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BEYOND THE VIEWBOX: THE RADIOLOGIST'S DUTY TO COMMUNICATE FINDINGS

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INTRODUCTION

The radiologist occupies an interesting place on the medical treatment team. Although the patient rarely sees or hears from the radiologist, the radiologist communicates with the patient's other physicians primarily through the radiology report – the written record generated following a formal x-ray interpretation by the radiologist.[1] This report finds its way to the hospital chart and/or to the primary care physician's office record.

In the medical-legal context, the classic definition of the radiologist's responsibility is as follows:

> A radiologist is a medical doctor specializing in radiology. He frequently . . . contracts with a hospital to read x-rays taken of patients of referring doctors. He does not take the x-ray films. He is not a treating physician; he does not attempt to administer to or advise any patient. Indeed, quite frequently he never even sees the patient. He does have some responsibility to see that a good x-ray view has been taken and developed. His primary responsibility is to evaluate the developed x-ray films (in accordance with recognized standards of his profession) to determine disease or abnormality.[2]

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1. "Diagnostic radiology, or diagnostic imaging, is the medical evaluation of body tissues and functions – both normal anatomy and physiology and abnormalities caused by disease or injury – by means of static (still) or dynamic (moving) radiologic images." John H. Harris, *Radiology*, Microsoft Encarta Online Encyclopedia (2001), *at* http://encarta.msn.com (visited Mar. 1, 2002). The American Board of Radiology defines diagnostic radiology as "that branch of Radiology which deals with the utilization of all modalities of radiant energy in medical diagnosis and therapeutic procedures utilizing radiologic guidance." The American Board of Radiology, *Diagnostic Radiation: Definition at* http://www.theabr.org/diagnostic.htm (visited Mar. 1, 2002).

2. Clayton v. Thompson, 475 So.2d 439, 448-49 (Miss. 1985) (Hawkins, J.,

Nevertheless, the radiologist, as a physician, owes a duty to the patient.[3] As will be seen, the fact that the radiologist is not perceived as being on the "front line" of medical care does not diminish his duty.

This Article analyzes a component of this duty – the duty to communicate radiological findings directly, promptly, even urgently to the referring or primary care physician who seeks the radiologist's interpretation. Therefore, this Article does not focus on "garden variety" radiology negligence – the failure of the radiologist to correctly interpret an x-ray.[4] It does focus on the radiologist's duty to expedite reporting, how professional standards or guidelines have shaped this duty, and the theory of medical negligence which will likely plague radiologists: the lost chance doctrine.[5]

I. THE AMERICAN COLLEGE OF RADIOLOGY

One must appreciate the role of the American College of Radiology ("ACR") in order to understand its impact on the radiologist's duty to communicate findings. The ACR does not grant medical degrees or license physicians, nor does it confer board certification.[6] The ACR is a voluntary, professional society that publishes "standards."[7] Of what legal significance are the ACR Standards concerning a radiologist's duty to a patient? The ACR published an "autobiography" pertaining to its purpose and its standards wherein the ACR pronounced that its "primary purposes are to advance the science of radiology, improve service to the patient, study the socioeconomic aspects of the practice of radiology, and encourage continuing education for radiologists,

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concurring).

3. Kobos v. Everts, 768 P.2d 534, 543 (Wyo. 1989)

4. *See, e.g.*, Portis v. Greenhaw, 38 S.W.3d 436 (Mo. Ct. App. 2001) (ruling that the radiologist read the patient's mammogram and detected the presence of scattered, small calcifications in the breast, but failed to identify cancerous masses that were present, and was liable for patient's subsequent death from undetected cancer).

5. The lost chance doctrine refers to the medical malpractice claim of a patient, which alleges that the health care provider's negligence "deprived the plaintiff of a chance to survive or recover from a health problem, or where the malpractice has lessened the effectiveness of treatment or increased the risk of an unfavorable outcome to the plaintiff." Holton v. Mem'l Hosp., 679 N.E.2d 1202, 1209 (Ill. 1997). *See also* Setterington v. Pontiac Gen. Hosp., 568 N.W.2d 93, 96-97 (Mich. Ct. App. 1997) (holding that the repeated failure of the hospital's radiologists to diagnose a cancerous lump found in decedent's computerized tomography scan effectively denied her an opportunity to survive).

6. *See* American Board of Radiology, *supra* note 1 (stating that board certification is conferred by the American Board of Radiology).

7. *See* American College of Radiology, *ACR Membership*, *at* http://www.acr.org/membership (last modified Feb. 25, 2002).

radiation oncologists, medical physicists and persons practicing in allied professional fields."[8]

What can be gleaned from the ACR's explanation of the intent of its standards? The ACR Standards are not rules, but are "principles of practice." They are designed to improve the quality of service to patients. Must or should a radiologist follow the standards, even if the radiologist is not an ACR member? More importantly, does an ACR Standard define or evidence the standard of care applicable to a radiologist in a given circumstance?[9] If so, an ACR Standard may have medico-legal

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8. American College of Radiology, *ACR Standards: Introduction*, *available at* http://www.acr.org (last modified Jan. 7, 2002).

