward the null; we will have underestimated the occurrence of new-onset CWP in the trauma group(s) and the true effect sizes will be greater than those we present.

Second, all the traumatic events in the current study

Table 3. Association between CWP onset and physically traumatic events*

Traumatic event	With CWP, no.	Without CWP, no.	OR (95% CI) Crude	Adjusted†	Further adjusted
Any event					
No	115	1,042	1.0	1.0	1.0
Yes	88	596	1.34 (0.996–1.80)	1.22 (0.90–1.65)	1.01 (0.73–1.40)‡
Road traffic accident					
No	213	1,702	1.0	1.0	1.0
Yes	20	103	1.55 (0.94–2.56)	1.84 (1.10–3.11)	1.50 (0.89–2.52)§
Fracture					
No	212	1,713	1.0	1.0	1.0
Yes	13	70	1.50 (0.82–2.76)	1.46 (0.78–2.75)	1.22 (0.64–2.33)¶
Injury at work					
No	223	1,736	1.0	1.0	1.0
Yes	9	54	1.30 (0.63–2.66)	1.31 (0.62–2.77)	1.03 (0.47–2.24)#
Hospitalization					
No	163	1,311	1.0	1.0	1.0
Yes	48	392	0.98 (0.70–1.39)	0.85 (0.60–1.21)	0.77 (0.54–1.11)**
Surgery					
No	172	1,386	1.0	1.0	1.0
Yes	33	282	0.94 (0.64–1.40)	0.89 (0.59–1.33)	0.77 (0.50–1.18)††
Childbirth, women					
No	131	979	1.0	1.0	1.0
Yes	6	53	0.84 (0.36–2.01)	1.16 (0.42–3.15)	0.83 (0.35–2.00)‡‡

* CWP = chronic widespread pain; OR = odds ratio; 95% CI = 95% confidence interval.
† For age, sex, general practice, and baseline pain status.
‡ For psychological distress, anxiety, depression, adverse health behavior, and sleep problems.
§ For anxiety and sleep problems.
¶ For psychological distress and adverse health behavior.
# For psychological distress, anxiety, and adverse health behavior.
** For psychological distress, depression, adverse health behavior, and sleep problems.
†† For depression, adverse health behavior, health anxiety, and sleep problems.
‡‡ For psychological distress and health anxiety.

were assessed by self-report. It is possible, therefore, that a recall bias may exist, whereby individuals with/without CWP recall (or report) traumatic events to a different extent. One can easily conceive of a scenario where such recall bias could occur. What is not so obvious is why it should only occur with RTAs and not other traumatic events, although RTAs may be subject to psychological after-effects and insurance implications that are less prominent with other traumas. In particular, we inquired about hospitalization (although this is not necessarily a physically traumatic event). Persons with CWP are a population known for higher than average levels of consultation for health care (23). Although it seems probable that if a differential recall exists it will be particularly prominent for the reporting of this exposure, persons with CWP in the current study were no more likely to report a recent hospitalization than other individuals (OR 0.98, 95% CI 0.70–1.39).

Previous studies have been unable to adjust satisfactorily for potential baseline confounding variables, since all preRTA data have been collected postRTA. One of the methodologic strengths of the current study is that, unlike previous studies in this area (12–15), potential confounding variables were recorded prior to the RTA, therefore eliminating the possibility that psychological response to the RTA may have influenced the reporting of preaccident health, pain, and distress. In addition, the participants in the current study were without CWP prior to their RTA, i.e., it is known that they were without CWP at baseline. What is not known, however, is the temporal course of events between baseline, the RTA, and the onset of CWP. It is not possible to determine whether participants experienced an RTA and then developed CWP, or whether they developed CWP prior to their RTA. Clearly, in terms of etiology, this is an important issue. However, in the case of the latter, for this to have influenced our results, one would have to argue that CWP onset increases the likelihood of reporting involvement in an RTA, but not the reporting of other traumatic events, including hospitalization. Again, we would hypothesize that this is unlikely. What cannot be ruled out with certainty, however, is that any potential confounding variables are not associated with the risk of exposure, i.e., with the risk of a traumatic event. If this is the case, and these variables are, in fact, path variables and not confounders, then statistical adjustment is inappropriate.

