

DISTRICT COURT, LARIMER COUNTY, COLORADO 201 Laporte Avenue Fort Collins, Colorado 80521 970-498-6100	
STEVEN PETERS and JOHANNA PETERS, Plaintiffs, v. DOYLE C. UDY, Defendant.	COURT USE ONLY
Stephen J. Jouard, #15078 RAY, JOUARD & PICKERING, P.C. 2038 Caribou, Suite 100 Fort Collins, CO 80525 Telephone: (970) 482-1977 Attorneys for Plaintiffs	Case No. 04 CV 2206 Division 5C
PLAINTIFF'S RESPONSE TO DEFENDANT'S MOTION IN LIMINE REGARDING THE TESTIMONY OF GREGORY HIPSKIND, M.D.	

Plaintiff, Johanna Peters, through counsel, responds to Defendant's Motion *in Limine* regarding the proposed expert testimony of Gregory Hipskind, M.D., to exclude SPECT Scans and related testimony from trial and, as grounds therefore, states as follows:

I. SUMMARY OF PLAINTIFF'S RESPONSE

The SPECT Scan involved in this case was for assessment and further evaluation of Johanna Peters. The SPECT scans obtained corroborate and are consistent both with a neuropsychological evaluation and re-evaluation done by Thomas L. Bennett, Ph.D., as well as evaluation done by the Plaintiff's neuro-optometrist, Christopher Eddy, O.D. Both federal and state courts in Colorado have specifically admitted evidence of the SPECT scan results in traumatic brain injury cases as well as the testimony of Plaintiff's designated expert S. Gregory Hipskind, M.D. Contrary to the misleading statements in the Defendant's motion, medical literature and the medical community support the use of SPECT. Medicare and many insurance companies accept and pay for SPECT for diagnosis and evaluation of traumatic brain injury. Should the Court deem it necessary to evaluate the relevancy and reliability of Dr. Hipskind's testimony, Plaintiff requests a hearing at which Plaintiff's expert will demonstrate that he is well

qualified, that SPECT is admissible, and that in this particular case, the SPECT corroborates and is consistent with the neuropsychologist's specific diagnosis of traumatic brain injury.

II. ARGUMENT

A. **The SPECT Scan involved in this case was for assessment and evaluation of Johanna Peters' diagnosed traumatic brain injury.**

The Plaintiff, Johanna Peters, was involved in a significant rear-end collision on November 3, 2001. She and her husband were headed eastbound on Mountain Vista Road at the time. Johanna Peters was driving and her husband, Steven Peters, was a front seat passenger in a brand new 2002 Subaru Outback station wagon. Ms. Peters slowed her vehicle and properly signaled to make a left turn onto County Road 9 to head northbound to the Peters' home in Wellington, Colorado. As they arrived at the intersection, Ms. Peters' vehicle came to a complete stop as she waited for on-coming traffic to clear. While the Peters vehicle was at a complete stop, it was rear ended by a 1997 Lincoln Continental operated by Defendant Doyle Udy at a high rate of speed.

Ms. Peters will testify that she was stunned and dazed after the collision, but does not know if she lost consciousness briefly, or not. She was taken by ambulance to Poudre Valley Hospital. Shortly after the collision, she developed headaches, accompanied by nausea, and began having difficulty with word finding. Within two weeks of the collision, her headaches had worsened, she was having problems with blurred vision, and continued to experience difficulty with word finding and memory. Because of those continuing complaints, Ms. Peters was referred by her family practice provider for neuropsychological evaluation by Thomas L. Bennett, Ph.D., a local neuropsychologist. There is no evidence that Ms. Peters had any similar pre-existing complaints.

Based upon a neuropsychological evaluation by Dr. Bennett, Ms. Peters was diagnosed as having suffered a mild traumatic brain injury with residual and persisting problems with fatigue, vision disturbances, verbal learning and memory. See narrative report of Dr. Bennett attached as Exhibit A.