> The American College of Radiology, with more than 30,000 members, is the principal organization of radiologists, radiation oncologists and clinical medical physicists in the United States. The College is a nonprofit professional society whose primary purposes are to advance the science of radiology, improve service to the patient, study the socioeconomic aspects of the practice of radiology, and encourage continuing education for radiologists, radiation oncologists, medical physicists and persons practicing in allied professional fields.
>
> The American College of Radiology will periodically define new standards for radiologic practice to help advance the science of radiology and to improve the quality of service to patients throughout the United States. Existing standards will be reviewed for revision or renewal as appropriate on their fourth anniversary or sooner, if needed.
>
> Each standard, representing a policy statement by the College, has undergone a thorough consensus process in which it has been subjected to extensive review, requiring the approval of the Commission on Standards and Accreditation as well as the ACR Board of Chancellors, the ACR Council Steering Committee, and the ACR Council. The standards recognize that the safe and effective use of diagnostic and therapeutic radiology requires specific training, skills, and techniques as described in each document.
>
> . . . .
>
> The standards of the American College of Radiology (ACR) are not rules but attempt to define principles of practice which should generally produce high-quality radiological care. The radiologist may exceed an existing standard as determined by the individual patient and available resources. The standards should not be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific procedure or course of conduct must be made by the radiologist in light of all circumstances presented by the individual situation. Adherence to ACR standards will not assure a successful outcome in every situation. It is prudent to document the rationale for any deviation from these suggested standards in the radiologist's policies and procedures manual or, if not addressed there, in the patient's medical record.

Id.

9. PROSSER & KEETON ON THE LAW OF TORTS, ch.5, § 32 (W. Page Keeton et al. eds., 5th ed. 1984). In regard to the standard of care, "the doctor must have and use the knowledge, skill and care ordinarily possessed and employed by members of the profession in good standing." *Id.* at 187. Thus, "the

dignity that the ACR did not intend.

II. THE ACR STANDARD FOR COMMUNICATION: DIAGNOSTIC RADIOLOGY

Is the radiologist in medico-legal peril for properly interpreting an x-ray and preparing an accurate report if the radiologist fails to communicate the interpretation in person or telephonically to the referring physician? Based upon the ACR Standard for Communication, which requires this expedited reporting under somewhat ambiguous circumstances, the answer is likely "yes." The irony here is that in its effort to improve the quality of care, the ACR Standard will likely increase the incidence of "failure to communicate" claims against radiologists.[10]

The January 2002 ACR Standard for Communication: Diagnostic Radiology[11] ("ACR Standard") provides, in its introductory section, that communication with patients and among physicians is essential to diagnostic radiology and promotes the highest quality of patient care.[12] The ACR Standard references "direct communication," which means something other than a

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standard of conduct becomes one of 'good medical practice,' which is to say, what is customary and usual in the profession." *Id.* at 189. Prosser and Keeton note that the medical profession has the privilege of setting its own legal standard of conduct, by adopting its own practices. *Id.*

10. *See* Michael M. Raskin, *Why Radiologists Get Sued*, 30 APPLIED RADIOLOGY 9-13 (2001), *available at* http://www.medscape.com/viewarticle/406661 (suggesting that the four main reasons for suits against radiologists are "errors in perception, errors in interpretation, failure to suggest the next appropriate procedure and failure to communicate in a timely and clinically appropriate manner"); Leonard Berlin & Johnathan Berlin, *Malpractice and Radiologists in Cook County, IL: Trends in 20 Years of Litigation*, 165 AM. J. RADIOLOGY, 782-85 (noting that twelve percent of the medical negligence suits filed in Cook County from 1975 to 1994 related to radiology, and that the largest category of claims against the radiologist is the missed diagnosis, accounting for fifty-nine percent of the twelve percent). The authors also opine that "in the future radiologic malpractice will be affected by several factors including new standards published by the American College of Radiology." *Id.* at 787.

11. AMERICAN COLLEGE OF RADIOLOGY (ACR) STANDARD FOR COMMUNICATION: DIAGNOSTIC RADIOLOGY § I (revised 2001).

12. *Id.*

> Communication is a critical component of the art and science of medicine and is especially important in diagnostic radiology. An official interpretation shall be generated following any examination, procedure, or officially requested consultation. In addition, the interpreting physician and the referring physician or other healthcare provider have other opportunities to communicate directly with each other during the course of a patient's case management. Such communication should be encouraged because it promotes optimal patient care and focuses attention on selection of appropriate and cost-effective imaging studies, clinical efficacy, and radiation exposure.

Id.

formal, written radiology report, but its purpose relates to "selection of . . . imaging studies, clinical efficacy, and radiation exposure."[13] The reference to direct communication does not relate to a duty of the radiologist to call or confer with a referring physician about x-ray findings on an urgent or expedited basis.

However, this ACR Standard also contains a "Direct Communication" section.[14] Here, Section A of the ACR Standard subjectively encourages the radiologist to directly communicate an interpretation indicating immediate patient treatment. That is, the *radiologist* judges whether the x-ray findings indicate that immediate treatment is required. Section C of the ACR Standard allows the interpreting radiologist to appreciate the presence of less urgent findings (compared to Section A), or significant unexpected findings, and encourages the radiologist to directly communicate those findings.[15]

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13. *Id.*

14. *Id.* § V.

§ V provides:

> A. Direct communication is accomplished in person or by telephone to the referring physician or an appropriate representative. Documentation of direct communication is recommended. In those situations in which the interpreting physician feels that immediate patient treatment is indicated (e.g., tension pneumothorax), the interpreting physician should communicate directly with the referring physician, other healthcare provider, or an appropriate representative. If that individual cannot be reached, the interpreting physician should directly communicate the need for emergent care to the patient or responsible guardian, if possible.
>
> B. Under some circumstances, practice constraints may dictate the necessity of a preliminary report prior to the preparation of the final report. A significant change between the preliminary and final interpretation should be directly reported to the referring physician.
>
> C. In those situations in which the interpreting physician feels that the findings do not warrant immediate treatment but constitute significant unexpected findings, the interpreting physician or his/her designee should communicate the findings to the referring physician, other healthcare provider, or an appropriate individual in a manner that reasonably insures receipt of the findings.

Id.