We found the incidence of CWP to be 11.6% over a 4-year period. This is possibly higher than one might expect, given what is known about the prevalence of the condition. Other authors have reported a prevalence of 11–13% in a similar population (2,3). The reason for the high prevalence of new-onset CWP is unknown, although it may be a function of surveillance, i.e., CWP may be better ascertained in a repeatedly monitored population

than in the general population. However, in the current study, even the baseline prevalence of CWP was high (17%), although previous work has shown that this is explained, at least in part, by (lower) socioeconomic status of the current study population (24). Although it would have been preferable to have an individual-level marker of socioeconomic status, such as income or social class, in the current analysis we were only able to adjust for socioeconomic status using a cruder, group-level proxy variable, i.e., general practice.

Although there is an increase in the likelihood of CWP onset associated with involvement in an RTA, we have shown that this is not true for other physically traumatic events. The reason for the specificity of this relationship is unclear. It may be that the extent of the initial injury will determine who develops CWP, although this was not examined in the current study. Again, however, this would not explain the specificity of the relationship to RTAs. To explain the current findings, one would have to suppose that the RTAs resulted in greater initial injury than the other traumatic events, including events such as bone fracture. Also, it is possible that some of the events overlap, e.g., some of the fractures/hospitalizations/surgery resulted from RTAs, although it is not possible to distinguish between these in the current study.

The psychological response to the unplanned nature of RTAs may be important. This might also explain the small increase in the likelihood of CWP onset associated with fractures and injury at work (also unplanned) although, interestingly, these latter relationships were attenuated (completely so in the case of workplace injury) by adjustment for baseline psychological variables.

So might there be something peculiar to an RTA that leads people to expect a poor outcome and maybe influence natural history? There is some evidence in support of this question. A study conducted in Lithuania revealed that in a country where compensation for whiplash injury was infrequent, and expectation of long-term disability was minimal, there was no evidence that car accidents led to chronic neck problems (25). Or, it may be that there are a number of influences on the reporting of chronic symptoms, including perceived "trigger" events and even, in the case of RTAs, issues surrounding fault and compensation. A recent survey demonstrated that persons with fibromyalgia, of which CWP is a major symptom, commonly attribute their symptoms to a physically traumatic event: 16.1% of respondents reported that symptoms were triggered by an RTA (11). It may be that this perception of a causal pathway, and potential over-reporting of trigger events (compared to perceived nontrigger events) may partly explain the current findings. However, this previous study also found that the same proportion of respondents reported surgery as a trigger event, and slightly more (17.1%) reported a nonRTA physical injury.

In summary, previous work has shown that patients with CWP often attribute symptom onset to a precipitating physically traumatic event and, although some studies have reported associations between such events and the onset of CWP, they have been unable to adequately adjust for pretrauma psychological health, which may confound any observed relationship. The current study provides some support for the hypothesis of an "at risk" phenotype, where individuals characterized by poorer health and psychological variables may be predisposed to develop CWP following a traumatic trigger event. We have demonstrated that persons with new-onset CWP are 34% more likely to report a prior, recent, and traumatic event than individuals who remain without CWP. We have also shown that involvement in an RTA specifically does appear to confer a modest increase in the likelihood of symptom onset over the short to medium term, although in general this effect is removed after adjusting for potential confounding factors. Future research should examine what it is about involvement in an RTA, or about one's reaction to an RTA, that confers this increase in the risk of CWP onset, which does not seem to occur with other traumatic events.

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AUTHOR CONTRIBUTIONS

All authors were involved in drafting the article or revising it critically for important intellectual content, and all authors approved the final version to be submitted for publication. Dr. Jones had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Study conception and design. Jones, McBeth, Morriss, Dickens, Macfarlane.

Acquisition of data. Nicholl, McBeth.

Analysis and interpretation of data. Jones, Nicholl, McBeth, Davies, Macfarlane.

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CASE NO. 69115-5-I

COURT OF APPEALS
DIVISION I
FOR THE STATE OF WASHINGTON

REBECCA LAMONTE,

Appellant,

v.

THE ESTATE OF SHERMAN LLOYD COOK, JR. and RICHARD WESTERFIELD and JANE DOE WESTERFIELD, husband and wife and the marital community composed thereof,

Respondents.

CERTIFICATE OF SERVICE

AIKEN, ST. LOUIS & SILJEG, P.S.

By: William A. Olson
David P. Hansen
Attorneys for Respondent
801 Second Avenue
Suite 1200
Seattle, WA 98104
(206) 624-2650

ORIGINAL

I certify under penalty of perjury under the laws of the State of Washington that on the date noted below, I sent a copy of BRIEF OF RESPONDENT and this Certificate of Service via ABC Legal Services, Inc., to:

Steven P. Krafchick
Sarah Lee
Krafchick Law Firm
100 W. Harrison, South Tower, Suite 300
Seattle, WA 98119

Print Name: Fara Fusaro
Date: March 28, 2013