Ms. Peters was subsequently referred for a SPECT scan for further evaluation of her diagnosed traumatic brain injury. (SPECT is "single photon emission computed tomography"¹). The SPECT was completed under the direction of S. Gregory Hipskind, M.D., Ph.D. The findings of the SPECT scan and interpretation of the scan by Dr. Hipskind are consistent with mild traumatic brain injury and Ms. Peters' specific complaints. In particular, the test results of the SPECT scan indicate:

¹ A SPECT scan measures perfusion levels or blood flow to various parts of the brain, which correlates with functional neuroanatomy of the brain.

The findings of fixed superior frontoparietal, anterior cerebellar, inferior frontal and anterior temporal areas of hypoperfusion seen on the isocontour/3D surfaces are most consistent with traumatic brain injury.

Based upon the results of the SPECT scan certain treatment recommendations were made by Dr. Hipskind. The results of the scan also validate, for the patient, that there is an explanation for her continuing symptoms related to her diagnosed traumatic brain injury. The findings of the SPECT scan and Dr. Hipskind's reading of the scan are also consistent with the neuro-optometric evaluation performed by Christopher Eddy, O.D., who has been endorsed to testify as an expert at trial that Johanna Peters' persisting visual symptoms and problems, and objective exam findings, are consistent with traumatic brain injury.

B. S. Gregory Hipskind, M.D., Ph.D., is qualified.

S. Gregory Hipskind, M.D., Ph.D., is indisputably qualified in the area of SPECT scans and in utilizing SPECT scans to assist in diagnosing traumatic brain injuries.² Although Dr. Hipskind and many other neuroradiologists have been using SPECT for numerous years to help diagnosis brain injuries, Defendant has filed a Motion *in Limine* to exclude evidence of the SPECT Scan done on Johanna Peters and to limit or exclude Dr. Hipskind's related testimony in evidence from trial.

The Defendant, through counsel, contends that SPECT scans cannot reliably be used to diagnosis or assess causation for brain injuries, and the admission of SPECT evidence would result in unfair prejudice, confusion of the issues and mislead the jury. SPECT scans and Dr. Hipskind's opinion, however, should be admissible in this matter pursuant to C.R.E. 702 and 703 because they are both **relevant** and **reliable** in the scientific community assisting in the diagnosis of brain injury and have been for years. Further, Dr. Hipskind is a recognized expert in the field. As such, Plaintiff requests this Court to deny Defendant's Motion *in Limine*.

C. Dr. Hipskind's proposed testimony is both relevant and reliable and should therefore be admissible under C.R.E. Rule 702.

C.R.E. Rule 702 governs the admissibility of expert testimony. The rule provides as follows:

² Dr. Hipskind is a board certified neuroradiologist who, in the past seven years, has read and evaluated well over 2000 SPECT brain function imaging scans concerning approximately 1100 patients. See Curriculum Vitae of Dr. Hipskind attached hereto as Exhibit B. He has acquired approximately 1000 hours of training pertaining to SPECT scans at St. Joseph's Hospital in Bellingham, Washington. He has received over 200 hours of training at the Institute of Nuclear Medicine education and obtained certificates of competency and principals of radiation physics, radiopharmaceuticals, medical radiation protection and medical radiation instrumentation, 90% of which dealt with training of SPECT. In 2003, Dr. Hipskind was licensed by the Nuclear Regulatory Commission to use SPECT imaging in clinical practice.

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

The decision of whether to admit expert testimony lies within the sound discretion of the trial court. *People v. Fasy*, 820 P.2d 1314 (Colo. 1992). Moreover, the Court's determination will not be overturned except upon an abuse of discretion. (*Baird v. Power Rental Equipment, Inc.*, 191 Colo. 319, 552 P.2d 494 (Colo. 1976); *Klein v. State Farm Mutual Ins. Co.*, 948 P.2d 43 (Colo.App. 1997). In borderline questions, it is more appropriate for a judge to admit the evidence than to exclude it from the fact finder because "vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 US 579, 596 (1993). The Colorado Rules of Evidence assign to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand. Accordingly, the trial judge is the "gatekeeper" of expert testimony to ensure that the testimony is both relevant and reliable. *U.S. v. Havvard*, 117 F.Supp 2d 848 (S.D.Ind.2000). The two part test for admissibility of expert testimony rests on relevance and reliability.