15. This standard can be compared with the Revised 1999 ACR Standard For Communication: Diagnostic Radiology, which provided:

> A. Direct communication can be accomplished in person or by telephone to the referring physician or an appropriate representative.
>
> B. In those situations in which the interpreting physician feels that immediate patient treatment is indicated (e.g., tension pneumothorax), the interpreting physician should communicate directly with the referring physician, other healthcare provider, or an appropriate representative. If that individual cannot be reached, the interpreting physician should directly communicate the need for emergent care to the patient or responsible guardian, if possible.
>
> C. In those situations in which the interpreting physician feels that less urgent findings (compared to B above) or significant unexpected findings

Even if physicians might reach a consensus as to certain radiological findings which require immediate patient treatment,[16] is it reasonable to expect a consensus of opinion on the definition of: 1) less urgent findings which should require direct communication, and 2) significant unexpected findings which should require direct communication by the radiologist? Causation concerns, (i.e., whether a theoretical, delayed diagnosis prevented a more effective treatment or cure) further complicate these communication issues. Logic suggests that the passage of time does not exacerbate certain diagnosis; earlier diagnosis does not always yield a better outcome. Additionally, an interesting issue of proof arises as to whether expert testimony is necessary to establish the need for direct communication and the mode or quality of the communication. Even the earliest version of this ACR Standard is of relatively recent vintage. Therefore, an examination of pre- and post-ACR Standard case law is necessary and instructive in resolving these issues.

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are present, the interpreting physician or designee should directly communicate the findings to the referring physician, other healthcare provider, or an appropriate representative.

D. Documentation of direct communication is recommended.

E. Any significant discrepancy between an emergency or preliminary report and the final written report should be promptly reconciled by direct communication with the referring physician, other healthcare provider, or an appropriate representative.

AMERICAN COLLEGE OF RADIOLOGY (ACR) STANDARD FOR COMMUNICATION: DIAGNOSTIC RADIOLOGY § V (revised 1999).

The Revised 1995 ACR Standard For Communication: Diagnostic Radiology, provided:

A. If there are urgent or significant unexpected findings, radiologists should communicate directly with the referring physician, other health care provider, or an appropriate representative who will be providing clinical follow-up.

B. Documentation of actual or attempted direct communication is appropriate.

C. Any significant discrepancy between an emergency or preliminary report and the final written report should be promptly reconciled by direct communication with the referring physician, other health care provider, or an appropriate representative.

AMERICAN COLLEGE OF RADIOLOGY (ACR) STANDARD FOR COMMUNICATION: DIAGNOSTIC RADIOLOGY § V (revised 1995).

Furthermore, the current ACR Standard can be compared with the original ACR effort in this regard, known as ACR Resolution 5, which provided that service of the patient's well being "may require direct communication of unusual, unexpected, or urgent findings to the referring physician in advance of the formal written report...." Kline & Kline, *Radiologists, Communication, and Resolution 5: A Medicolegal Issue*, 184 RADIOLOGY 131 (1992) (citing Council of the American College of Radiology and discussing Resolution 5's impact on the Radiologist's duty to communicate).

16. The ACR Standard specifically refers to tension pneumothorax.

III. PRE-ACR STANDARD CASE LAW

A journey through the pre-ACR Standard case law reasonably commences in 1971 with *Keene v. Methodist Hospital*.[17] In *Keene*, the patient received head injuries from a fight and was taken to an emergency room.[18] Skull films were taken and the patient was released without treatment.[19] The radiologist interpreting the x-rays dictated a report revealing the possibility of a skull fracture and suggesting additional studies, but these findings were not relayed to the attending physician or emergency room staff.[20]

The *Keene* court agreed with plaintiff's theory that an immediate report from the radiologist to the treating physician and emergency room staff would have facilitated surgery prior to the occurrence of irreparable brain damage.[21] Curiously, the court characterized the act of the radiologist in communicating a report as "administrative" for the purpose of imposing liability on the hospital for the radiologist's negligence.[22] Under the ACR Standard, the communication directive is not characterized in "administrative" terms; it is integral to the responsibility of the radiologist.[23]

An interesting communication case arose in 1973, the gist of which was the failure of a non-radiologist to communicate a radiological finding. In *Merriman v. Toothaker*, the defendant physician was a pediatrician on-call in the emergency room when a sixteen-year-old automobile accident patient arrived with facial injuries and neck and shoulder tenderness.[24] X-rays were taken and interpreted by the defendant, who concluded the patient suffered a bruised and sprained neck. A radiologist formally interpreted the films and diagnosed cervical spine curving and ligament damage. The defendant physician received the formal report a few days later, then mailed the report to the patient's attending physician and the hospital. The attending physician did

17. 324 F. Supp. 233 (N.D. Ind. 1971).

18. *Id.* at 233.

19. *Id.*

20. *Id.* at 233-34.

21. *Id.* at 234. The court also stated that:

> Dr. Choslovsky [the radiologist] was negligent in failing to immediately bring his report to the attention of the proper persons. Dr. Choslovsky knew that there would be a delay in the transcription of his report under the normal hospital procedures. Given the fact that these procedures were inadequate, when Dr. Choslovsky noted the possibility of a serious injury, due care would have required that he telephone his report to the attending physician, the Emergency Room, or the Hospital administration.

Id.

22. *Keene*, 324 F. Supp. at 234.

23. AMERICAN COLLEGE OF RADIOLOGY (ACR) STANDARD FOR COMMUNICATION: DIAGNOSTIC RADIOLOGY § V (revised 2001).

24. 515 P.2d 509 (Wash. Ct. App. 1973).

not receive the report. The patient had symptoms, including swelling and the inability to hold up his head. Subsequently, the patient was hospitalized and underwent a fusion and disentomb.

