X CONGRESSO NAZIONALE SIMEU
Il volto della Medicina di Emergenza-Urgenza: identità professionale e servizio pubblico

Napoli, 18/20 Novembre 2016

SALA STROMBOLI – 19 Nov

RADIOLOGI

Moderatori: Biagio Epifani, Fabio De Iaco

15.20 – 15.40 La TAC cranio
Libero Barozzi

15.40 – 16.00 La radiologia dei segmenti ossei: problemi interpretativi ed implicazioni medico legali
Roberto Farina, Antonio Pinto

16.00 – 16.20 Medicina difensiva e rischio radiologico del paziente in PS
Fabio De Iaco

16.20 – 16.40 Discussione

ROBERTO FARINA Presiedente della Sezione di Ecografia della Società Italiana di Radiologia Medica

ANTONIO PINTO Presiedente della Sezione di Etica e Radiologia Forense della Società Italiana di Radiologia Medica

U.O.S.C.di Radiologia Generale e di P.S.
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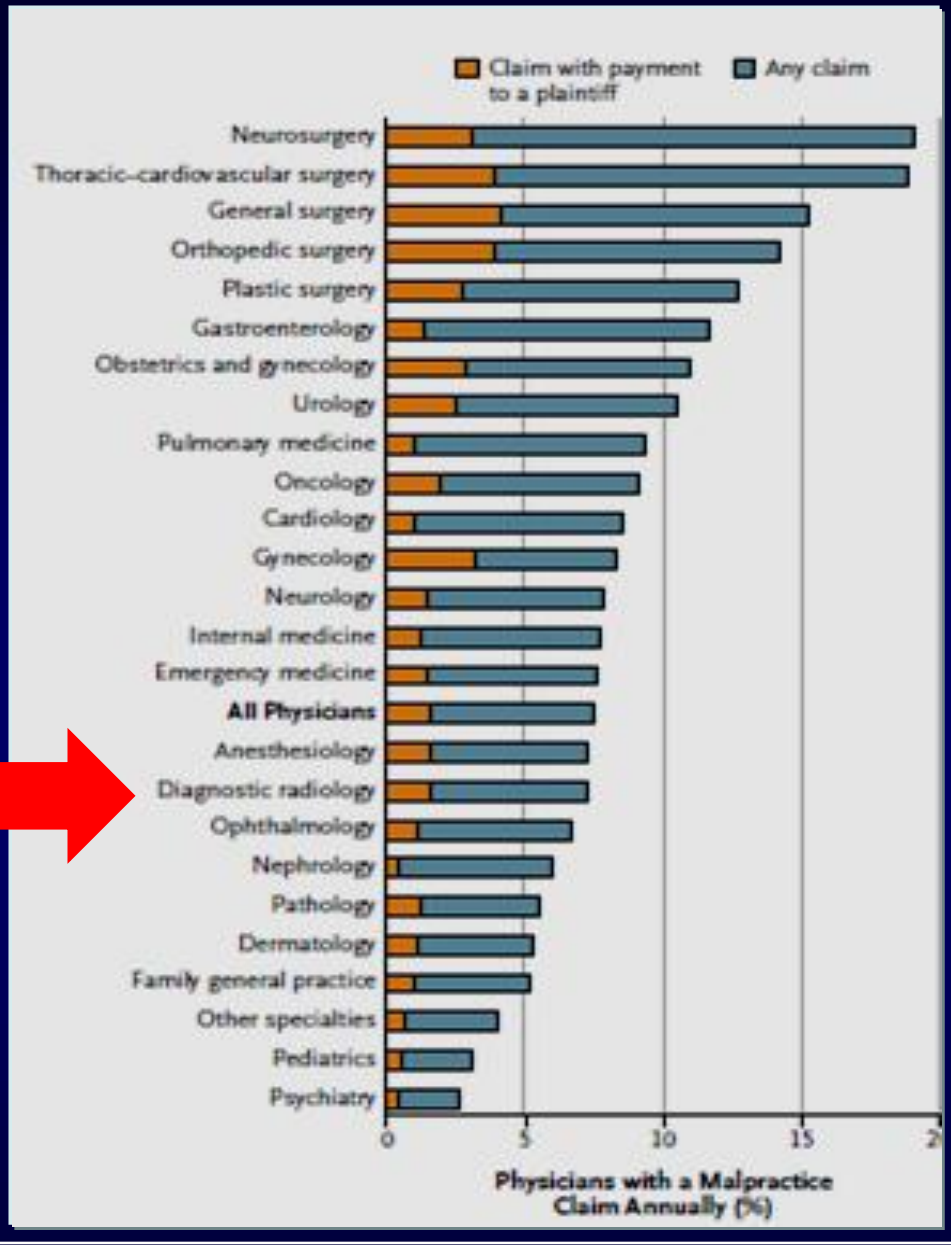

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

Malpractice Risk According to Physician Specialty

Anupam B. Jena, M.D., Ph.D., Seth Seabury, Ph.D., Darius Lakdawalla, Ph.D., and Amitabh Chandra, Ph.D.

N Engl J Med 2011;365:629-36.

Proportion of Physicians facing a malpractice claim annually, according to specialty

Special Articles • Original Research

Fool Me Twice: Delayed Diagnoses in Radiology With Emphasis on Perpetuated Errors

Young W. Kim[1]
Liem T. Mansfield[2,3]

OBJECTIVE. We hypothesized that delayed diagnoses in radiology are not recognized on subsequent radiologic examinations because of multiple types of errors.

MATERIALS AND METHODS. Six hundred fifty-six radiologic examinations with delayed diagnoses were collected from July 1, 2002, to January 31, 2010. Each case was reviewed by two radiologists together, and the diagnostic errors were classified according to our modified scheme with consensus between the radiologists.

RESULTS. There were a total of 1269 errors. The range of days elapsed from the initial error in interpretation to the correct diagnosis was 0–461 days, with an average of 251 days. The percentage for each type of error was 0.9% (*n* = 11) for type 1, 9% (*n* = 110) for type 2, 3% (*n* = 36) for type 3, 42% (*n* = 535) for type 4, approximately 0% (*n* = 1) for type 5, 2% (*n* = 29) for type 6, 5% (*n* = 59) for type 7, 2% (*n* = 20) for type 8, 7% (*n* = 92) for type 9, 22% (*n* = 288) for type 10, 0.5% (*n* = 6) for type 11, and 6% (*n* = 79) for type 12. The correct diagnoses were not recognized on subsequent radiologic examinations in 196 of 656 cases (30%).

CONCLUSION. Delayed diagnoses were not recognized on subsequent radiologic examinations in about one-third of the cases. The most common types of error were undersreading, satisfaction of search, faulty reasoning, and location of the finding.

Keywords: delayed diagnosis, diagnostic errors, error in interpretation

DOI:10.2214/AJR.13.11403

Received July 2, 2013; accepted after revision September 11, 2013.

Presented in part at the 2011 annual meeting of the ARRS, Chicago, IL.

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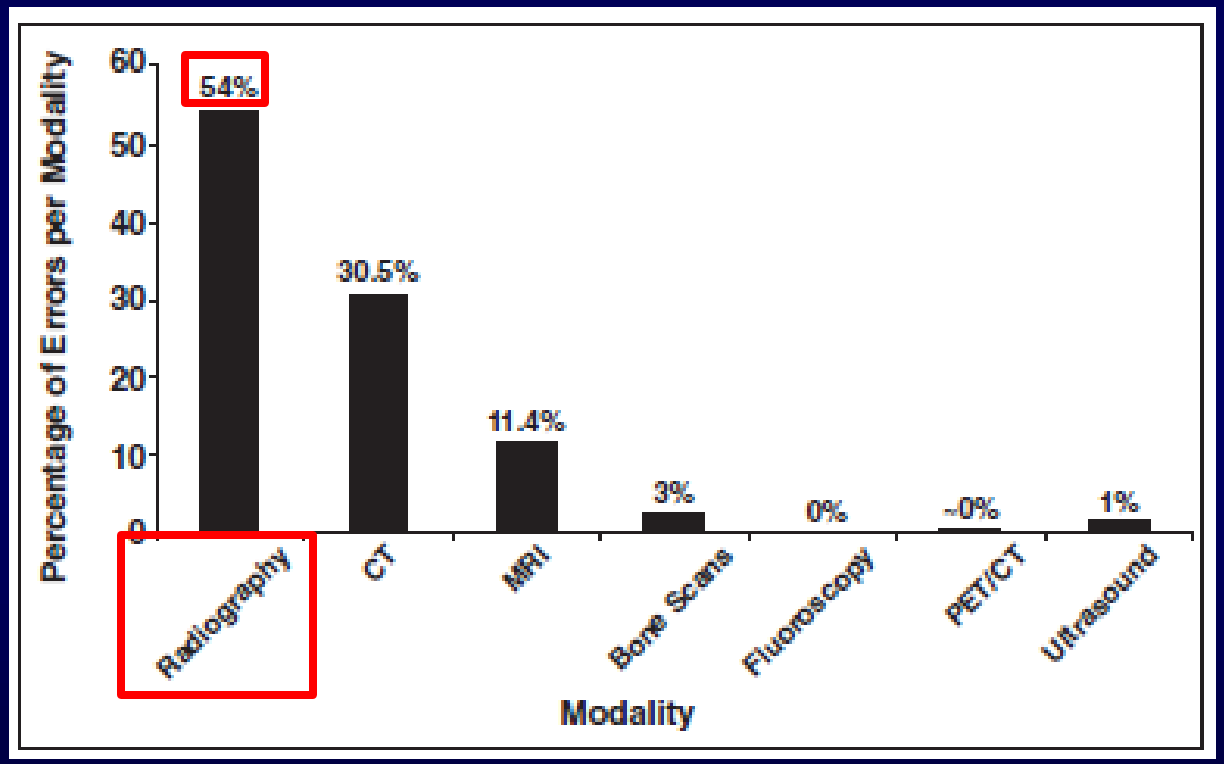
AJR 2014; 202:465–470

0361–803X/14/2023–465

Materials and Methods

The Brooke Army Medical Center Department of Clinical Investigation approved this retrospective study. Six hundred fifty-six radiologic examinations with delayed diagnoses at our institution were collected from July 1, 2002, to January 31, 2010. The cases were collected from the department of radiology difficult case conferences and by the authors during the daily interpretation of radiologic examinations. Because the senior author was in charge of conducting the difficult case conference, the radiology faculty and residents were asked to report to him any cases of delayed diagnosis or misdiagnosis that they came upon during their daily clinical practice. Each case was reviewed by two radiologists, and the diagnostic errors were classified on consensus according to our modified scheme (Table 1), which was adapted from previous publications by Smith [2] and Renfrew et al. [3]. Types 6 through 12 errors were added or expanded by the authors from previous reports. Type 6 errors were attributed to improper imaging technique; type 7 errors were due to failure to consult old radiology examinations; type 8 errors were due to inaccurate or incomplete history; type 9 errors were due to the location of abnormality, type 10 errors were related to satisfaction of search; type 11 errors involved complications from a procedure, and type 12 errors were related to satisfaction of report. A type 9 error was assigned when the missed finding was lo-



Percentage of errors based on imaging modality

Radiologic Malpractice Litigation Risk in Italy: An Observational Study Over a 14-Year Period

Adriano Fileni[1]
Nicola Magnavita[2]
Paoletta Mirk[3]
Ivo Iavicoli[2]
Giulia Magnavita[2]
Antonio Bergamaschi[2]

OBJECTIVE. The purpose of this study is to assess the risk of medical malpractice litigation for Italian radiologists, compared with the corresponding data in the literature.

MATERIALS AND METHODS. The insurance claims of Italian radiologists over the 1993–2006 period were anonymously assessed and classified according to the cause of the claim.

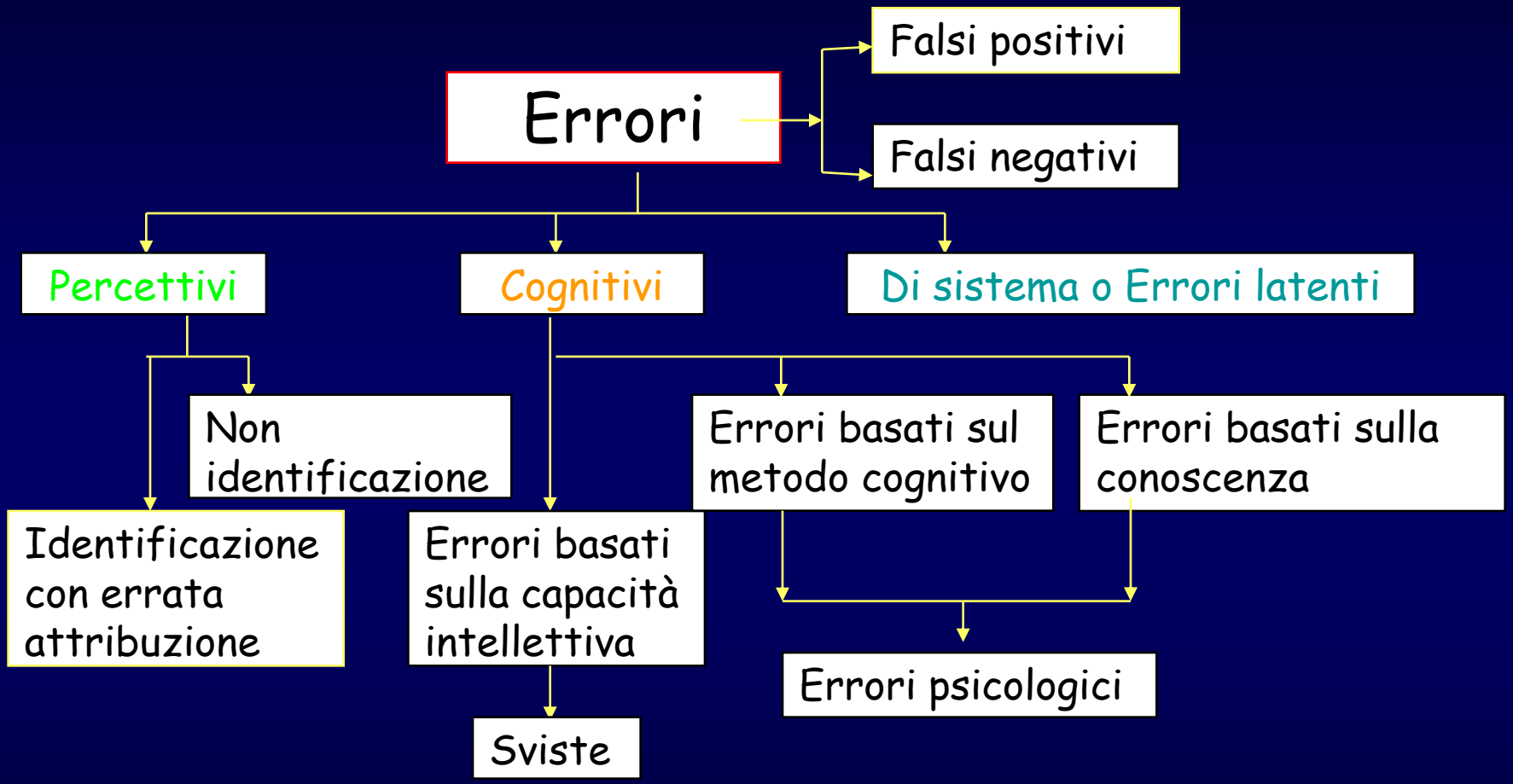
RESULTS. A total of 1,424 claims were filed during the examined period, with most claims being filed at a considerable time interval after the event (up to 10 years). The resulting incidence may be estimated as 44.2 cases per 1,000, meaning that 44% of Italian radiologists have received, or will receive, summons regarding their professional activity during the past 10 years.