1. Dr. Hipkind's testimony is relevant pursuant to C.R.E. 401.

Evidence is relevant for purposes of the Colorado Rules of Evidence if it has "any tendency to make the existence of any fact that is of consequence to the determination of the action more or less probable than it would be without the evidence." C.R.E. 401.

There is little question that Dr. Hipkind's testimony and the results of the challenged SPECT scans are **relevant** to this matter. The scans were obviously taken of the Plaintiff, Johanna Peters, for the purpose of diagnosis and evaluation of her traumatic brain injury. Secondly, one of the main purposes in general, and the entire purpose of the use of SPECT scans in this matter, is to contribute to the objective evidence diagnosing a patient with a traumatic brain injury. Appropriately considered medical literature indicates that "a variety of radiological and laboratory techniques have been used to diagnose TBI, including x-rays of the skull, computed tomography of the brain, MRI, and SPECT (Single Photon Emission Computed Tomography)." ³ SPECT, in particular, is a procedure providing a measure of brain metabolism by measuring cerebral blood flow. Patterns of regional cerebral blood flow generally match the metabolic requirements of the brain, and thus will provide information regarding the functional status of the brain tissue.⁴

³ National Center for Injury Prevention and Control. *Report to Congress on mild traumatic brain injury in United States: Step to Prevent a Serious Public Health Problem*, Atlanta, California: Centers for Disease Control and Prevention; 2003, P.7 (**emphasis added**).

⁴ Kant R, Smith-Seemiller L., et al. tc-HMPAO SPECT in persistent post-concussion syndrome after mild head injury: comparison with MRI/CT. *Brain Inj.* 1997 Feb; 11(2), pp. 115-116.

Based upon discussion with current defense counsel, Defendant apparently disputes that Plaintiff has in fact sustained a traumatic brain injury in this matter.⁵ Defense counsel argues that use of SPECT in diagnosis of traumatic brain injury is “investigational” citing a nearly ten year old report. Despite the Defendant’s argument that SPECT is investigational for purposes of diagnosing brain injuries, the fact is that SPECT is being used to assist in determining whether the existence of Plaintiff’s brain injury is more or less probable, a fact that is in dispute. Dr. Hipskind’s report clearly shows that Plaintiff suffered a traumatic brain injury, and indicates the specific basis for his opinions. Dr. Hipskind’s report should be taken together with all of the other information in this case indicating that Plaintiff has sustained a traumatic brain injury, including the opinions of Ms. Peters’ other treating medical providers, Thomas Bennett, Ph.D., and Christopher Eddy, O.D.

2. Dr. Hipskind’s testimony is likewise reliable and should therefore be admissible as expert testimony.

In order to be admissible, expert testimony must also be **reliable**. C.R.E. Rule 702. The trial court may consider the *Daubert* factors as a “non-exclusive list of general observations that a trial court may consider.” *People v. Shreck*, 22 P.3d 68, 77 (Colo.2001). The particular factors a trial court considers will depend upon the unique circumstances of the expert testimony involved. *Kumho Tire Co., Carmichael*, 526 U.S. 137, 141, 151-152. *Kumho* trial court noted that in other cases, the relevant reliability concern may well focus upon personal knowledge or experience alone. *Id.* at 141.

Dr. Hipskind has more than ten years of experience in SPECT training and personal SPECT scan evaluation. He makes clear in his report, and he will make clear in his testimony, that he bases his opinions on nationally standardized criteria as well as literature, training and experience that shows abnormal areas of profusion can occur in discreet patterns which, in Plaintiff’s case, were indicative of a brain injury. Furthermore, additional information on Plaintiff’s medical history was not provided to Dr. Hipskind in order to obtain a completely unbiased objective opinion based on the SPECT scan results. As a result, the SPECT test results clearly indicate a brain injury which is also confirmed by the evidence in this case including, but not limited to, the neuropsychological testing, the type of accident which occurred, and the confirmation by Plaintiff’s treating neuro-optometrist, Dr. Eddy.