The timing of the radiology report was crucial to the patient's treatment, and evidence suggested that if the formal radiology report had been acted upon in a timely fashion the medical complications may have been avoided. The court noted that the medical standards in the community required the radiologist to communicate with the attending physician, particularly because of the medical significance of the x-ray report and the severe danger the plaintiff would be in if his neck was not immobilized.[25] The court essentially treated the medical scenario as an emergency; therefore, the court held that "a personal contact was required to insure prompt action."[26]

An important pre-ACR Standard case that has received some comment in medical journals[27] is *Phillips v. Good Samaritan Hospital*.[28] There a young child was injured while playing and then taken to the emergency room for treatment and x-rays. The treating physician discharged the child prior to a formal radiological interpretation of the films. The next day, the radiologist interpreted the films and diagnosed a displaced fracture of the humerus. The radiologist dictated his report but neither the attending physician nor family physician was aware that the formal radiology interpretation was contrary to the diagnosis of the emergency physician. Several months later the child's parents learned their daughter had a broken arm.

The *Phillips* court noted, "communication of a diagnosis so that it may be beneficially utilized may be altogether as important as the diagnosis itself."[29] In fact, the court rejected the concept of radiological "indirect medical care," or the idea that the radiologist need only arrive at a correct radiological interpretation and send it on its administrative way.[30] Significantly, the court acknowledged that the radiologist was a member of a medical treatment team, all members of which owe precisely the same duties of care to a patient.

The court then addressed the crucial issue of what duty physicians owe in communicating a diagnosis.[31] The court

25. *Id.* at 511.
26. *Id.* at 512.
27. *See* Berlin, *supra* note 10, at 514 (discussing increased medical malpractice against radiologists); Raskin, *supra* note 10 (reporting holding of an Ohio court that radiologist's diagnosis and dictation of a report did not eliminate liability); Kline & Kline, *supra* note 15, at 132 (reporting on cases establishing liability for radiologists' failure to personally communicate).
28. 416 N.E.2d 646 (Ohio Ct. App. 1979).
29. *Id.* at 648.
30. *Id.* at 649.
31. *Id.*

analyzed this issue by referring to medical exigencies and varying levels of response. The form and immediacy of communication relate to the "[s]everity of condition, urgency of treatment, potential of interim injury, suffering from delayed response, need for further analysis and consultation, and the patient's awareness of the extent of injury or the nature of the condition."[32]

The aspect of *Phillips* that causes medico-legal discomfort for the radiologist is the extent the court required expert testimony to prove a "failed communication" claim. The court required expert testimony to determine "the immediacy of need for treatment as it relates to the diagnosis and the harm likely to result from inattention."[33] However, the court also determined that the mode and manner of communication "is not so complex and technical that it should escape the comprehension of a layman jury."[34] The court essentially excused the need for expert testimony as to the type of communication required. It is debatable whether it is appropriate to allow a jury to conclude, without the guidance of expert testimony, that a radiologist must utilize the telephone, e-mail, or a person-to-person conference to communicate a radiology interpretation. Furthermore, whether the jury should have the authority to determine whether the radiologist may delegate the immediate communication to a colleague, a nurse, a secretary, or other hospital personnel, in the absence of expert testimony on this issue is questionable. If these are appropriate functions of a jury in a medical negligence case the quality of required proof is diluted in the absence of expert testimony.

The Supreme Court of Alabama considered the relationship of the need for a direct radiology communication and proximate cause. In *Davison v. Mobile Infirmary*,[35] the court focused on a radiologist's failure to emergently communicate potentially serious abdominal findings to the admitting physician. The interesting aspect of *Davison* is the court's recitation of a substantial portion of the radiologist's trial testimony.[36] The testimony pertaining to x-ray interpretation, merits repetition here:

> Q. . . . Based upon your interpretation of this x-ray and the wording [of your report], . . . was what appeared to be a large amount, a huge amount of medication pills undissolved, did you think it was important to call her admitting physician and report even though he hadn't requested it?
>
> A. I didn't at the time.

32. *Id.*
33. 416 N.E.2d 646, 650 (Ohio Ct. App. 1979).
34. *Id.*
35. 456 So.2d 14, 15 (Ala. 1984).
36. *Id.* at 15-16.

Q. . . . And you did not, did you?

A. I did not.

Q. . . . How did you handle your report on this x-ray?

A. I dictated a report and it was put on the patient's chart.

Q. And what happened to it after that?

A. I don't have any way to know.

. . . .

Q. Had you ever seen an x-ray that had as many pills in someone's body as this on the date that you saw this on June [26] of 1977?

A. No.

. . . .

Q. Did you consider it to be unusual that you had just viewed an x-ray that has more pills in it than you've seen in a hundred and fifty thousand or so x-rays?

A. I've never seen that many pills in an x-ray of the stomach before.

A. Did you think it was unusual?

A. Yes.

Q. Was it out of the ordinary?

A. Yes.

Q. Was it an emergency situation?

A. Not in my judgment, but I don't know. I'm not a clinician. I can't make that judgment.

Q. You didn't know what the pills were, did you?

A. That's right.

Q. How could you tell?

A. I couldn't make that judgment.

. . . .

Q. . . . Is it the national standard [of medical care] that if the radiologist working for a private hospital in California or New York or Miami, Florida, would call an admitting physician if he viewed an x-ray of . . . .