CONCLUSION. The risk of medical malpractice litigation for Italian radiologists is by now comparable to that for American radiologists. Comparison with previous data concerning the same study population shows that the diagnostic errors category has surpassed all other error categories (nondiagnostic errors) and that, within the diagnostic errors category, claims for allegedly missed cancer have surpassed claims for allegedly missed bone abnormalities. Among missed diagnosis claims, the maximum increase concerned mammograms. Strict adherence to radiologic standards and radiotherapy protocols may be a means of reducing the risk of legal action and obviating litigation.

TABLE 3: Causes of Lawsuits: Absolute and Relative Frequencies

Cause	Frequency, No. (%)	Total Percentage
Diagnostic errors		64.7
Fracture	390 (27.4)	
Cancer	418 (29.4)	
Other	152 (10.7)	
Penal code: manslaughter or personal injuries	182 (12.8)	12.8
Techniques		11.5
Contrast-enhanced examinations	26 (1.8)	
Enema	20 (1.4)	
Interventional procedures	98 (6.9)	
Other techniques	20 (1.4)	
Accidents: slip-and-fall or others	50 (3.5)	3.5
Radiotherapy	36 (2.5)	2.5
Omissions	8 (0.6)	0.6
Miscellaneous: other penal laws	24 (1.7)	1.7
Total	1,424 (100.0)	100.0

Attività radiologica: errori e cause



Pescarini L et al, Radiol med 2006

L'ERRORE IN RADIOLOGIA D'URGENZA

" Trauma care creates a "perfect storm" for **medical errors**: unstable patients, incomplete histories, time-critical decisions ("golden hour") and often junior personnel working after-hours in busy emergency departments"

Gruen RL et al, Ann Surg 2006

L'ERRORE IN RADIOLOGIA D'URGENZA

Errori diagnostici più frequenti nei DEA

L'ERRORE IN RADIOLOGIA D'URGENZA

Plain radiographs are still the main imaging tool in the ED for detecting bony fractures in patients sustaining trauma.

Failure to identify fractures is the most common diagnostic error, which may account for **41-80%** of diagnostic errors in the ED.

Williams SM et al, Clin Radiol 2000

Berlin L, AJR 2001

Guly HR, Emerg Med J 2001

L'ERRORE IN RADIOLOGIA D'URGENZA

Orthopedic injuries predominate, constituting 75% of missed diagnosis.

Missed orthopedic injuries are most common in the periarticular regions, shoulder girdle, and feet

Brooks A et al, Injury 2004

L'ERRORE IN RADIOLOGIA D'URGENZA

Table 1 Diagnostic errors made 1 August 1992 to 6 August 1996

Diagnosis	*Number of errors*	*%*	*Number of patients*	*%*
Fractures	760	79.7	746	79.9
Dislocations	19	2.0	19	2.0
Tendon injuries	21	2.2	21	2.2
Nerve injuries	5	0.5	2	0.2
Ligament injuries	15	1.6	14	1.5
Foreign bodies	19	2.0	19	2.0
Other trauma	51	5.4	51	5.5
Non trauma	36	3.8	36	3.9
Incidental findings	27	2.8	26	2.8
	953		934	

Guly HR, Emerg Med J 2001

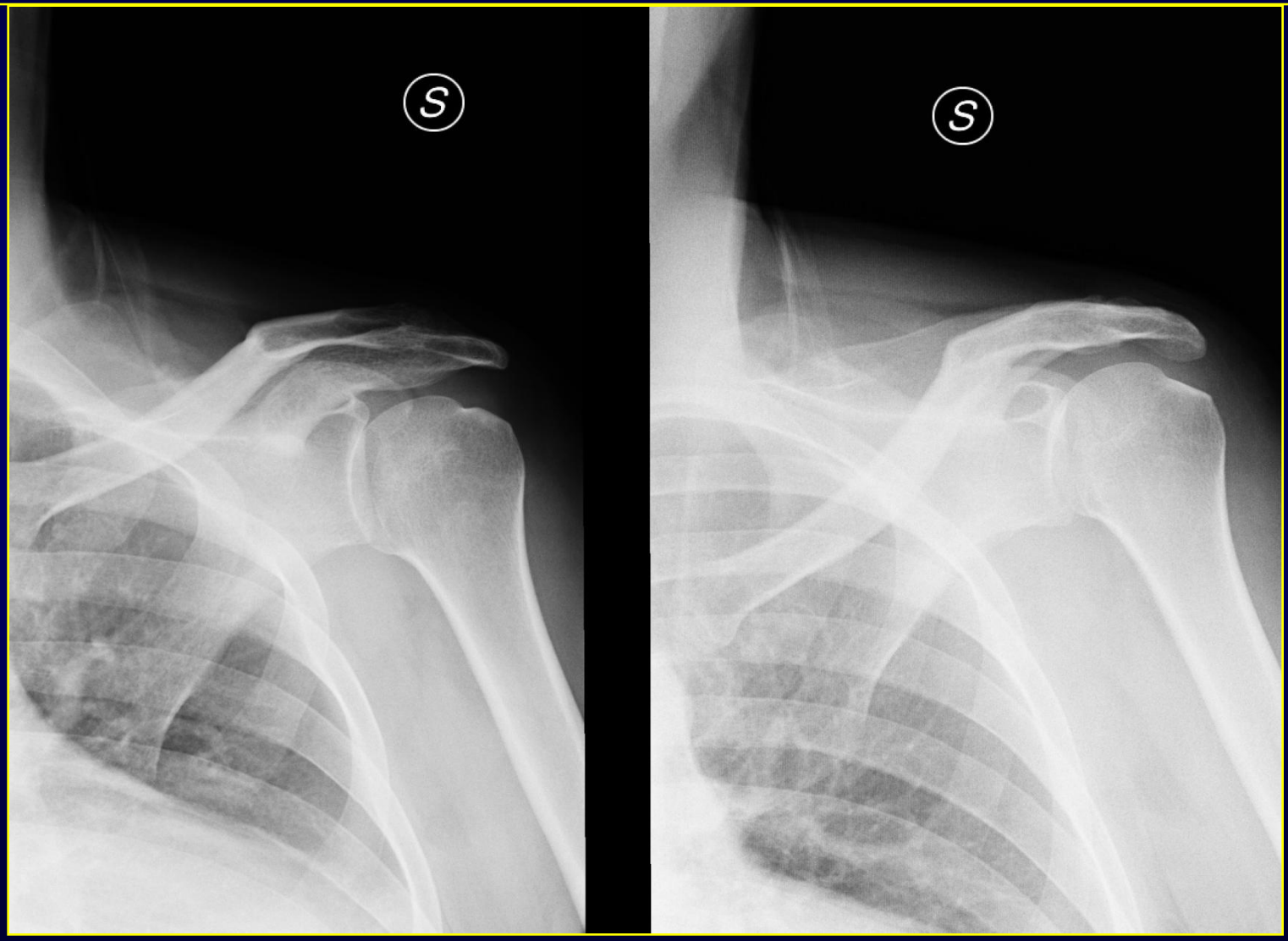
L'ERRORE IN RADIOLOGIA D'URGENZA

Table 1. Distribution of all fractures, initially missed fractures, and secondary missed fractures

	Number and percentage of all fractures	Number and percentage of initially missed fractures	Percentage of initially missed fractures in all fractures of the same area	Number and percentage of secondary missed fractures
Wrist	606 (19.7%)	25 (21.7%)	4.1%	12 (48%)
Hip	512 (16.6%)	20 (17.4%)	3.9%	8 (40%)
Ankle	282 (9.2%)	8 (7.0%)	2.8%	2 (25%)
Shoulder	266 (8.6%)	5 (4.3%)	1.9%	3 (60%)
Foot	238 (7.7%)	18 (15.7%)	7.6%	12 (67%)
Elbow	234 (7.6%)	14 (12.2%)	6.0%	6 (43%)
Tibia or fibular shaft	226 (7.3%)	1 (0.9%)	0.4%	1 (100%)
Knee	224 (7.3%)	14 (12.2%)	6.3%	6 (43%)
Hand	185 (6.0%)	10 (8.7%)	5.4%	5 (50%)
Radius or ulnar shaft	119 (3.9%)	0	0	0
Femoral shaft	115 (3.7%)	0	0	0
Humeral shaft	74 (2.4%)	0	0	0
Total	3081	115 (100%)		55

Acta Radiol 2006 (7)

C.F, maschio, sospetta lesione ossea traumatica spalla sinistra.
Esame rx eseguito il 11-09-2010 ore 20.51



L'ERRORE IN RADIOLOGIA D'URGENZA

Research article

Errors in fracture diagnoses in the emergency department characteristics of patients and diurnal variation

Peter Hallas*† and Trond Ellingsen†

Address: Department of Surgery, Hålogalandssykehuset Harstad, 9406 Harstad, Norway

Email: Peter Hallas* - hallas@rocketmail.com; Trond Ellingsen - trond.ellingsen@hhf.no

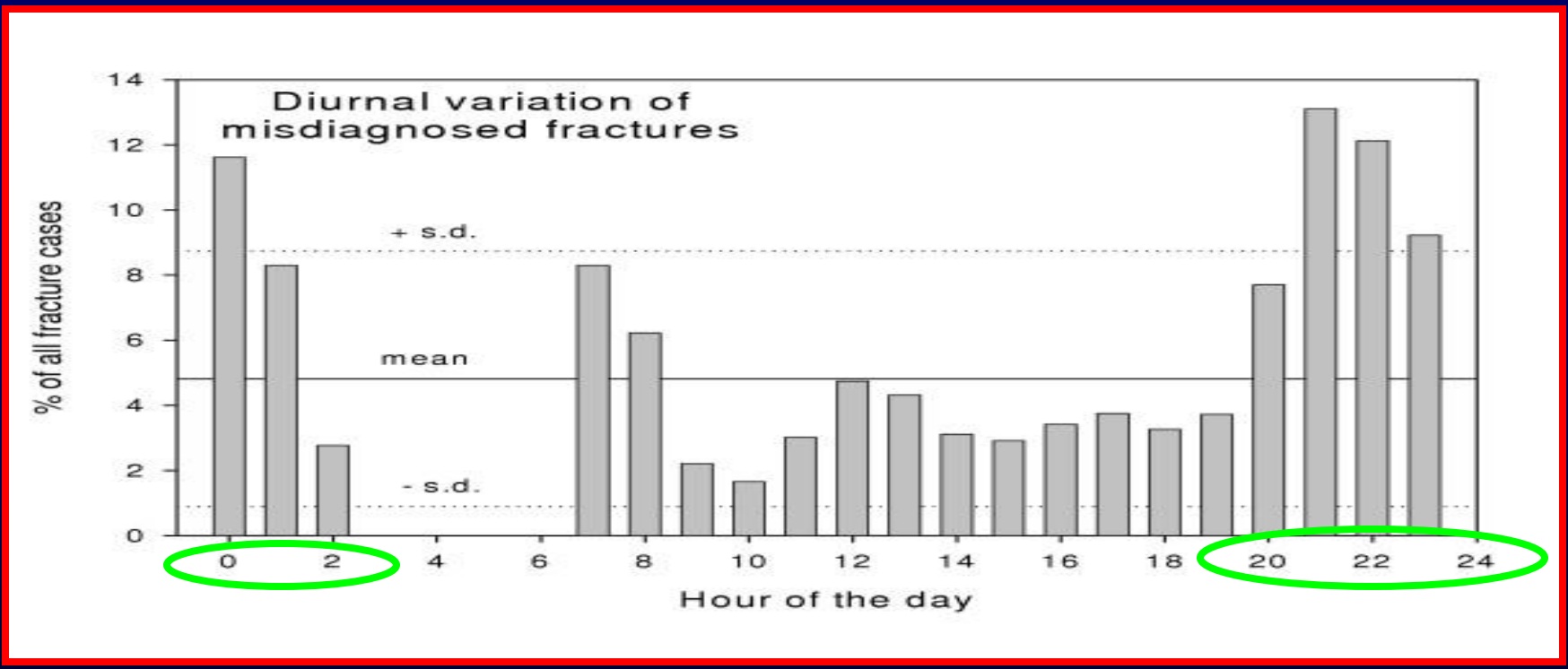
* Corresponding author †Equal contributors