⁵ Defendant and his counsel failed to timely designate any expert to testify regarding Ms. Peters’ diagnosed brain injury. More than three weeks after the court extended the deadline for designation of experts and 35 days prior to trial, Defendant has submitted a supplemental expert designation of Kenneth Gamblin, M.D., to testify that Plaintiff does not have a traumatic brain injury. Plaintiff will be filing a motion to strike the untimely designation in the next few days.

There is an abundance of articles identifying the use of SPECT scans as a useful tool in diagnosing injury.⁶ In particular, attached to this brief as Exhibit D is the adopted practice guideline for the American College of Radiology (2002) providing that “Clinical indications for SPECT brain perfusion studies include: ...Evaluating symptomatic traumatic brain injury...” Also attached to this response as Exhibit E are the adopted guidelines of the European Association of Nuclear Medicine identifying SPECT as commonly indicated for the diagnosis of several conditions including evaluation of traumatic brain injury.

The Defendants reference a 1996 publication: “Assessment of Brain SPECT” authored by Bennett and Davalos, which is now almost ten years old. The defense fails, however, to advise the Court of the significant number of studies which have taken place since 1996. Dr. Hipskind will testify that since 1996, there have been over 100 additional peer-reviewed scientific studies concerning SPECT in mild-to-moderate traumatic brain injury cases using HMPAO (the isotope used in the scan done of Ms. Peters) and more advanced multiple-detector gamma cameras. In strong recognition of the advances made over the past decade, the European Association of Nuclear Medicine, citing a number of reports, considers the evaluation of traumatic brain injury a “common indication” for the utilization of brain SPECT imaging.

Thus, SPECT scans have clearly been used and are considered a reliable source in the scientific community to diagnose brain injury or at a minimum, to offer evidence consistent with the diagnosis of brain injuries, and should be admissible for such purpose.

D. Federal and State law in Colorado support the Admissibility of SPECT scans as reliable scientific evidence.

Defendant does not cite a single Colorado decision which has barred the introduction of SPECT scanning as reliable scientific evidence of traumatic brain injury. In addressing the same arguments raised by the Defendant here, the United States District Court for the District of Colorado, Judge Zita Weinshienk presiding, specifically denied a defendant’s motion to exclude SPECT test results and Dr. Hipskind’s testimony on the basis that it was not relevant and unreliable. *Searcy v. Hamburger*, Civil Action # 02-cv-2260-ZLW-MJW.⁷

In the hearing before Judge Weinshienk, Dr. Hipskind testified:

Regarding the validity of brain SPECT imaging in traumatic brain injury, I note that the *Report to Congress on Mild Traumatic Brain Injury in the United States: Steps to Prevent a Serious Public Health Problem* (citation omitted), refers to Dr.

⁶ In light of the Colorado Rules of Civil Procedure Committee comments recommendation that responses be limited to ten pages and that only concise exhibits be attached, rather than attaching all mentioned articles, Plaintiff has attached various research excerpts from many articles confirming the use of SPECT scans as a diagnostic tool for accessing brain injury. See Exhibit C. Plaintiff will certainly be able to produce such articles to the Court at any Shreck hearing.

⁷ A copy of Judge Weinshienk’s order is attached hereto as Exhibit F.

Bigler, among others, as describing SPECT as diagnostic in traumatic brain injury (“TBI”). Further, in his chapter entitled “Neuroimaging in Forensic Neuropsychology” which appears in the *Handbook of Forensic Neuropsychology* (2003), at pages 197-199, regarding the role of neuroSPECT in TBI he states: “[T]he more revealing findings come with single photon emission computed tomography (SPECT), which demonstrated lack of perfusion in regions that exceed the boundaries defined by the signal abnormalities in the temporal area... Although structural imaging with MRI in this region did indicate some structural damage, SPECT imaging clearly demonstrated a large left frontal defect (see Figure 7.2). What is important in viewing this defect is that it shows considerable functional impairment in what otherwise looks to be normal-appearing tissue. Such frontal defects are expected to result in changes in executive and personality function. Such problems were reported and observed in this patient, but were difficult to actually demonstrate with neuropsychological technique, because of very high premorbid functioning.