A. I would say yes.

Q. Would he also call if he deemed it a dangerous condition?

A. Possibly.

Q. . . . You've called physicians before under those circumstances, haven't you?

A. Yes.[37]

After referring to this compelling testimony, which essentially conceded the radiologist's duty to urgently communicate findings, the court then referred to the testimony of plaintiffs' expert witness, a family medicine physician, not a radiologist, as follows:

Q. When you were contacted by [Plaintiffs' counsel], what were you told or asked about this case, if anything?

A. I was told that a woman had pills in her stomach which might have represented an emergency situation, and she became blind, and he wondered whether I would review the hospital records and give my opinion as to whether there appeared to have been a mistake made in the management of the patient or in the diagnosis.

. . . .

A. And what are your opinions?

A. My opinion is that this unfortunate woman developed a bezoar of mixed food and undigested pills. This is an extremely unusual occurrence and one which I believe should have alerted the radiologist to possible seriousness - -the possible emergency nature of this condition.

. . . .

Q. . . . What do you think should have been done when the x-ray disclosed the bezoar?

A. I believe that the radiologist should have alerted the treating physician in some special manner to the fact that there was an unusual occurrence.[38]

With ample testimony to support the need for an urgent radiology communication, the court was required to resolve a significant problem; the treating physician testified that even if he had known earlier of the x-ray findings, he would not have treated the patient sooner. The trial court concluded that there was no proof of proximate cause. Remarkably, the Alabama Supreme

37. *Id.* at 16-17.
38. *Id.* at 18-20.

Court reasoned that a jury could conclude this testimony could have been motivated by the treating physician's self interest and further held that a jury should be able to determine "whether the x-ray doctor's report, as routinely handled, adequately apprised the treating doctor of the unusual and dangerous potential of that which was revealed by the x-ray."[39] Whether a treating physician would alter treatment or provide it more quickly upon receipt of an x-ray finding seems to be a question that typically requires expert testimony; this is not a topic within the knowledge of a lay juror. In essence, the *Davison* court greatly relaxed, or even excused, the need for expert proximate causation testimony. Excusing this testimony undoubtedly exposes the defendant physician or hospital to great risk.

In *Shuffler v. Blue Ridge Radiology Associates P.A.*, the Court of Appeals of North Carolina addressed a radiologist's failure to inform a treating physician that an x-ray study was incomplete.[40] In *Shuffler*, an emergency room physician sent a patient to radiology for various x-rays, including spine films.[41] The patient was not completely positioned for the films and the spine study was incomplete. The radiologist prepared a written radiology report that did not mention that the study was incomplete. At trial, the radiologist testified that he told the emergency room physician of the difficulty in obtaining the films. Significantly, the radiologist also testified that the standard practice among similarly trained and experienced radiologists was to inform the requesting physician that complete x-rays could not be obtained, verbally or in writing. However, the emergency room physician testified that the limited nature of the study was not reported to him and that he did not recall a conference with the radiologist.[42]

The *Shuffler* court held that the radiologist's testimony established the standard of care and that the emergency physician's testimony established a breach of the standard. This testimony suggested that the lack of appropriate communication by the radiologist caused a delay in the detection of a spinal fracture.[43] *Shuffler* is of interest to the radiology community as it considers a procedural or technical medical issue, the completeness of an x-ray study, as opposed to a substantive diagnosis with respect to the duty to urgently communicate with a treating physician.[44] It is questionable whether the ACR considered this scenario in promulgating the current Standard for

39. *Id.* at 24.
40. 326 S.E.2d 96 (N.C. Ct. App. 1985).
41. *Id.* at 97-98.
42. *Id.* at 98.
43. *Id.* at 99.
44. *Id.*

direct communication.[45]

In *Alvarez v. Prospect Hospital*, the Court of Appeals of New York considered an effort by plaintiff's counsel to resist summary judgment by attempting to impose a duty on a radiologist to consult with attending physicians, notwithstanding the radiologist's transmission of written reports.[46] In *Alvarez*, a radiologist twice interpreted barium enema x-rays as revealing "cecal neoplasm," and prepared written radiology reports that were sent to the attending physicians. Shortly thereafter, the plaintiff underwent surgery to remove the malignancy.[47]

The radiologist moved for summary judgment.[48] In opposition to the motion, plaintiff's counsel argued that the radiologist should have discussed his findings with the treating physicians. The motion was denied despite the lack of an expert opinion to contradict the radiologist's motion. The Appellate Division affirmed but the Court of Appeals of New York reversed.[49] The court characterized plaintiff's position as a "new theory . . . predicated on the hypothesis that [the radiologist] had a duty to consult with the attending physicians concerning his interpretation of the x-rays notwithstanding that his reports containing his interpretations were forwarded to the attending physicians."[50] The court found that "expert medical opinion was required to demonstrate the viability of the new theory of liability hypothesized by plaintiff's counsel."[51] This suggests that the court would recognize a duty to consult if testimony of a radiology expert supported this theory.

Another pre-ACR Standard case that is problematic for radiologists is *Jenoff v. Gleason*, where routine pre-operative chest x-rays revealed a possible lung tumor.[52] The radiologist prepared written radiology reports but did not otherwise communicate his findings to the treating physicians. The hospital chart apparently did not contain the written radiology reports that suggested the possibility of a tumor. The hospital discharge summary referred to an unremarkable chest film. A workers' compensation carrier for the patient's employer later reviewed the hospital records. The patient learned of the condition approximately three months after his discharge, and a follow-up study revealed spread of the disease

45. Here, some interpretation of the ACR Standard is required. The ACR Standard seems to be phrased in terms of positive diagnostic findings. *See* AMERICAN COLLEGE OF RADIOLOGY (ACR) STANDARD FOR COMMUNICATION: DIAGNOSTIC RADIOLOGY § V (revised 1999).

46. 501 N.E.2d 572, 573 (N.Y. 1986).

47. *Id.*

48. *Id.*

49. *Id.* at 574.

50. *Id.* at 575.

51. 501 N.E.2d 572, 576 (N.Y. 1986).