Published: 16 February 2006

BMC Emergency Medicine 2006, 6:4 doi:10.1186/1471-227X-6-4

Received: 24 October 2005

Accepted: 16 February 2006



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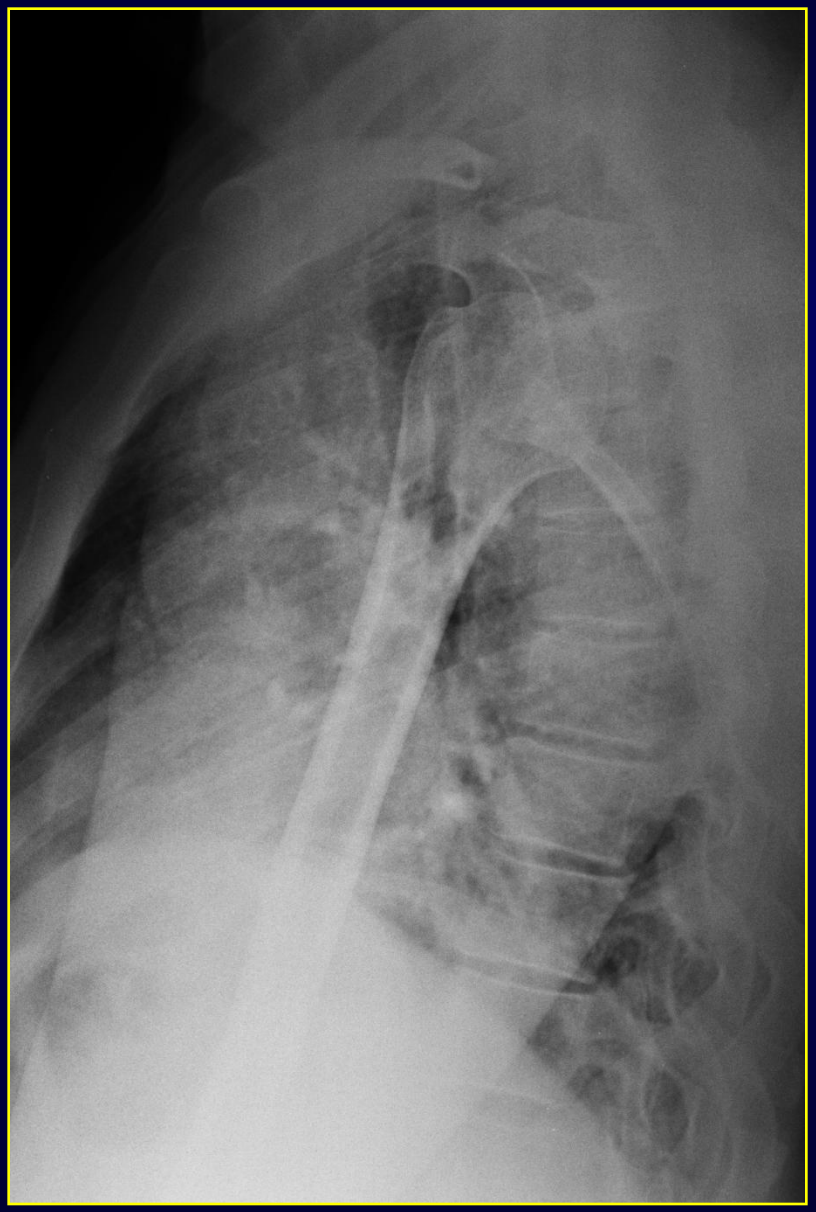


L'ERRORE IN RADIOLOGIA D'URGENZA

Spine injuries constitute approximately 10% of all initially missed diagnoses. These are especially common at the cranio-cervical junction (40-50% of all initially missed spine injuries) and at the cervico-thoracic junction

Stanescu L et al, Emerg Radiol 2006

Emergency Radiology (2005) 11: 158–161
DOI 10.1007/s10140-004-0351-6

ORIGINAL ARTICLE

Giang K. Nguyen · Robert Clark

Adequacy of plain radiography in the diagnosis of cervical spine injuries

The Journal of TRAUMA® *Injury, Infection, and Critical Care*

The Inefficiency of Plain Radiography to Evaluate the Cervical Spine After Blunt Trauma

Stephen C. Gale, MD, Vicente H. Gracias, MD, Patrick M. Reilly, MD, and C. William Schwab, MD

Emergency Radiology (2004) 11: 2–8
DOI 10.1007/s10140-004-0360-5

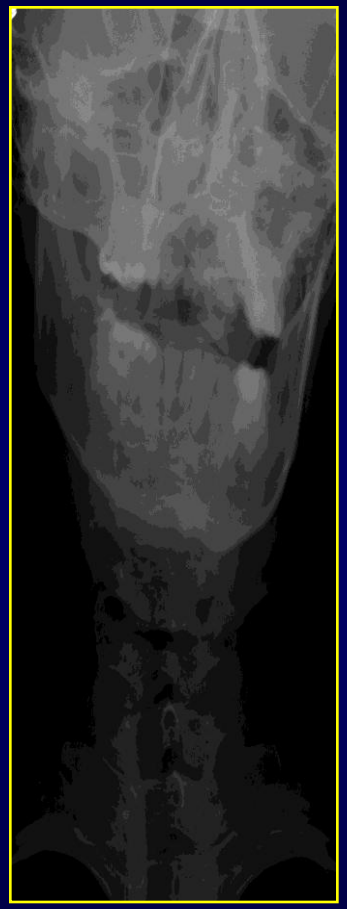
ORIGINAL ARTICLE

Richard H. Daffner

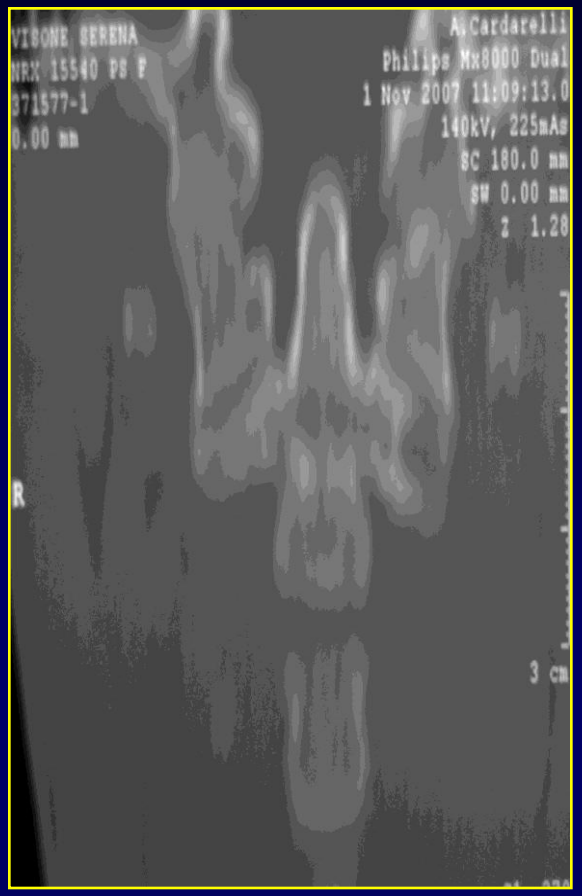
Controversies in cervical spine imaging in trauma patients

Caso clinico

- F, 27 anni, alla guida della propria auto
- Incidente della strada il 31-10-2007 (tamponamento)
- Dolore in regione cervicale
- Esame radiografico del rachide cervicale negativo presso altra azienda ospedaliera
- Il giorno seguente giunge presso il nostro PS per l'intensa cervicalgia



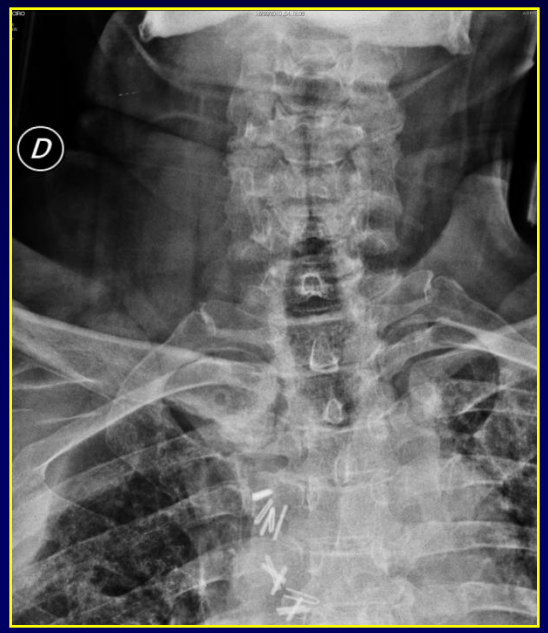
Rima di radiotrasparenza a livello del soma di C2 + incremento di ampiezza della linea spinolaminare nel tratto C1-C2

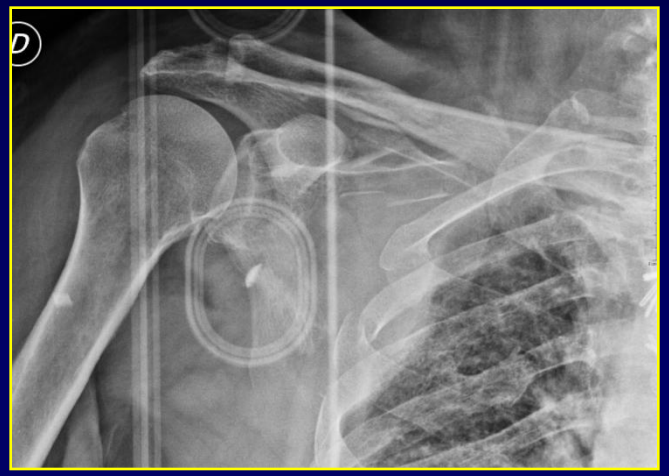


Esame TC

Frattura a decorso trasversale-obliquo di C2 alla base del dente, con frammenti intasati con rime di frattura che si estendono bilateralmente alle masse articolari ed al forame vertebrale di sinistra

Caso clinico









Fratture di C1-C2: cause di errore diagnostico

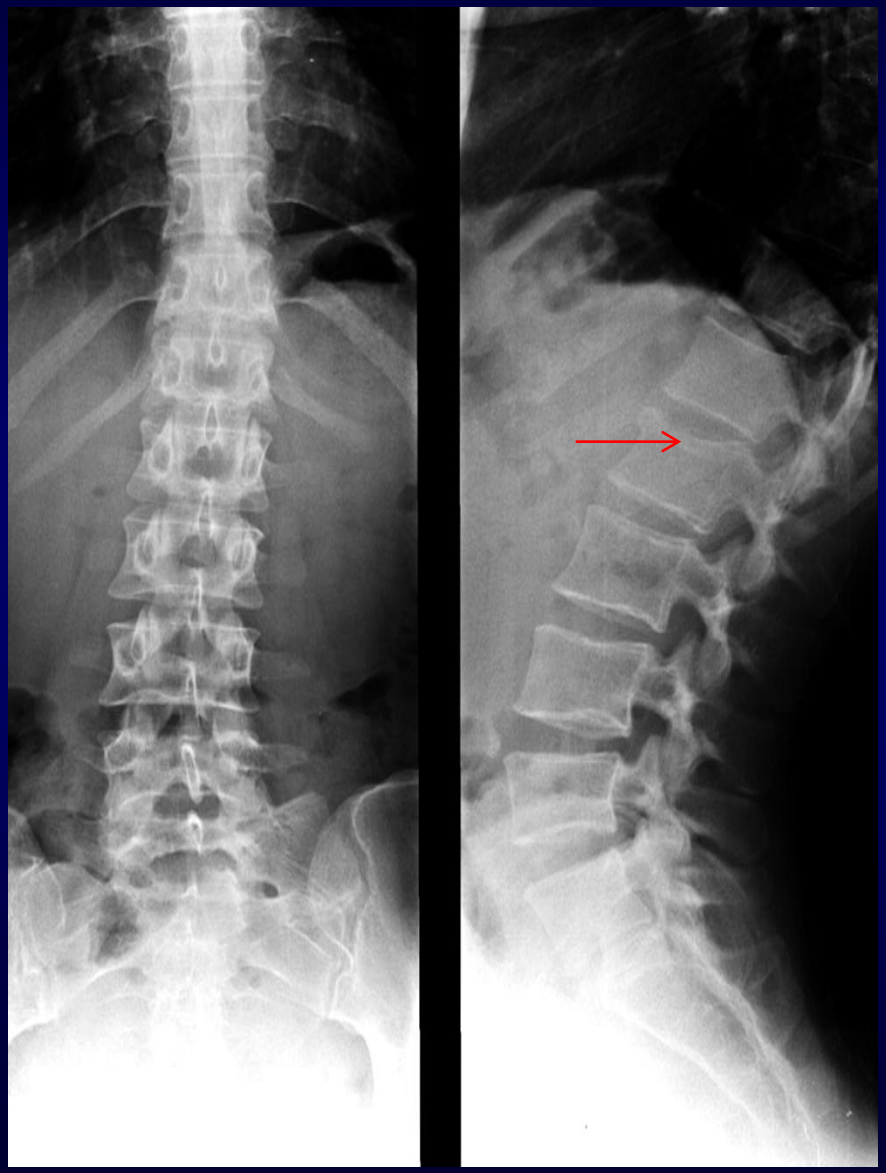
- Sovrapposizioni ossee
- Proiezione scorretta
- Soddisfazione del risultato*
- Disassamento del dente dell'epistrofeo
- Sublussazione laterale di C1-C2
- Osteoporosi

Cusmano F et al, Radiol Med 1999

* Difficoltà a riconoscere ulteriori lesioni, quando una malattia importante è già stata riconosciuta nello stesso radiogramma o in radiogrammi contigui oppure perdita di attenzione del radiologo una volta che ha riconosciuto una lesione importante

Caso clinico

Caso clinico



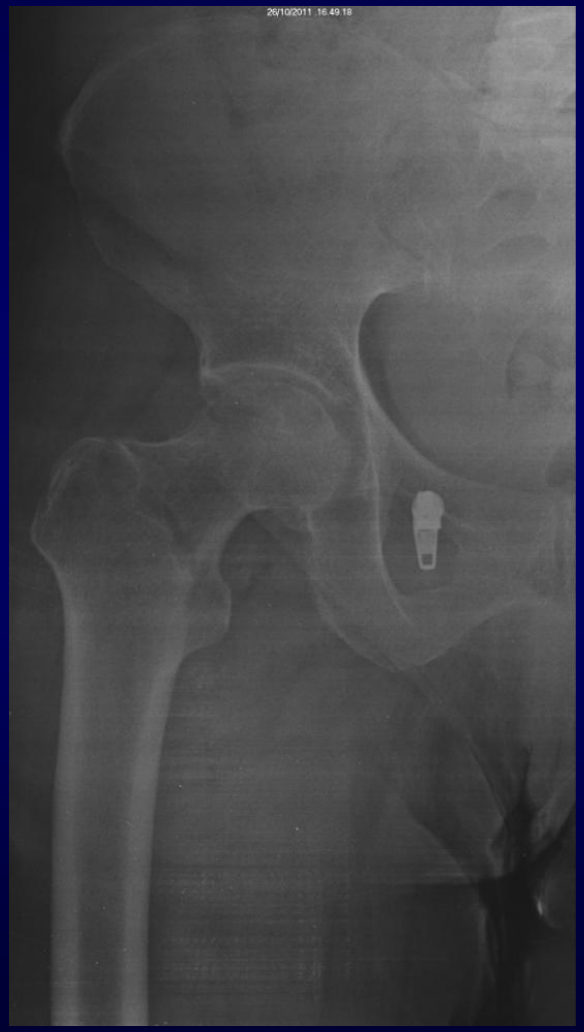
Affossamento limitante superiore del soma di L1