Moreover, Judge Melonakis in the Adams County District Court similarly denied a defense motion to exclude SPECT imaging as unreliable in the diagnosis or evaluation of traumatic brain injury in the case of *Campbell v. T.R. Transportation, et al.*, Case No. 00 CV 373.⁸

E. Plaintiff’s Offer of Proof

To the extent that the Court determines there is a need to conduct a Shreck hearing with regard to the admissibility of Dr. Hipskind’s testimony and the reliability of SPECT in the diagnosis of traumatic brain injury, Plaintiff will present the testimony of Dr. Hipskind. Dr. Hipskind will testify with the use of a PowerPoint presentation, what is represented above and the following:

1. Dr. Hipskind and Brain Matters, Inc., use the latest in high resolution SPECT camera.
2. How the SPECT functions and how it differs from an MRI or a CT scan.
3. A showing of findings on an MRI, a CT scan and a SPECT (related to the Plaintiff).
4. Excerpts from the medical communities’ acceptance of brain SPECT imaging and TBI. The European Association of Nuclear Medicine, the American College of Radiology, and the Society of Nuclear Medicine all accept SPECT.
5. Medicare contract guidelines (§13.5.1) indicating the SPECT is “safe and effective; not experimental or investigational . . .”
6. That numerous third party payers accept SPECTs for TBI including the following:
 - a. Medicare
 - b. United Healthcare

⁸ A copy of the relevant portions of the transcript of Judge Melonakis’ opinion is attached hereto as Exhibit G.

- c. Humana
 - d. CHUBB
 - e. GEICO
 - f. Farmers
 - g. Zurich
 - h. Amica
 - i. Blue Cross
 - j. Connecticut General
 - k. State Farm
 - l. Shelter
 - m. Fortis
 - n. Trustmark
 - o. Aetna
7. Worker's compensation insurers in a majority of states reimburse SPECTs for TBI.
 8. How the brain SPECT examination process works.
 9. How accurate the brain SPECT is. (Dr. Hipskind will explain a study about traumatic brain injury issued by Jacobs in 1996 discussing 136 patients and SPECT sensitivity. This sensitivity at twelve months was 100 percent.)
 10. SPECT reliability in predicting outcome (Dr. Hipskind will also address specificity which was 100 percent at 12 months in the Jacobs study).
 11. What researchers conclude about brain SPECT application and traumatic brain injury. Dr. Hipskind will rely not only on Jacobs (1996) but also Bavetta (1994).
 12. Dr. Hipskind will describe what the appointments for a SPECT scan consist of.
 13. Dr. Hipskind will compare Ms. Peters' SPECT scan results with the SPECT scan of a normal sample.
 14. Dr. Hipskind will discuss the most common TBI-SPECT findings and the findings on Ms. Peters' scan.

WHEREFORE, Plaintiff respectfully requests that this Honorable Court deny Defendants' Motion *in Limine* regarding the Testimony of Gregory Hipskind, M.D. In the alternative, Plaintiff requests a Shreck hearing to determine the admissibility of Dr. Hipskind's testimony and the admissibility of Plaintiff's SPECT scans, and such other and further relief as to this Court seems just and proper.

DATED this 26th day of August, 2005.

RAY, JOUARD & PICKERING, P.C.
**Duly signed copy on file with the offices
of Ray, Jouard & Pickering, P.C.
/s/ Stephen J. Jouard**

By: _____
Stephen J. Jouard

CERTIFICATE OF SERVICE

I do hereby certify that on this 26th day of August, 2005, I placed a true and correct copy of the foregoing **PLAINTIFF'S RESPONSE TO DEFENDANT'S MOTION IN LIMINE REGARDING THE TESTIMONY OF GREGORY HIPSKIND, M.D.** in the United States mail, postage prepaid, properly addressed to the following, to-wit:

Arthur J. Kutzer, Esq.
Geraldine E. Flynn, Esq.
Senter, Goldfarb & Rice, L.L.C.
1700 Broadway, Suite 1700
Denver, CO 80290

**Duly signed copy on file with the offices
of Ray, Jouard & Pickering, P.C.
/s/ Lori A. Haberer**

for RAY, JOUARD & PICKERING, P.C.