52. 521 A.2d 1323, 1325 (N.J. Super. Ct. App. Div. 1987).

and the patient died less than two years later.[53]

The attending cardiologist testified that, in his experience, radiologists called him to discuss unusual or unexpected x-ray findings.[54] The cardiologist was unable to testify regarding the procedure in the radiology department, and was not identified as an expert witness against the radiologist. The trial court concluded that plaintiff failed to establish a breach of the standard of care.[55] The court of appeals disagreed.[56]

Impressed with the importance of the communication of an unusual x-ray finding to the primary care physician, the court held that "[w]here the evidence suggests to people of ordinary intelligence what the standard of care is, or what the deviation from the standard is, or both, juries have been allowed to determine that standard or deviation regardless of the absence of expert testimony."[57] The court also pronounced "the method of communicating a radiologist's findings concerning a patient in the hospital is not a matter peculiarly within the knowledge of trained medical experts."[58] This is a particularly troublesome and likely flawed holding.

A court would undoubtedly require expert testimony to convince a jury that a radiologist improperly interpreted an x-ray. Laypersons cannot have the expertise to make decisions regarding a physician's compliance with the standard of care. Why, then, would a court differentiate the communication of a radiology finding from the radiology diagnosis, particularly if the court believes both are of equal importance? Relaxing the need for expert testimony to prove the standard of care or a deviation therefrom would cripple the ability of physicians to defend medical negligence claims on the basis of medical judgment. A lay jury may simply decide that a communication issue is so elementary that a radiologist could never explain a failure to have a personal consultation with a treating physician. Furthermore, it would seem only logical to require a direct communication by a radiologist with a treating physician in almost every circumstance, urgent or not. After all, the importance or urgency of the finding is in the eye of the beholder.

Finally, in *Courteau v. Dodd*, the Supreme Court of Arkansas focused on a medical urgency, which was likely considered by the ACR as a basis of its communication standard.[59] In *Courteau*, the plaintiff alleged that a radiologist failed to immediately notify

53. *Id.* at 1325.
54. *Id.* at 1326.
55. *Id.*
56. *Id.*
57. 521 A.2d 1323, 1327 (N.J. Super. Ct. App. Div. 1987).
58. *Id.*
59. 773 S.W.2d 436 (Ark. 1989).

others that an x-ray revealed a dislodged breathing tube.[60] Summary judgment was entered in favor of the radiologist due to the absence of expert testimony against him, and Arkansas Supreme Court affirmed. The dissent specifically referred to the holding in *Phillips*, which acknowledged the ability of a lay jury to consider modes of communication in the absence of expert testimony.[61] The dissent stated that only "common knowledge" was necessary to determine that the x-rays required immediate action, rather than normal routine.[62]

The dissent represents an opinion that certain medical negligence cases are entitled to the same evidentiary requirements as are "garden variety" negligence cases; that the requirement of expert testimony against a defendant-physician should be relaxed or discarded in the face of "common knowledge" or the "archaic rule" requiring an expert physician to testify as to the standard of care and deviation therefrom. If the dissenting opinion were to represent the majority view, medical negligence litigation would be turned on its head.

IV. POST-ACR STANDARD CASE LAW

Judicial opinions referring to ACR Standards are few in number but nonetheless significant.[63] In *Aldoroty v. HCA Health Services of Kansas Incorporated*,[64] the Supreme Court of Kansas considered a medical negligence action brought against three radiologists and a medical center, which alleged that a delayed diagnosis of lymphoma deprived the plaintiff [65] of a better chance for recovery or cure. The radiology defendants settled prior to trial and the jury entered a substantial verdict against the medical center, which appealed. One theory of liability was the failure of the radiologists to compare certain x-rays that would have led to the diagnosis.[66]

Aldoroty does not raise ACR communication issues.[67] It does, however, recognize testimony by plaintiff's expert radiologist,

60. *Id.*

61. *Compare Courteau*, 773 S.W.2d at 439 (holding that expert testimony is required to establish the urgency and necessity of direct communication between the radiologist and the treating physician) *with* Phillips v. Good Samaritan Hosp., 416 N.E.2d 646, 649-50 (Ohio Ct. App. 1979) (holding that expert testimony is not required for a trier of fact to determine the appropriate manner of communication between a radiologist and a treating physician).

62. 773 S.W.2d at 442 (Purtle, J., dissenting).

63. Vaughan v. Oliver, No. 1991055, 2001 WL 1143713 (Ala. Sept. 28, 2001); Aldoroty v. HCA Health Serv. of Kan., Inc., 962 P.2d 501 (Kan. 1998).

64. 962 P.2d 501 (Kan. 1998).

65. Interestingly, plaintiff is a psychiatrist. *Id.* at 503.

66. *Id.*

67. *See generally* Aldoroty v. HCA Health Serv. of Kan., Inc., 962 P.2d 501 (Kan. 1998).

regarding "standards of approved medical practices."[68] The expert specifically referred to the ACR Standard relating to comparison of previous x-rays and x-ray reports.[69]

The importance of this testimony is obvious. The expert did not state that the ACR Standard was the "standard of care," although the Standards state that they are guidelines and not rules.[70] In pertinent part they state that:

> The standards should not be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed to obtaining the same results. The standards are not intended to establish a legal standard of care or conduct, and deviation from a standard does not, in and of itself, indicate or imply that such medical practice is below an acceptable level of care.[71]

Despite these facts, the *Aldoroty* court allowed testimony about the ACR Standard as evidence of the standard of care. This means that the jury will hear about the standard, even though the ACR neither considers its standards to establish the standard of care nor intends them to do so. The Standard takes on an air of professional prominence and plays an important role in medico-legal disputes, despite the disclaimer of the ACR.