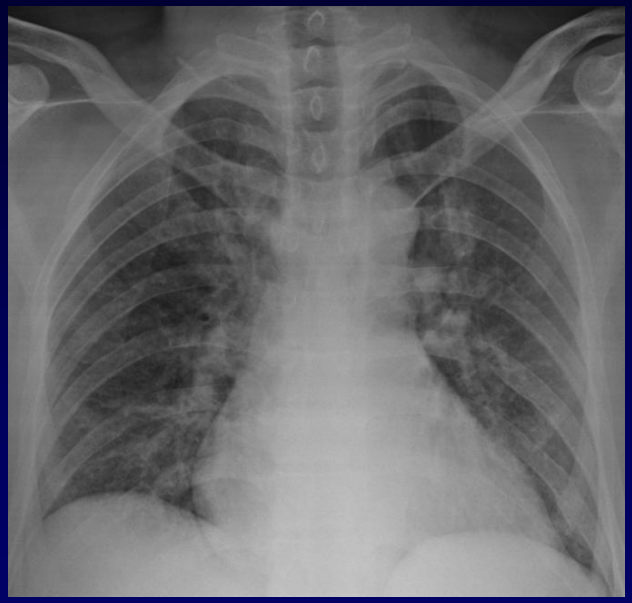
NON SEGNALATO DI NOTTE

Le lesioni misconosciute …

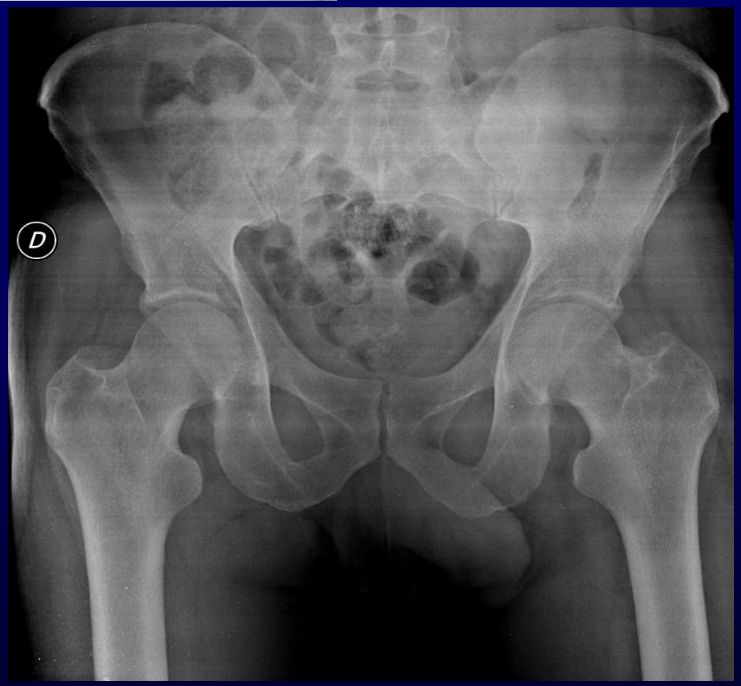
Asportazione di astragalo. Anamnesi non riportata

Le fratture di femore

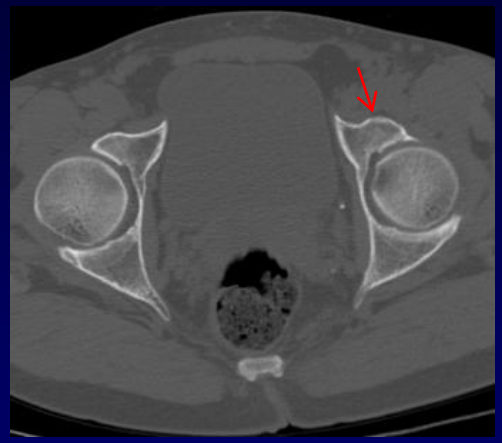


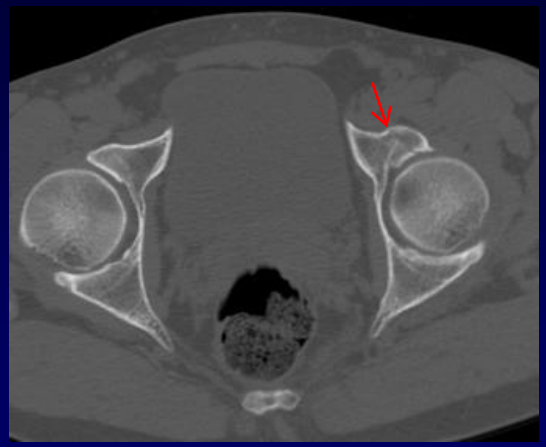


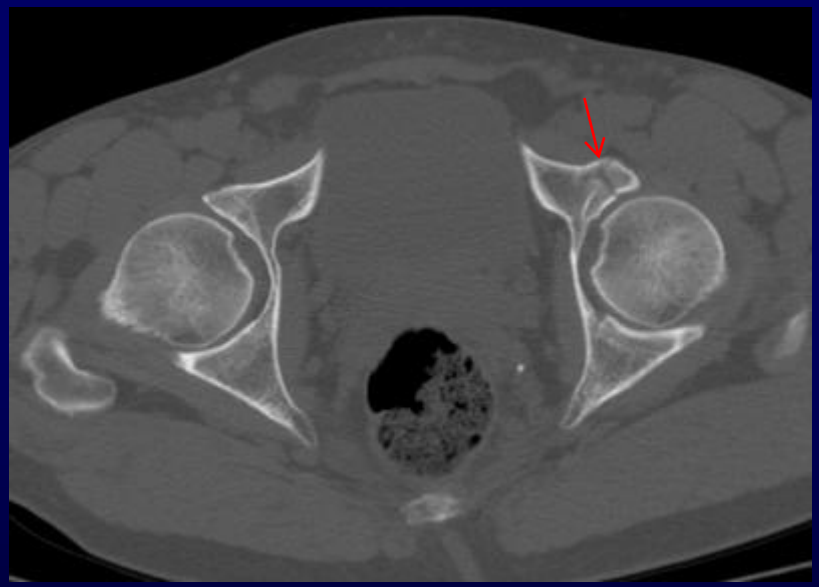
A. L., m, 15-11-1971



A. L., m, 15-11-1971

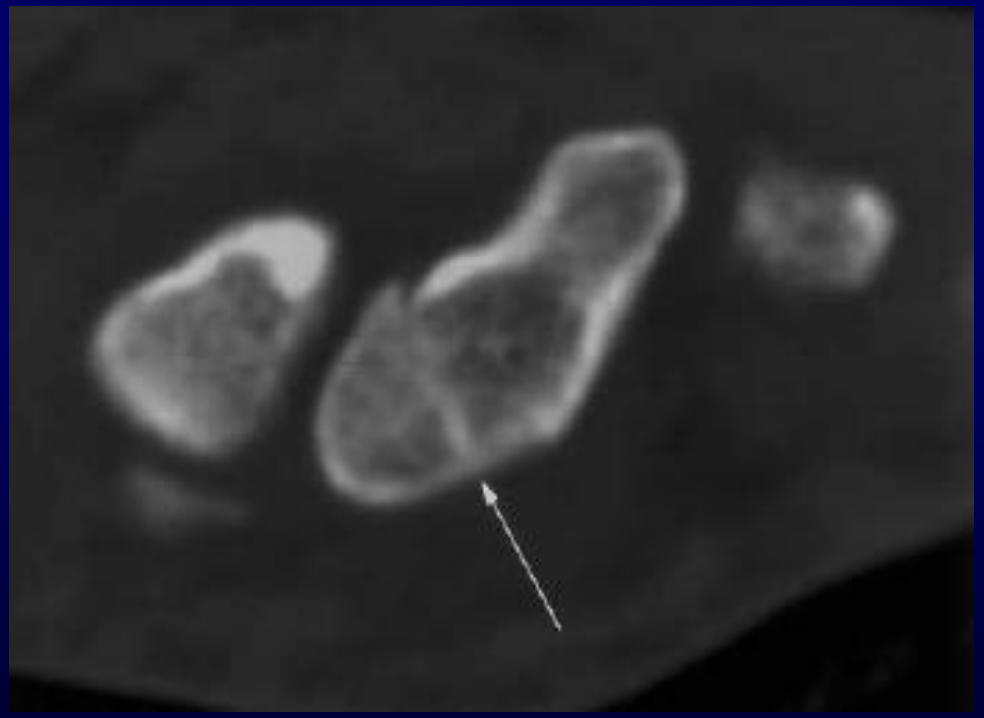






Frattura composta del pilastro acetabolare anteriore di sinistra

Frattura occulta di scafoide



Frattura-lussazione tarso-metatarsale

Lisfranc Injury: Imaging Findings for this Important but Often-Missed Diagnosis

Rajan T. Gupta, MD,[a] Rakhee P. Wadhwa, MD,[b] Thomas J. Learch, MD, [b] and Steven M. Herwick, MD[a]

The Lisfranc injury is a popular topic in the radiology, orthopedic surgery, and emergency medicine literature, primarily due to the subtleties of the radiographic findings and potentially dire consequences of missed diagnoses. The purpose of this article is to help readers understand the anatomy of the tarsometatarsal joint, identify a systematic approach for the evaluation of the joint, and demonstrate how a multimodality approach can be used in both straightforward and more complex cases. Specifically, the utility of lateral and weight-bearing radiographs as well as computed tomography and magnetic resonance will be addressed. The dorsoplantar radiograph is often the first radiological examination performed, after initial history and physical examination. An understanding of the anatomy of the normal Lisfranc joint and subtle findings in the abnormal joint is essential in making an accurate diagnosis. Lateral and weight-bearing radiographs can be very useful in evaluating for subtle dislocation and minimizing the effects of overlapping structures at the tarsometatarsal joint. Computed tomography is particularly helpful in the delineation of anatomy and identification of small fractures. The strength of magnetic resonance lies in its ability to show isolated ligamentous injury and bone marrow edema. At the end of the article, the reader should be able to describe the normal anatomy of the tarsometatarsal joint, identify findings of Lisfranc injury on all three modalities, and understand the specific indications for the use of each modality.

Injury to the Lisfranc joint has long been a popular topic in the radiology, orthopedic surgery, and emergency medicine literature. Much of the literature has focused on the injury's frequency and potential long-term complications. The purpose of this article is to describe the mechanism of injury, identify key radiographic findings, and illustrate how computed tomography (CT) and magnetic resonance (MR) can be used as diagnostic aids in complex cases.

The Lisfranc joint bears the name of a field surgeon in Napoleon's army, Jacques Lisfranc, who described a technique for amputation of the forefoot through the tarsometatarsal joint.[1] Multiple authors, including Cassebaum,[2] have noted that fractures or dislocations at the tarsometatarsal joint were never described by Lisfranc. By all accounts, this fracture–dislocation is rare, making up only 0.2% of all fractures (approximately 1 per 55,000 yearly).[1,3,4] Despite its low incidence and prevalence, it has taken on significant importance due to the poor long-term prognosis when treatment is inadequate, inappropriate, or delayed due to initial missed diagnosis.[5] Chronic pain, functional loss due to residual ligamentous instability, arthritis, deformity, and soft-tissue injury are the most significant long-term sequelae of delayed or inappropriate management of a Lisfranc joint injury.[6] It is difficult to quantify the percentage of initial missed diagnoses of Lisfranc fracture–dislocations in the emergency department, but numbers most often quoted in the literature are in the neighborhood of 20%.[7-9] The missed Lisfranc fracture–dislocation is cited as one of the most common reasons for malpractice lawsuits against radiologists and emergency medicine physicians.[10] A recent study showed that over 50% of patients with Lisfranc injuries had pursued legal claims by 2 years after initial injury, with many of these patients having had poor outcomes.[11]

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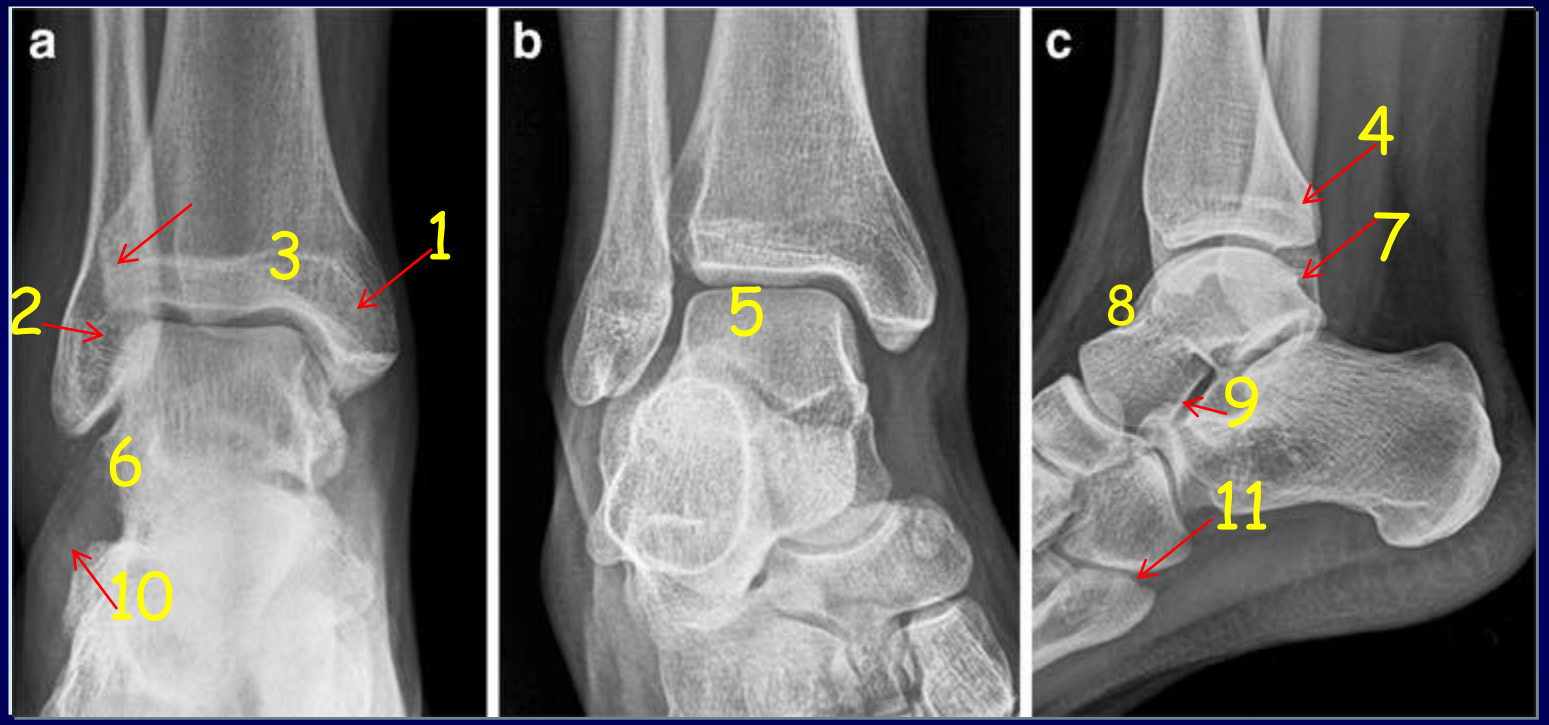
Reprint requests: Rajan T. Gupta, MD, Advocate Illinois Masonic Medical Center, Department of Radiology, 836 West Wellington Avenue, Chicago, IL 60657. E-mail: rajan.t.gupta@gmail.com.
Curr Probl Diagn Radiol 2008;37:115-126.