Vaughan v. Oliver appears to represent the most recent consideration of the ACR Standards.[72] In *Vaughan*, the Supreme Court of Alabama considered a medical negligence action against a radiologist and her practice group for failing to timely diagnose and notify plaintiff's treating physicians of an improperly positioned central venous catheter. The patient suffered a thrombosis in, and amputation of her arm below the elbow.[73]

The court recited much of the testimony of plaintiff's radiology expert, which includes the following:

> Q. Okay. Doctor, based on your training and experience and background and education, are you familiar with the standard of care of a board certified radiologist?
>
> A. Yes, I am.
>
> Q. Would you tell the jury what that standard is?
>
> A. Well, the role of a radiologist is a consultant. And a referring physician usually orders an X-ray, and it's the job of the radiologist to interpret those films accurately, on a timely basis, and then also

68. *Id.* at 504.
69. *Id.*
70. AMERICAN COLLEGE OF RADIOLOGY (ACR) STANDARD FOR COMMUNICATION: DIAGNOSTIC RADIOLOGY (revised 2001).
71. *Id.*
72. No. 1991055, 2001 WL 1143713 (Ala. Sept. 28, 2001).
73. *Id.* at *1-2.
73. *Id.* at *2.

provide a report back to that referring physician or representative on a timely basis as was deemed necessary, meaning if it's a routine prep chest X-ray for surgery next week, well, then he can dictate out a report assuming it's normal and wait for the report to get back to the doctor the next day. Whereas if it's a stat report from an intensive care unit looking for a question, that means immediate, then it should be interpreted immediately and the report conveyed back in a timely manner.

Q. Doctor, is that the same standard in Florida as in Alabama?

A. Right. That's a national standard of care.

. . . .

Q. Doctor, based on [your] training and experience and your review of the record, x-rays and reports in this particular case, have you formed any opinions as to the conduct of Dr. Suzanne Vaughan?

A. Yes, I have.

Q. Would you tell the jury those opinions?

A. The opinion is that the radiographs were not interpreted on a timely basis and the findings she found, even though she saw an abnormality, she did not realize the significance of them and did not convey the results to the treating physician in a timely manner.

Q. Okay. And do you have an opinion as to whether that would breach the standard of care?

A. Yes, I believe it is a breach of the standard of care.

. . . .

Q. Okay. And, Doctor, the standard that you have alluded to that you say in your deposition it's not written down out there anywhere or anything like that, is it?

A. No, there isn't anything that's hard and fast that's written saying this what you must do, but there are guidelines that are published that tell you this is how you should do it.

Q. Doctor, did you bring those with you?

A. Yes, I did.

Q. Okay. I'm going to mark it as the next exhibit.

(Plaintiff Exhibit Number 9 marked for identification.)

Q. Let me show you what I've marked as Plaintiff's Exhibit 9, is that a document you brought with you?

A. Yes, it is.

Q. Okay. All right. And, Doctor, what is that document?

A. Well, it's the ACR, which is the American College of Radiology standard for communication in diagnostic radiology.

Q. And did you bring that as some evidence of showing what the standard of care is?

A. Yes, I did.

Q. For a board-certified radiologist?

A. Yes.

Q. And doing what you said a while ago was the standard?

A. Yes.

Q. And that's not the standard written down, correct?

A. That's correct.

Q. But some guidelines, and I'm sure there are others out there, aren't there?

A. Other guidelines?

Q. Yes.

A. Not put out by the American College of Radiology.

Q. Okay. What is the American College of Radiology?

A. It's sort of the governing group for all of the radiologist in the United States.

Q. Okay. All right.

MS. SHAW: Judge, at this time we would offer Plaintiff's Exhibit 9.

THE COURT: Admitted.

(Plaintiff's Exhibit Number 9 was admitted into evidence.)

....

A. The opinion is that the films were not interpreted on a timely manner. The other was that the significance of the findings [was] not appreciated. And third, was that the failure to communicate the

significant findings in a timely manner to the referring physician.[74]

A review of the expert's testimony reveals the relationship of the ACR Standard with the dynamic of the trial. The expert radiologist identified the ACR Standard as a guideline; however, the court admitted the standard into evidence, presumably as evidence of the radiological standard of care for communication.[75] With the standard in evidence at trial, plaintiff's counsel would likely emphasize it when possible, including at closing argument. The court might allow the actual standard to go back to the jury during deliberations, with any other evidence sent to the jury room. This is not likely what the ACR contemplated when it promulgated its communication standard.

The other aspect of the expert's testimony that merits comment is the reference to the ACR as "sort of the governing group for all of the radiologists in the United States."[76] The ACR does *not* govern, and awarding the ACR "official" status would seem to elevate ACR standards to requirements, not guidelines.

V. LOSS OF CHANCE

The ACR Standards necessarily implicate the loss of chance theory of liability against radiologists.[77] Because radiologists interpret studies and communicate their findings, the constant element in this process is time. There is always a time lapse from the taking of the x-ray, the interpretation process, the preparation of the radiology report, and the transmission of the report, to the point at which the report of the interpretation is obtained and examined by the attending or referring physician. If the radiology report is unusually delayed through this process, or if the radiologist failed to orally report an urgent finding, more time is lost and treatment will therefore be delayed.

Elapse of time is a necessary component of the communication process. Therefore, the amount of time that may elapse before a radiologist is negligent is a fundamental litigation issue. How much time lapse is too much? At what point in time does the lapse of time actually affect the patient's treatment, hope of cure or survival?

Radiology negligence in the diagnosis of cancer is a good target for the loss of chance doctrine.[78] Under that doctrine,

74. *Id.* at *22-26.

75. *Id.* at *21-22.