0363-0188/2008/$34.00 + 0
doi:10.1067/j.cpradiol.2007.08.012

Traumi ossei: la caviglia



There are 11 target sites that represent vulnerable areas where fractures occur including the medial (1) and lateral (2) malleoli, anterior tibial tubercle (3) and posterior tibial malleolus (4), talar dome (5), lateral talar process (6), tubercles of the posterior talus process (7), dorsal to the talonavicular joint (8), anterior calcaneus process (9), calcaneal insertion of the extensor digitorum brevis (10), and the base of the fifth metatarsal bone (11)

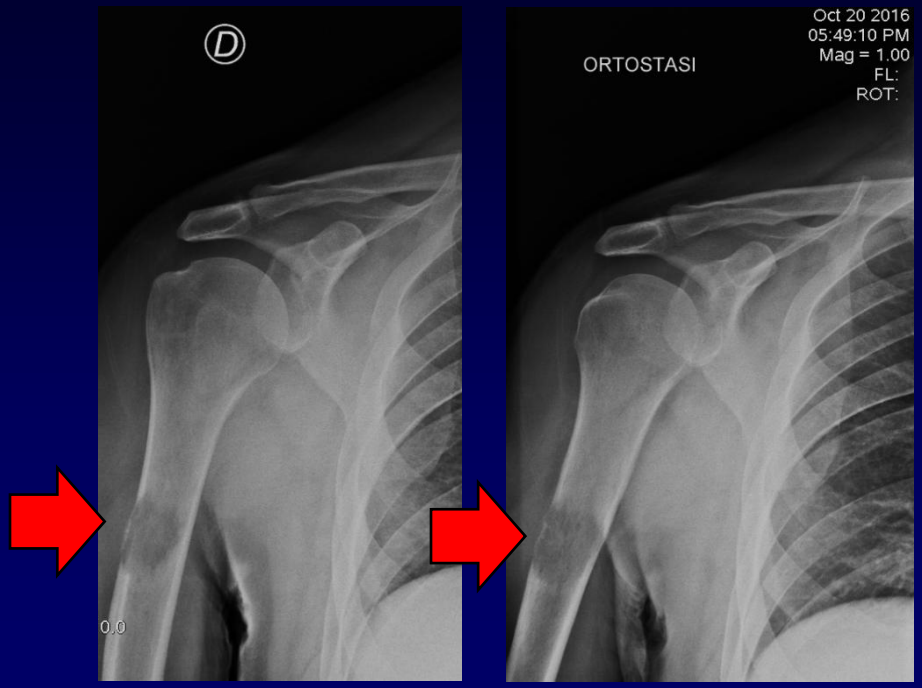
20/10/2016 ore 17.30

M, nato il 15-04-1961.

Giunto al PS per riferito dolore alla spalla destra e al braccio destro da circa un mese. Nega traumi attuali o pregressi.

In Radiologia di PS giunge richiesta di RX SPALLA DESTRA e RX OMERO DESTRO

Uno dei TSRM di turno mi contesta la richiesta degli esami RX.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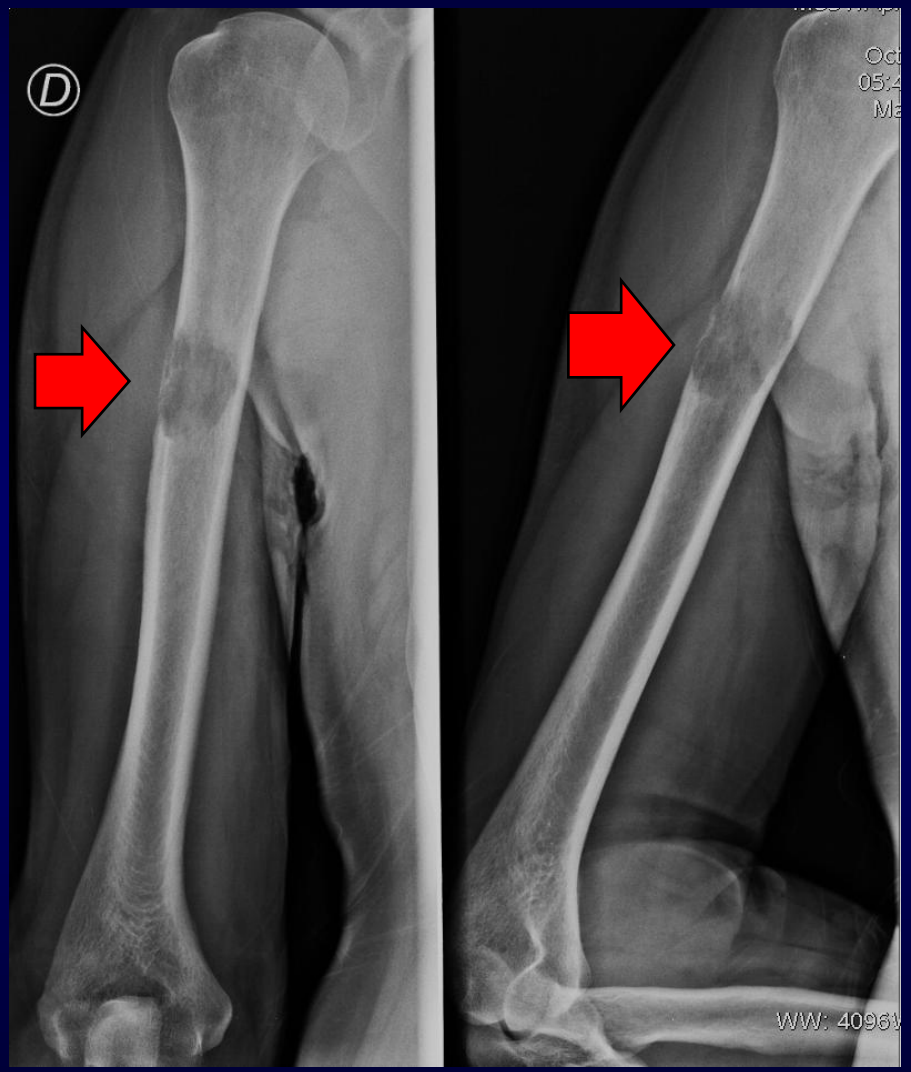
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Fool Me Twice: Delayed Diagnoses in Radiology With Emphasis on Perpetuated Errors

Young W. Kim[1]
Liem T. Mansfield[2,3]

Keywords: delayed diagnosis, diagnostic errors, error in interpretation

DOI:10.2214/AJR.13.11483

Received July 2, 2013; accepted after revision September 11, 2013.

Presented in part at the 2011 annual meeting of the ARRS, Chicago, IL.

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AJR 2014; 202:465–470

0361–803X/14/2023–465

OBJECTIVE. We hypothesized that delayed diagnoses in radiology are not recognized on subsequent radiologic examinations because of multiple types of errors.

MATERIALS AND METHODS. Six hundred fifty-six radiologic examinations with delayed diagnoses were collected from July 1, 2002, to January 31, 2010. Each case was reviewed by two radiologists together, and the diagnostic errors were classified according to our modified scheme with consensus between the radiologists.

RESULTS. There were a total of 1269 errors. The range of days elapsed from the initial error in interpretation to the correct diagnosis was 0–4611 days, with an average of 251 days. The percentage for each type of error was 0.9% (*n* = 11) for type 1, 9% (*n* = 110) for type 2, 3% (*n* = 39) for type 3, 42% (*n* = 535) for type 4, approximately 0% (*n* = 1) for type 5, 2% (*n* = 29) for type 6, 5% (*n* = 59) for type 7, 2% (*n* = 20) for type 8, 7% (*n* = 92) for type 9, 22% (*n* = 280) for type 10, 0.5% (*n* = 6) for type 11, and 6% (*n* = 79) for type 12. The correct diagnoses were not recognized on subsequent radiologic examinations in 196 of 656 cases (30%).

CONCLUSION. Delayed diagnoses were not recognized on subsequent radiologic examinations in about one third of the cases. The most common types of error were underreading, satisfaction of search, faulty reasoning, and location of the finding.

As important technologic advances have been made in the field of radiology within the last two decades, medical imaging has become a crucial component in the decision-making process in the care of patients. Radiologists interpret imaging on the basis of both visual perception and its cognitive interpretation. Mistakes are made in both aspects of interpretation despite the available technologic tools, which may lead to serious consequences for the patient. In the daily radiology practice, the rate of interpretation error is between 3% and 4%; however, of the radiology studies that contain abnormalities, the error rate is even higher, averaging in the 30% range [1]. The problem is further compounded when the error is perpetuated, resulting in a significant delay in diagnosis. Our hypothesis was that delayed diagnoses in radiology are often not recognized on subsequent radiologic examinations and are due to multiple types of diagnostic errors.

Materials and Methods

The Brooke Army Medical Center Department of Clinical Investigation approved this retrospective study. Six hundred fifty-six radiologic examinations with delayed diagnoses at our institution were collected from July 1, 2002, to January 31, 2010. The cases were collected from the department of radiology difficult case conferences and by the authors during the daily interpretation of radiologic examinations. Because the senior author was in charge of conducting the difficult case conference, the radiology faculty and residents were asked to report to him any cases of delayed diagnosis or misdiagnosis that they came upon during their daily clinical practice. Each case was reviewed by two radiologists, and the diagnostic errors were classified in consensus according to our modified scheme (Table 1), which was adapted from previous publications by Smith [2] and Renfrew et al. [3]. Types 6 through 12 errors were added or expanded by the authors from previous reports. Type 6 errors were attributed to improper imaging technique, type 7 errors were due to failure to consult old radiology examinations, type 8 errors were due to inaccurate or incomplete history, type 9 errors were due to the location of abnormality, type 10 errors were related to satisfaction of search, type 11 errors involved complications from a procedure, and type 12 errors were related to satisfaction of report. A type 9 error was assigned when the missed finding was lo-

TABLE 1: Classification of Errors in Diagnostic Radiology

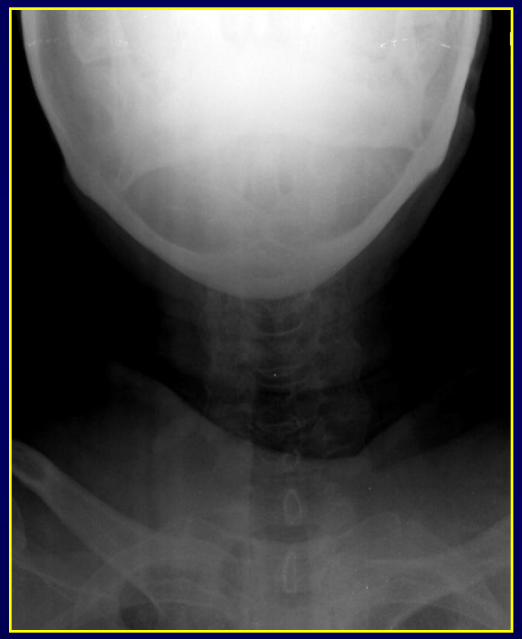
Type	Cause of Error	Explanation
1	Complacency	Error of overreading and misinterpretation, in which a finding is appreciated but is attributed to the wrong cause
2	Faulty reasoning	Error of overreading and misinterpretation, in which a finding is appreciated and interpreted as abnormal but is attributed to the wrong cause. Misleading information and a limited differential diagnosis are included in this category
3	Lack of knowledge	The finding is seen but is attributed to the wrong cause because of a lack of knowledge on the part of the viewer or interpreter
4	Underreading	The finding is missed
5	Poor communication	The lesion is identified and interpreted correctly, but the message fails to reach the clinician
6	Technique	The finding is missed because of the limitations of examination or technique
7	Prior examination	The finding is missed because of failure to consult prior radiologic studies or reports
8	History	The finding is missed because of acquisition of inaccurate or incomplete clinical history
9	Location	The finding is missed because of the location of a lesion outside the area of interest on an image, such as in the corner of an image
10	Satisfaction of search	The finding is missed because of failure to continue to search for additional abnormalities after the first abnormality was found
11	Complication	Complication from a procedure
12	Satisfaction of report	The finding was missed because of complacency of report, and overreliance of the radiology report of the previous examinations

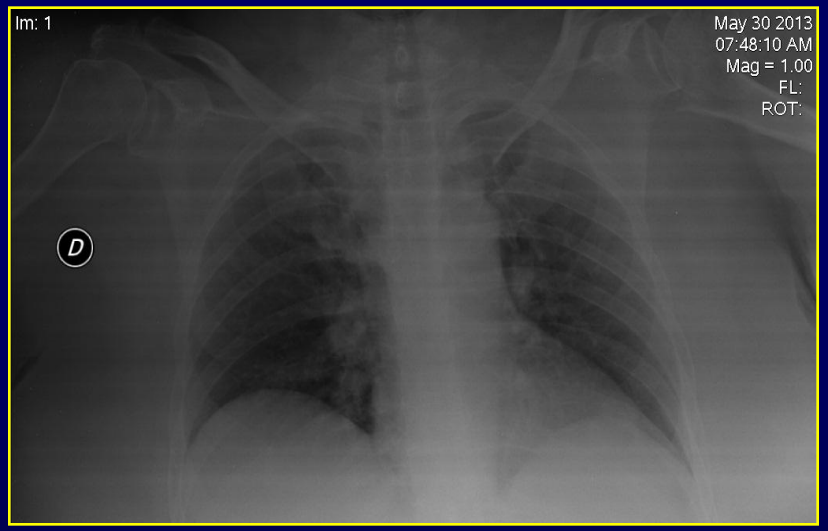
Note—This classification scheme is a modification of the schemes by Smith [2] and Renfrew et al. [3].

L'errore in radiologia d'urgenza

C.F., f, 8.10.1952, policontusa. Clinicamente non valutata

30 maggio 2013 ore 7.48

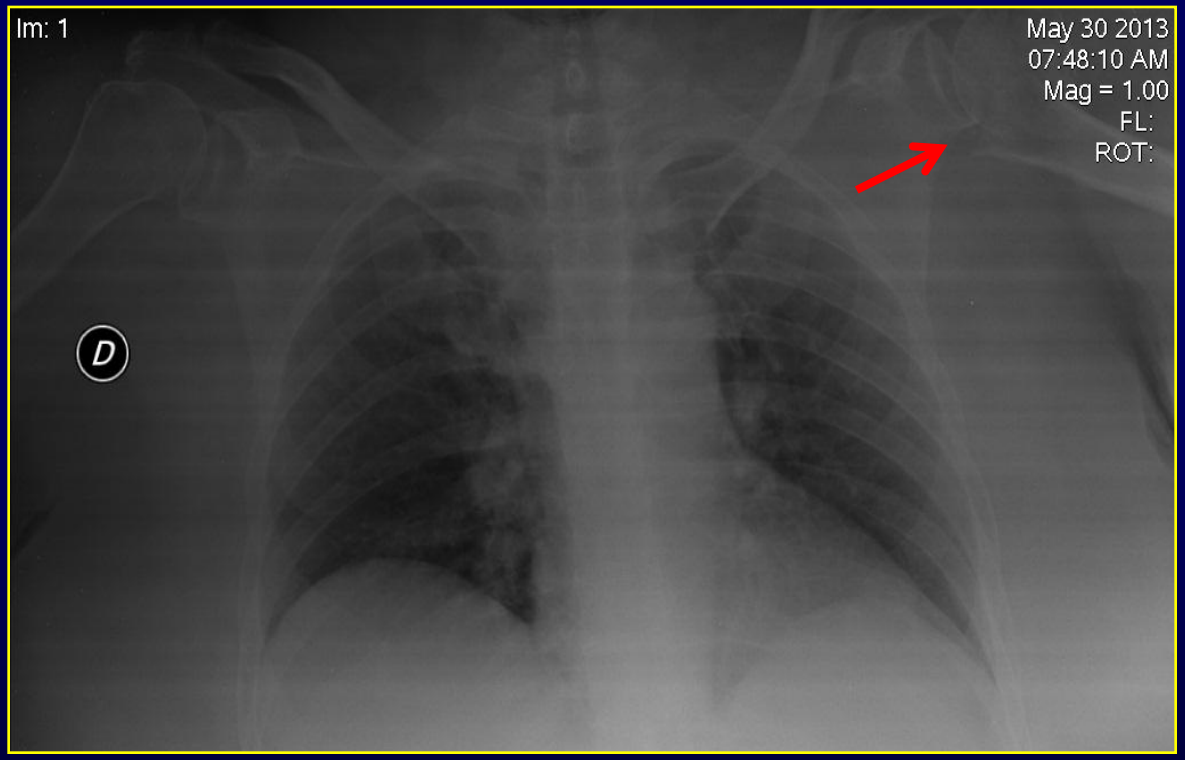




L'errore in radiologia d'urgenza

C.F., f, 8.10.1952, policontusa. Clinicamente non valutata

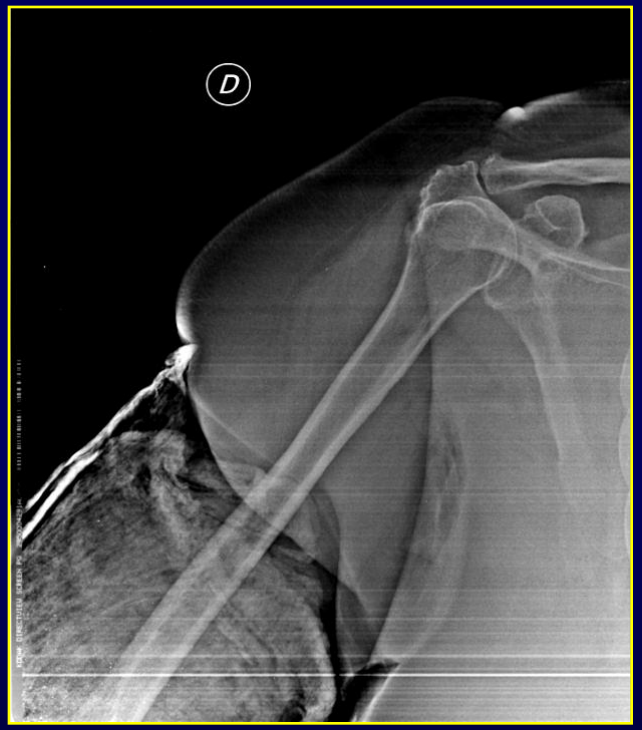
30 maggio 2013 ore 7.48



L'errore in radiologia d'urgenza

C.F., f, 8.10.1952

3 giugno 2013



L'errore in radiologia d'urgenza

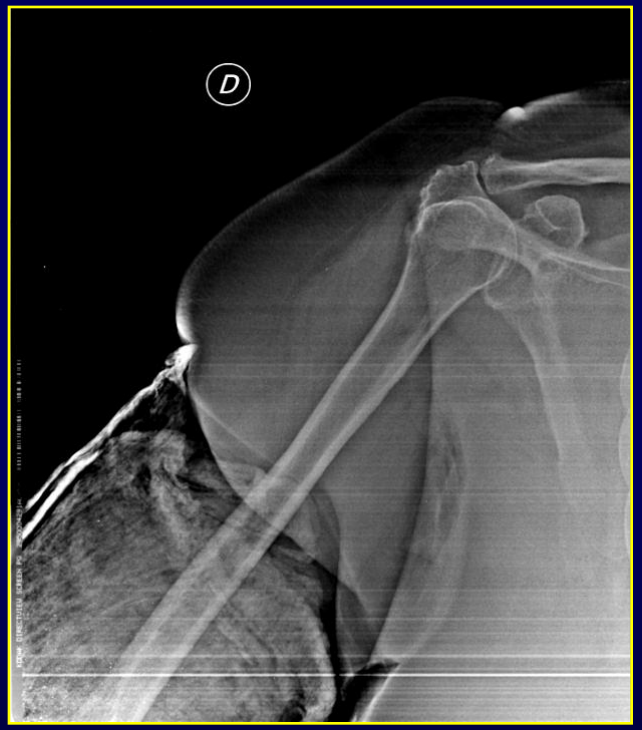
C.F., f, 8.10.1952

Sempre il 30 maggio 2013 la pz era stata ricoverata nell'U.O. di Ortopedia

L'errore in radiologia d'urgenza

C.F., f, 8.10.1952

3 giugno 2013



L'errore in radiologia d'urgenza

C.F., f, 8.10.1952

5 giugno 2013

Fattori responsabili dell'errore in radiologia d'urgenza

- Fattori intrinseci
- Richieste di indagini radiografiche senza quesito clinico
- Politrauma grave
- Errori di tecnica radiografica
- Esperienza del Radiologo
- Errori di percezione e/o di interpretazione

Fattori responsabili dell'errore in radiologia d'urgenza

Fattori intrinseci

- Logistica dei DEA che talvolta non risponde a precisi criteri di flusso
- Tecnologie disponibili non sempre adeguate
- Ambiente lavorativo non collaborativo e carico di tensioni
- Ritmi e carichi di lavoro eccessivi
- Impossibilità di consultare colleghi più esperti
- Impossibilità di confrontare l'attuale indagine radiografica con precedenti esami radiografici

Logistica dei DEA che talvolta non risponde a precisi criteri di flusso

Mercoledì 13 ottobre 2010
Il Mattino

I conti della sanità

Visite senza ticket: la truffa del pronto soccorso

Corsa al Loreto Mare e al San Giovanni Bosco, dove non c'è sistema per classificare le urgenze

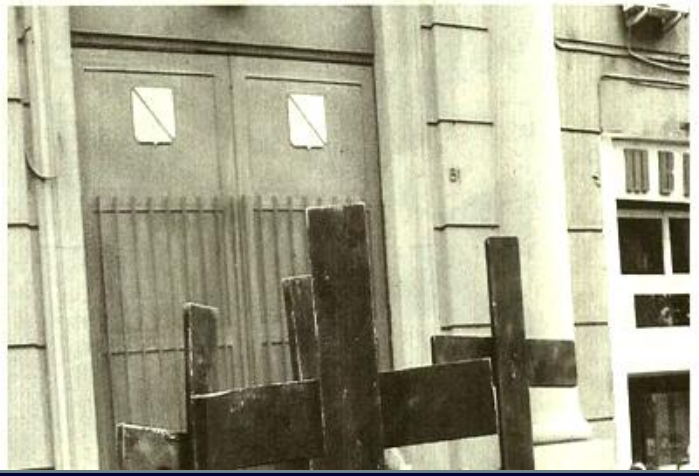
Melina Chiapparino

Truffano il sistema sanitario e manda-
no in tilt due ospedali napol[illegible]. È
l'esercito dei codici bianchi che beffa-
no il superticket sanitario imposto nei
nosocomi dalla Regione, intasando i
pronti soccorso del San Giovanni Bo-
sco e del Loreto Mare. Un mare di furbi
che ha scatenato l'indignazione e la de-
nuncia della classe medica e infermie-
ristica preoccupata di «mettere a serio
rischio la qualità delle prestazioni me-
diche». Protagonisti dell'imbroglio so-
no i pazienti con patologie guaribili da
medici di base, che approfittano dei
due presidi ospedalieri sprovvisti di
triage per evitare il pagamento dei 50
euro previsti dal superticket. Di fatti, in
entrambi i nosocomi, non è attuato il

Il fenomeno

L'altro trucco: fingere sintomi più gravi

Secondo l'azione di monitoraggio documentata dal Circ, il Coordinamento infermieri regione Campania, ci sono ancora molti scompensi nell'applicazione del superticket tra i



Il corteo

No al piano, scendono in p
sindaci e vescovo dell'alta

IL RISCHIO NELLA RADIOLOGIA D'URGENZA

L'identificazione del paziente nella corrispondente documentazione costituisce, anche sotto il profilo medico-legale, la condizione che conferisce autenticità alla prestazione radiologica; diversamente il documento risulta falso. La procedura d'identificazione, sempre più frequentemente legata ai sistemi informatici, si attua con l'intervento di personale tecnico e amministrativo ed al radiologo spetta il compito della vigilanza.

Regione Campania
D.P.G.R.C. 136/2014

Agenzia Regionale Sanitaria
Arsan

Sezione Operativa
Sistemi Informativi, Analisi
e Programmazione

Ai **Referenti degli Uffici SDO**
Ai **Referenti dei Flussi Informativi delle prestazioni sanitarie**
delle ASL, delle AO, delle AOU, dell'IRCCS 'INT Pascale'
Regione Campania

e, p.c., ai Direttori Generali delle ASL, delle AO,
delle AOU e dell'IRCCS 'INT Pascale' della regione Campania
al SubCommissario ad Acta per il Piano di Rientro
Dott. Mario Morlacco
al SubCommissario ad Acta per il Piano di Rientro
Prof. Ettore Cinque
al Direttore del Dipartimento Salute e Risorse Naturali
Prof. Ferdinando Romano
al Direttore Generale per la Tutela della Salute
ed il Coordinamento del Sistema Sanitario Regionale
Dott. Mario Vasco

AGENZIA REGIONALE SANITARIA
Prot. 2014/158 del 03-07-2014
Sezione:PARTENZA

SIAMPROG

Oggetto: Acquisizione dei corretti identificativi (codici sanitari individuali) nella registrazione delle prestazioni sanitarie
Rif. Nota Arsan Prot. 199/2014

Facendo seguito alla precedente nota 199/2014 di questa Agenzia, che per opportunità si acclude, relativa alla qualità delle informazioni acquisite nel corso degli anni nella piattaforma di accoglienza delle prestazioni sanitarie - schede di dimissione ospedaliera (SDO), attività di specialistica ambulatoriale, erogazione dei farmaci, etc. -, sono stati riscontrati numerosi errori degli identificativi individuali (codici fiscali) riferiti ai fruitori, ed in particolare è stato rilevato un elevato numero di codici non presenti nell'anagrafe assistiti realizzata dalla ditta SOGEI per l'Agenzia delle Entrate.

Problemi medico-legali inerenti l'identificazione del paziente

AREA METROPOLITANA
NAPOLI

IL PRESIDIO L'INDAGINE

Gli investigatori stanno accertando l'identità di chi si è sottoposto all'esame diagnostico: il controllo sarebbe stato fatto sotto falso nome

L'ingresso dell'ospedale Santa Maria della Pietà a Nola

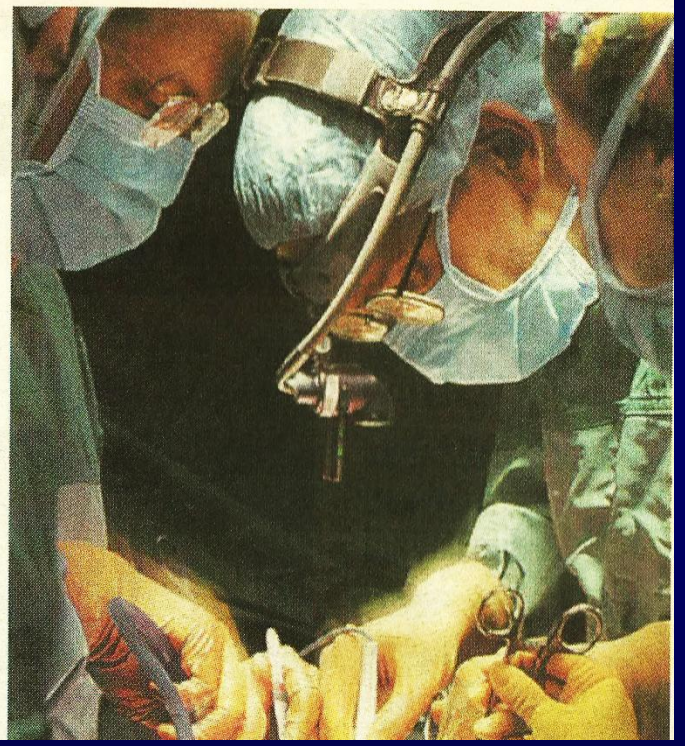
Tac a un latitante, è giallo nell'ospedale

Nola: partite le indagini dei carabinieri. Sequestrati referti e registri, ascoltati medici e operatori