76. No. 1991055, 2001 WL 1143713 (Ala. Sept. 28, 2001).

77. AMERICAN COLLEGE OF RADIOLOGY (ACR) STANDARD FOR COMMUNICATION: DIAGNOSTIC RADIOLOGY § I (revised 2001).

78. *See also* Setterington v. Pontiac Gen. Hosp., 568 N.W.2d 93, 96-97 (Mich. Ct. App. 1997) (applying the "substantial opportunity to survive" rule). *See generally* Bogren v. United States, 716 F. Supp. 1378 (D. Kan. 1989); Boody v. United States, 706 F. Supp. 1458 (D. Kan. 1989).

plaintiff may recover for a delayed diagnosis of his or her lost chance of survival or for a better quality of life. The fact that plaintiff may not have had a greater than fifty percent chance of survival or a better outcome will not defeat the claim for lack of proof of proximate causation.[79]

The loss of chance doctrine is tailored to radiology negligence claims. It is likely that as failure to communicate actions proliferate, they will refer both to ACR Standards and the loss of chance doctrine.

CONCLUSION

The case law regarding the negligence of radiologists based upon their failure to communicate x-ray findings reveals some significant points. Radiologists, as physicians are part of the treatment team; therefore, they owe the same duty of care to patients as owed by physicians in direct, "hands on," contact with patients. Even prior to the existence of the ACR Standards, courts recognized that a radiologist's duty does not conclude with the issuance of the formal report. There are circumstances that require the radiologist to urgently communicate a finding to a treating physician. The ACR Standards, in essence, codify the communication duty in urgent and emergency circumstances. Its legal effect will likely exceed what was originally contemplated by the ACR.

The Institute Of Medicine,[80] in its highly publicized report, *To*

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79. *See* Holton v. Mem'l Hosp., 679 N.E.2d 1202, 1213 (Ill. 1997) (holding that defendant doctor's failure to diagnose plaintiff's condition entitled her to relief even though her chance of recovery, notwithstanding the doctor's negligence, was less than fifty percent). The lost chance doctrine as pronounced in *Holton* was born of a significant degree of judicial skepticism regarding physicians treating patients who were likely doomed to poor outcomes. The court recognized the lost chance doctrine and stated that:

> [t]o hold otherwise would free health care providers from legal responsibility for even the grossest acts of negligence, as long as the patient upon whom the malpractice was performed already suffered an illness or injury that could be quantified by experts as affording that patient less than a 50% chance of recovering his or her health.
>
> Disallowing tort recovery in medical malpractice actions on the theory that a patient was already too ill to survive or recover may operate as a disincentive on the part of health care providers to administer quality medical care to critically ill or injured patients.

Id. at 1213. One might wonder if members of the court had less than satisfactory experiences with physicians. The court cites no authority for the proposition that the quality of medical care decreases with the increasing seriousness of an illness. The opposite argument is equally valid.

80.

> The Institute of Medicine was established in 1970 by the National Academy of Sciences to secure the services of eminent members of appropriate professions in the examination of policy matters pertaining to the health of the public. The Institute acts under the responsibility

Err Is Human, Building a Safer Health System,[81] noted that "[o]ne way that professional societies contribute to standards of practice is through the promulgation and promotion of practice standards."[82] The purpose of the ACR Standards may be advisory, and may not include defining a legal standard of care; however, it would be naïve to believe that practice standards will not creep into medico-legal litigation as evidence of the applicable standard of care.

It is difficult to predict an explosion of medical negligence actions against radiologists based on lack of urgent communication, but it is reasonable to suspect an increase in the incidence of this type of claim. The ACR Standards will likely be recognized as evidence of the standard of care, despite the disclaimer contained in the standard. If courts continue to admit ACR Standards into evidence, as in *Vaughan v. Oliver*,[83] a jury might consider the ACR Standards tantamount to the standard of care. Furthermore, courts have been known to excuse or relax the need for expert testimony in communication cases.[84] This truly places radiologists in peril.

The American College of Radiology does not confer medical degrees,[85] does not grant licenses to practice medicine[86] and does not grant board certification to radiologists.[87] Nevertheless, the ACR Standards will continue to have legal implications for radiologists, despite the intent of the ACR. The ACR cannot be faulted for its laudable efforts to improve the quality of medical care provided by its membership. However, radiologists must realize that the ACR Standard for Communication is a double-edged sword. The potential use of this standard by courts and the possibility of a relaxed requirement for expert testimony in communication cases will likely generate claims against

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> given to the National Academy of Sciences by its congressional charter to be an adviser to the federal government and, upon its own initiative, to identify issues of medical care, research, and education.

Institute of Medicine, *To Err Is Human, Building a Safer Health System*, Notice (1999).

81. Institute of Medicine, *supra* note 80, at 145. *See generally* Barry Furrow, *Patient Injury and Liability: Why Worry?*, 29 J.L. MED. & ETHICS 250 (2001); Bryan Liang, *The Adverse Event of Unaddressed Medical Error: Identifying and Filling the Holes in the Health-Care and Legal Systems*, 29 J.L. MED. & ETHICS 346 (2001).

82. Institute of Medicine, *supra* note 80, at 125.

83. No. 1991055, 2001 WL 1143713 (Ala. Sept. 28, 2001).

84. Jenoff v. Gleason, 521 A.2d 1323 (N.J. 1987); Phillips v. Good Samaritan Hosp., 416 N.E.2d 646 (Ohio Ct. App. 1979).

85. Conferring medical degrees is a function of medical schools.

86. Granting licenses to practice medicine is a function of the state government.

87. Granting board certification to radiologists is a function of the American Board of Radiology.

radiologists for failure to timely communicate radiology diagnoses.