IN UN OSPEDALE DI BOLOGNA

In sala operatoria con la Tac di un'altra Muore sotto i ferri

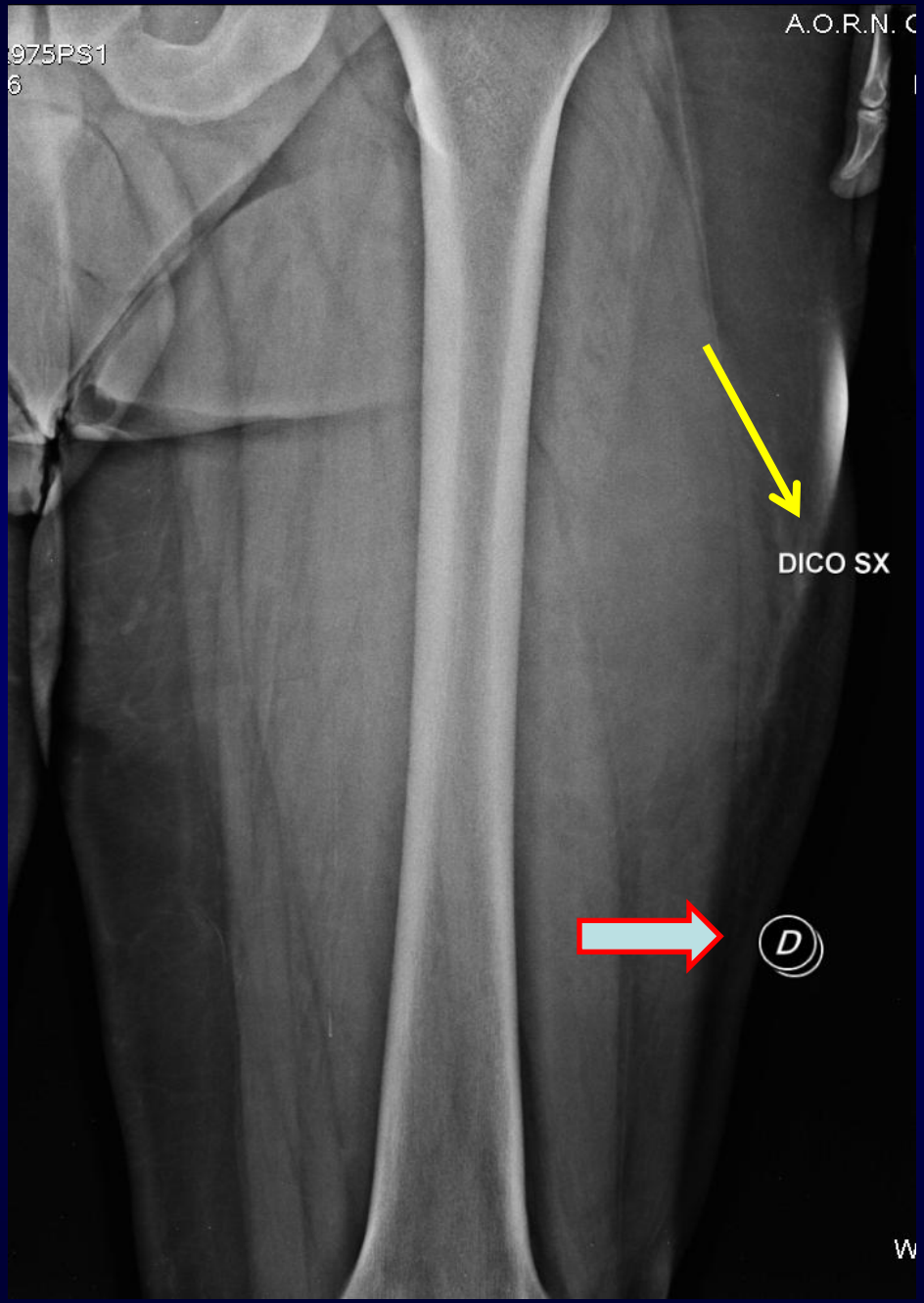
I referti scambiati per un caso di omonimia I chirurghi le hanno asportato un rene sano



Errare humanum est: Frequency of Laterality Errors in Radiology Reports

- 1.065.322 studi radiologici
- 88 errori di "lato" (0,00008%)

Sangwaiya, AJR 2009


975PS1
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A.O.R.N.
DICO SX
D

Pz rifiuta di togliere gli orecchini

Fattori responsabili dell'errore in radiologia d'urgenza

Ambiente lavorativo non collaborativo e carico di tensioni

RADIOLOGIA di P.S.


A.O.R.N. A. CARDARELLI

Fattori responsabili dell'errore in radiologia d'urgenza

Ambiente lavorativo non collaborativo e carico di tensioni

CRONACA NAPOLI

SANITÀ
IL CASO

Aggressione nel reparto medicina d'urgenza la paziente è grave Scatta l'inchiesta interna

BRUNO BUONANNO

Diciotto giorni di prognosi per Enzo Monti, operatore sanitario della medicina d'urgenza del Cardarelli, che per un improvvisa e violenta zuffa con il parente di una degente si è ritrovato in pronto soccorso con il naso fratturato.

Ricoverata nella medicina d'urgenza da almeno un paio di settimane, un'anziana ricoverata - la signora Maria L. - aveva conquistato anche rapidamente un posto letto in corsia. Ma le sue condizioni fisiche sembravano migliorate e ieri mattina barella

C'è posto solo in barella rompe il naso al portantino

Cardarelli: trasferita, perde il letto. Esplode l'ira di un parente

LA PROVOCAZIONE

La tipologia di incidenti nei servizi ospedalieri (2005)

Qualifica professionale	Modalità di accadimento							
	Scivolam.	Perdita di controllo di mezzo, utensile	Movim. scoordin.	Movim. sotto sforzo	Violenza, aggressione	Caduta, crollo di materiale	Altre e indet.	Totale
Infermiere	1.838	1.966	1.628	1.280	234	204	1.984	9.134
Operatore	656	669	464	445	57	60	628	2.979
Ausiliario sanit., portantino	455	356	277	303	30	41	392	1.854
Assistente sanitario	234	211	176	203	31	30	175	1.060
Medico	196	245	161	70	31	17	177	897
Impiegato	156	108	80	61	7	11	87	510
Altre e indeterminate	578	527	392	251	39	64	480	2.331
Totale	4.113	4.082	3.178	2.613	429	427	3.923	18.765

Fattori responsabili dell'errore in radiologia d'urgenza

Ritmi e carichi di lavoro eccessivi

Excess workload can lead to error. Error rates in reporting abdominal CT more than doubled when a radiologist reported more than 20 studies a day **Bechtold RE et al, JCAT 1997**

INFORTUNI

Superlavoro in radiologia

Tac, radiografie e risonanze per gli incidenti di tutti i giorni

MASSIMO ALTAMURA

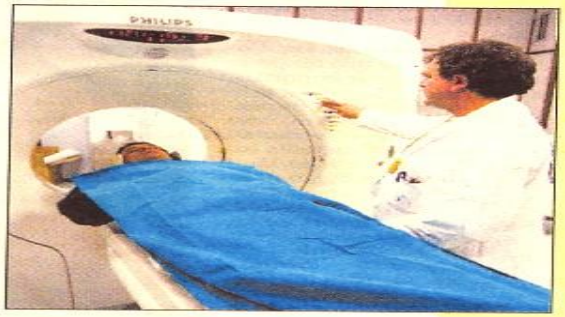
NEGLI ultimi sei mesi il pronto soccorso del Cardarelli ha registrato circa 55.000 accessi per una media di 300 utenti al giorno che si concentrano soprattutto nelle ore notturne e del tardo pomeriggio e principalmente per problemi di lieve entità che impegnano il servizio di diagnostica per immagini anche per 100 esami a notte. Dati che fanno riflettere se si pensa che gran parte dei pazienti che giunge al Cardarelli arriva da un'altra realtà territoriale e che nell'area che comprende Napoli e la sua provincia ci sono ben 28 fra ospedali e aziende ospedaliere che effettuano pronto soccorso in funzione nell'arco delle ventiquattro ore, molti dei quali lamentano una scarsa affluenza.

«Credo che una rete territoriale che funzionasse a pieno regime limiterebbe quest'affluenza che è eccessiva e che per lo meno noi - spiega Luigia Romano, dirigente della radiologia del Cardarelli - come servizio di diagnostica per immagini, abbiamo grosse difficoltà a gestire. Abbiamo destinato oltre il 50% delle risorse al pronto soccorso e non possiamo destinarne di più perché c'è l'ospedale con 1200 posti letto che va gestito, soprattutto se si considera che anche nell'ambito delle attività dedicate all'assistenza del paziente ospedalizzato esiste una

tro ore, ma l'attività del reparto è limitata».

Tac e risonanze lavorano nei presìdi di pronto soccorso anche in piena notte. Ma spesso l'utilizzo delle radiologie e degli apparecchi ecografici viene richiesto per accertare la presenza di patologie anche croniche, che non hanno nulla a che vedere con gli incidenti casalinghi. I danni provocati dalla caduta da una scala, da un urto violento della testa contro lo stipite di una finestra, o le conseguenze di una profonda ferita che in casa ci si può provocare a volte in maniera semplice - magari per colpa del cristallo di una porta che si rompe - naturalmente richiedono immediati accertamenti diagnostici per verificare fratture ossee, o danni agli organi interni che quasi sempre vanno risolti con un intervento di chirurgia di urgenza.

Il Cardarelli soffre per la forte pressione del pronto soccorso che anche nelle

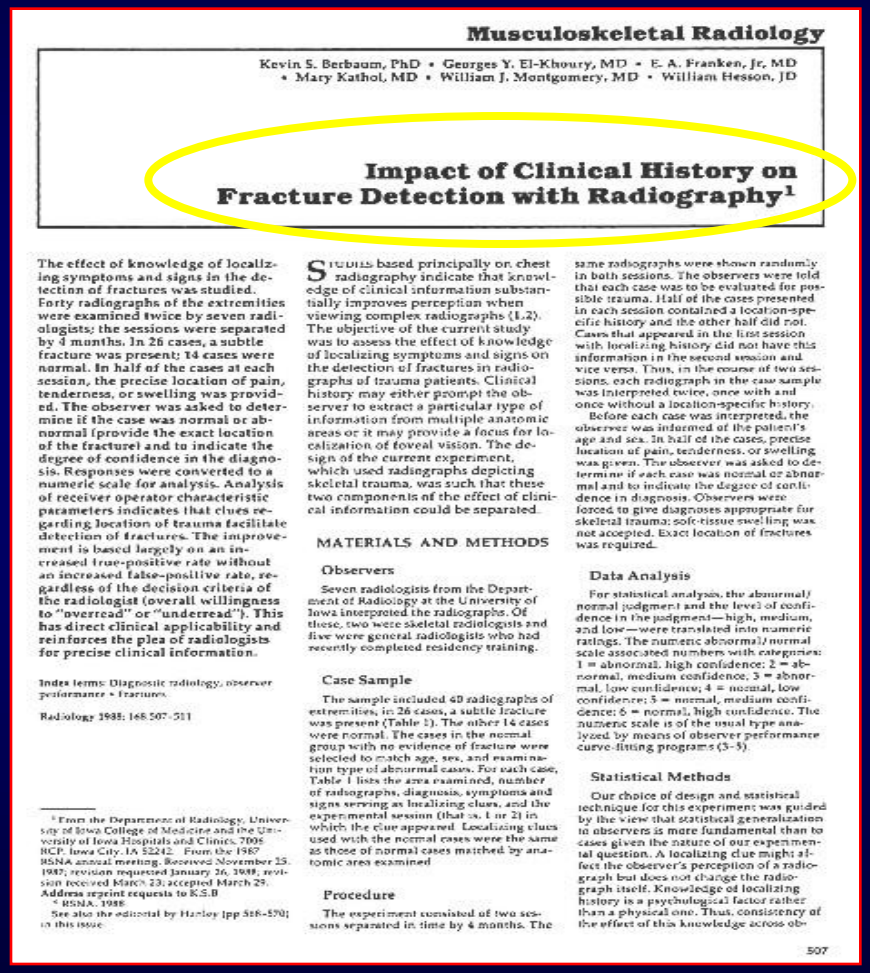


Cure immediate in ambulatori e presìdi minori

Il problema di gestione che si riscontra presso la radiologia del pronto soccorso del Cardarelli è dovuto a numerose patologie di basso profilo per le quali serve l'intervento del medico per stabilire se un sintomo è espressione di un fatto lieve o di un'affezione più importante. Si tratta spesso di risposte che potrebbero essere chieste in ambulatorio o in presidi di minori dimensioni.

«Sicuramente la grossa affluenza è dovuta anche alla fiducia che il cittadino ha nell'azienda Cardarelli - dice la dottoressa Luigia Romano - ma bisogna rafforzare l'immagine dei presìdi più piccoli di pronto soccorso attraverso la

Fattori responsabili dell'errore in radiologia d'urgenza



Musculoskeletal Radiology

Kevin S. Berbaum, PhD • Georges Y. El-Khoury, MD • E. A. Franken, Jr, MD • Mary Kathol, MD • William J. Montgomery, MD • William Hesson, JD

Impact of Clinical History on Fracture Detection with Radiography[1]

The effect of knowledge of localizing symptoms and signs in the detection of fractures was studied. Forty radiographs of the extremities were examined twice by seven radiologists; the sessions were separated by 4 months. In 26 cases, a subtle fracture was present; 14 cases were normal. In half of the cases at each session, the precise location of pain, tenderness, or swelling was provided. The observer was asked to determine if the case was normal or abnormal (provide the exact location of the fracture) and to indicate the degree of confidence in the diagnosis. Responses were converted to a numeric scale for analysis. Analysis of receiver operator characteristic parameters indicates that clues regarding location of trauma facilitate detection of fractures. The improvement is based largely on an increased true-positive rate without an increased false-positive rate, regardless of the decision criteria of the radiologist (overall willingness to "overread" or "underread"). This has direct clinical applicability and reinforces the plea of radiologists for precise clinical information.

Index terms: Diagnostic radiology, observer performance • Fractures

Radiology 1988; 168:507-511

[1] From the Department of Radiology, University of Iowa College of Medicine and the University of Iowa Hospitals and Clinics, 200S RCP, Iowa City, IA 52242. From the 1987 RSNA annual meeting. Received November 25, 1987; revision requested January 26, 1988; revision received March 23; accepted March 29. Address reprint requests to K.S.B.

See also the editorial by Hanley [pp 568-570] in this issue.

Studies based principally on chest radiography indicate that knowledge of clinical information substantially improves perception when viewing complex radiographs (1,2). The objective of the current study was to assess the effect of knowledge of localizing symptoms and signs on the detection of fractures in radiographs of trauma patients. Clinical history may either prompt the observer to extract a particular type of information from multiple anatomic areas or it may provide a focus for localization of foveal vision. The design of the current experiment, which used radiographs depicting skeletal trauma, was such that these two components of the effect of clinical information could be separated.

MATERIALS AND METHODS

Observers

Seven radiologists from the Department of Radiology at the University of Iowa interpreted the radiographs. Of these, two were skeletal radiologists and five were general radiologists who had recently completed residency training.

Case Sample

The sample included 40 radiographs of extremities, in 26 cases, a subtle fracture was present (Table 1). The other 14 cases were normal. The cases in the normal group with no evidence of fracture were selected to match age, sex, and examination type of abnormal cases. For each case, Table 1 lists the area examined, number of radiographs, diagnosis, symptoms and signs serving as localizing clues, and the experimental session (that is, 1 or 2) in which the clue appeared. Localizing clues used with the normal cases were the same as those of normal cases matched by anatomic area examined.

Procedure

The experiment consisted of two sessions separated in time by 4 months. The same radiographs were shown randomly in both sessions. The observers were told that each case was to be evaluated for possible trauma. Half of the cases presented in each session contained a location-specific history and the other half did not. Cases that appeared in the first session with localizing history did not have this information in the second session and vice versa. Thus, in the course of two sessions, each radiograph in the case sample was interpreted twice, once with and once without a location-specific history.

Before each case was interpreted, the observer was informed of the patient's age and sex. In half of the cases, precise location of pain, tenderness, or swelling was given. The observer was asked to determine if each case was normal or abnormal and to indicate the degree of confidence in diagnosis. Observers were forced to give diagnoses appropriate for skeletal trauma; soft-tissue swelling was not accepted. Exact location of fractures was required.

Data Analysis

For statistical analysis, the abnormal/normal judgment and the level of confidence in the judgment—high, medium, and low—were translated into numeric ratings. The numeric abnormal/normal scale associated numbers with categories: 1 = abnormal, high confidence; 2 = abnormal, medium confidence; 3 = abnormal, low confidence; 4 = normal, low confidence; 5 = normal, medium confidence; 6 = normal, high confidence. The numeric scale is of the usual type analyzed by means of observer performance curve-fitting programs (3–5).

Statistical Methods

Our choice of design and statistical technique for this experiment was guided by the view that statistical generalization to observers is more fundamental than to cases given the nature of our experimental question. A localizing clue might affect the observer's perception of a radiograph but does not change the radiograph itself. Knowledge of localizing history is a psychological factor rather than a physical one. Thus, consistency of the effect of this knowledge across ob-

Richieste di indagini radiografiche senza quesito clinico

There is no doubt that substantial improvement in radiograph interpretation occurs with ***knowledge of clinical information***

Fattori responsabili dell'errore in radiologia d'urgenza

Errori di tecnica radiografica

"L'**errore** per mancato riconoscimento di un segno risulta sicuramente più grave quando sia conseguenza di carenze negli standards tecnico-metodologici, anche in tema di documentazione"

Tamburrini O, Dalla Palma F: L'atto medico radiologico
Approvato dal Consiglio Direttivo della SIRM
in data 2 luglio 2007. Radiol Med 2008

Errori di tecnica radiografica

Eur Radiol (2002) 12:938–941
DOI 10.1007/s003300101067

MALPRACTICE-LEGAL

Thröstur Finnbogason
Staffan Bremmer
Hans Ringertz

Side markings of the neonatal chest X-ray: two legal cases of pneumothorax side mix up

The Importance of Proper Radiographic Positioning and Technique

Leonard Berlin[1]

The Cases

Case 1

A 55-year-old woman was referred for radiologic examination of the chest because of hemoptysis. A posteroanterior radiograph was interpreted as normal by the radiologist (Fig. 1A). The patient returned 2 years later, again complaining of hemoptysis. Another chest radiograph was obtained, which was also reported as normal by the radiologist (Fig. 1B). Approximately 1 year later the patient was seen by another physician and referred to a different facility for chest radiographs. On that examination, a radiologist reported a mass in the left mid lung field (Fig. 1C). A biopsy disclosed squamous cell carcinoma. The patient died approximately 1 year later.

Case 2

A 52-year-old man was admitted to a hospital's emergency department after having fallen down a stairway while inebriated. After physical examination, the man underwent a cross-table lateral cervical spine radiograph (Fig. 2A) that was interpreted by the radiologist as negative for fracture or dislocation, although the radiologist noted that the study was "limited" in that only the first four cervical vertebrae were visualized. The patient was admitted to the hospital for observation. The next day his attending physician noted that the patient complained of neck pain and spasms, although there was no apparent motor weakness. The next day, more than 36 hr after the first radiologic examination, the attending physician ordered that the patient undergo a full cervical spine series. The same radiologist then reported "arthritic changes" and found no fracture or dislocation. The radiologist failed to note that the spine was not visualized below the body of C6 on the lateral radiographic view (Fig. 2B).

The patient was discharged with a clinical diagnosis of cervical sprain. Several days later, because of increasing pain and progressive neurologic symptoms, the patient was admitted to another hospital where radiologic examination disclosed a C6–C7 subluxation with fractures of both vertebrae. A cervical fusion was performed at surgery, but the patient became permanently quadriplegic.

The Malpractice Issues

Case 1

A malpractice lawsuit was filed against the radiologist, claiming that missing the cancer on radiographs deprived the patient of a chance for cure. During pretrial discovery proceedings, expert radiologists for both the plaintiff and the defendant testified that the patient's tumor should have been diagnosed on the earlier radiographs, but that the tumor was not adequately visualized because the chest radiographs were overexposed. The expert radiologists testified that the lesion would have been easy to see had a bright light been used, but the defendant radiologist testified that he had interpreted the radiograph on a standard illumination view box. The malpractice lawsuit was settled on behalf of the defendant radiologist for a payment of $290,000.

Received October 23, 1995; accepted after revision November 8, 1995.
Case summaries are based on actual events and lawsuits, although certain facts have been omitted or modified by the author, who has supplied and obtained authorization for the reproduction of the radiographic images. All opinions expressed herein are those of the author and do not necessarily reflect those of the American Journal of Roentgenology or the American Roentgen Ray Society.
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AJR 1996;166:769–771 0361–803X/96/1664–769

Fattori responsabili dell'errore in radiologia d'urgenza

Esperienza del Radiologo

Computed Tomography

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Effects of Training and Experience in Interpretation of Emergency Body CT Scans[1]

PURPOSE: To determine the effects of level of training and other factors on the rate of discrepant interpretation of emergency body computed tomographic (CT) scans by trainees and staff radiologists.

MATERIALS AND METHODS: Five hundred ninety-eight consecutive emergency CT studies were prospectively interpreted by radiology residents or board-certified body imaging fellows over a 12-month period. Each interpretation was reviewed within 12 hours by an attending body CT radiologist. Major discrepancies between staff radiologists' and trainees' interpretations were defined as those with the potential to affect immediate patient therapy; minor discrepancies were defined as those without such potential. The effects on discrepancy rates were examined for abnormal versus normal CT findings and trauma versus nontrauma cases.

RESULTS: Major and minor discrepancy rates were 1.2% and 6.5%, respectively, between interpretations made by the trainee and the staff radiologist. Overall, fellows demonstrated statistically significantly lower discrepancy rates than did senior or junior residents (5.9%, 13.7%, and 13.3%, respectively). The discrepancy rate was higher when CT findings were abnormal than when they were normal (13.5% vs 2.6%). There were no differences between discrepancy rates for trauma and nontrauma cases.

CONCLUSION: Experience appeared to decrease discrepancy rates. Trainees were more likely to miss findings than to read normal scans as abnormal.

In radiology training programs, the interpretation of emergency body computed tomographic (CT) studies by trainees with delayed review by staff radiologists is a common practice. The degree of interpretive accuracy may vary as a result of the trainee's experience and previous instruction. The clinical effect of misinterpretation depends on the type of case (trauma vs non-trauma), type of error (false-negative or false-positive), and how that error affects immediate therapy.

As part of our radiology department's ongoing quality assurance program, discordant opinions between trainees and attending staff were monitored to assess the number and types of errors made by trainees. The purpose of this study was also to determine (*a*) the effects of the level of training on the rate of discrepant interpretations between trainees and attending radiologists, (*b*) the effect of the type of error on the discrepancy rate, (*c*) whether these discrepancy rates varied as a result of the type of case, and (*d*) the clinical effect of these discrepancies.

MATERIALS AND METHODS

Trainees

Radiology trainees represented three levels of experience: junior residents, senior residents, and body imaging fellows. Junior residents had completed at least 2 months of a dedicated CT rotation. During a 1-month CT rotation, images are obtained in approximately 600 cases, and each resident who performs the rotation is responsible for the interpretation of images obtained in approximately 150 cases. In addition, all cases are briefly reviewed at morning conference so that residents see most of the images that were obtained in the 600 cases during their month of service.

Junior residents were in their 3rd postgraduate year or at the end of their 2nd year of residency training. Senior residents had completed a minimum of 3 months and a maximum of 5 months of a rotation dedicated to body CT imaging and were either in their 4th postgraduate year or at the end of their 3rd year of residency training. In addition to completion of the body CT rotation, all residents attended a weekly ½-hour session dedicated to interesting cases of the week. Every resident also attended a 1-hour didactic lecture on cross-sectional imaging (CT and ultrasound [US]) each week throughout the academic year.

Fellows were board-certified radiologists who underwent an additional year of body cross-sectional imaging training after completion of the residency. This training consisted of 3 months of CT, 3 months of magnetic resonance imaging, and 6 months of US. The 3 months of CT training were divided into six 2-week intervals that were completed in 1 year.

Emergency CT Cases

Five hundred ninety-eight consecutive off-hour (evening, weekend, or holiday) emergency CT studies that were performed between June 1994 and May 1995 were prospectively interpreted by trainees and were eligible for inclusion in the study. Trainees notified the attending staff radiol-

Index terms: Computed tomography (CT) • Diagnostic radiology, observer performance • Images, interpretation

Abbreviation: CI = confidence interval.

Radiology 1996; 199:717–720

[1] From the Department of Radiology, Thomas Jefferson University Hospital, 111 S 11th St, Ste G2080, Philadelphia, PA 19107. From the 1995 RSNA scientific assembly. Received November 28, 1995; revision requested January 22, 1996; revision received February 23; accepted February 27. Address reprint requests to R.J.W.

Table 1

Numbers and Rates of Discrepancies in Interpretation of CT Findings Corresponding to Level of Training

Trainee Level	Total No. of Cases	Degree of Discrepancy			Total No. of Discrepancies
		None	Minor	Major	
Junior resident	90	78 (86.6)	12 (13.3)	0 (0)	12 (13.3)
Senior resident	51	44 (86.3)	3 (5.9)	4 (7.8)	7 (13.7)
Fellow	456	429 (94.1)	24 (5.3)	3 (0.7)	27 (5.9)
All trainees	597*	551 (92.2)	39 (6.5)	7 (1.2)	46 (7.7)

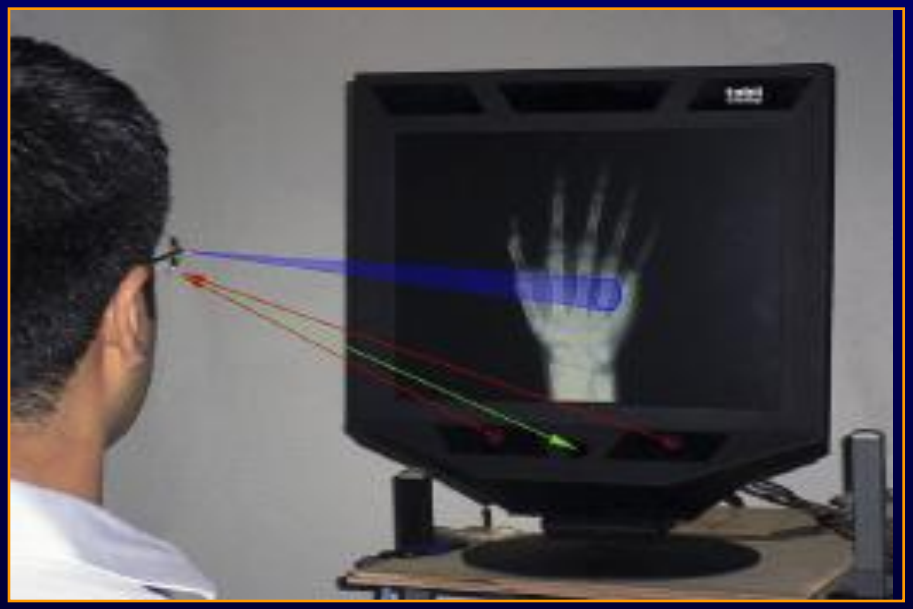
Note.—Numbers in parentheses indicate percentages.

* One case was excluded from analysis because the level of training of the resident was not specified.

Fattori responsabili dell'errore in radiologia d'urgenza

Errori percettivi da attività di "disturbo" di altri medici che sostano in sala di refertazione

Cocktail-party effect: il radiologo che esamina un'immagine radiografica focalizza la sua attenzione su un determinato particolare, tralasciando il resto dell'immagine



Caldwell C et al, Annals of Health Law 2007

CONCLUSIONI

E' fondamentale un approccio diverso al tema dell'errore: quello della conoscenza delle cause e non quello della ricerca pregiudiziale delle colpe

WJR World Journal of Radiology

Online Submissions: http://www.wjgnet.com/1949-8470office
wjr@wjgnet.com
doi:10.4329/wjr.v2.i10.377

World J Radiol 2010 October 28; 2(10): 377-383
ISSN 1949-8470 (online)

EDITORIAL

Spectrum of diagnostic errors in radiology

Antonio Pinto, Luca Brunese

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Seminars in ULTRASOUND CT and MRI

The Concept of Error and Malpractice in Radiology

Antonio Pinto, MD, PhD,* Luca Brunese, MD,† Fabio Pinto, MD,* Riccardo Reali, MD,‡ Stefania Daniele, MD,* and Luigia Romano, MD*

Since the early 1970s, physicians have been subjected to an increasing number of medical malpractice claims. Radiology is one of the specialties most liable to claims of medical negligence. The etiology of radiological error is multifactorial. Errors fall into recurrent patterns. Errors arise from poor technique, failures of perception, lack of knowledge, and misjudgments. Every radiologist should understand the sources of error in diagnostic radiology as well as the elements of negligence that form the basis of malpractice litigation. Errors are an inevitable part of human life, and every health professional has made mistakes. To improve patient safety and reduce the risk from harm, we must accept that some errors are inevitable during the delivery of health care. We must play a cultural change in medicine, wherein errors are actively sought, openly discussed, and aggressively addressed.
Semin Ultrasound CT MRI 33:275-279

DIAGNOSTIC IMAGING EUROPE, May 2013

QUALITY CONTROL

by Dr. Antonio Pinto

The importance of learning from errors in radiology

VOL 33, NO 4
AUGUST 2012

ELSEVIER

Seminars in ULTRASOUND CT and MRI

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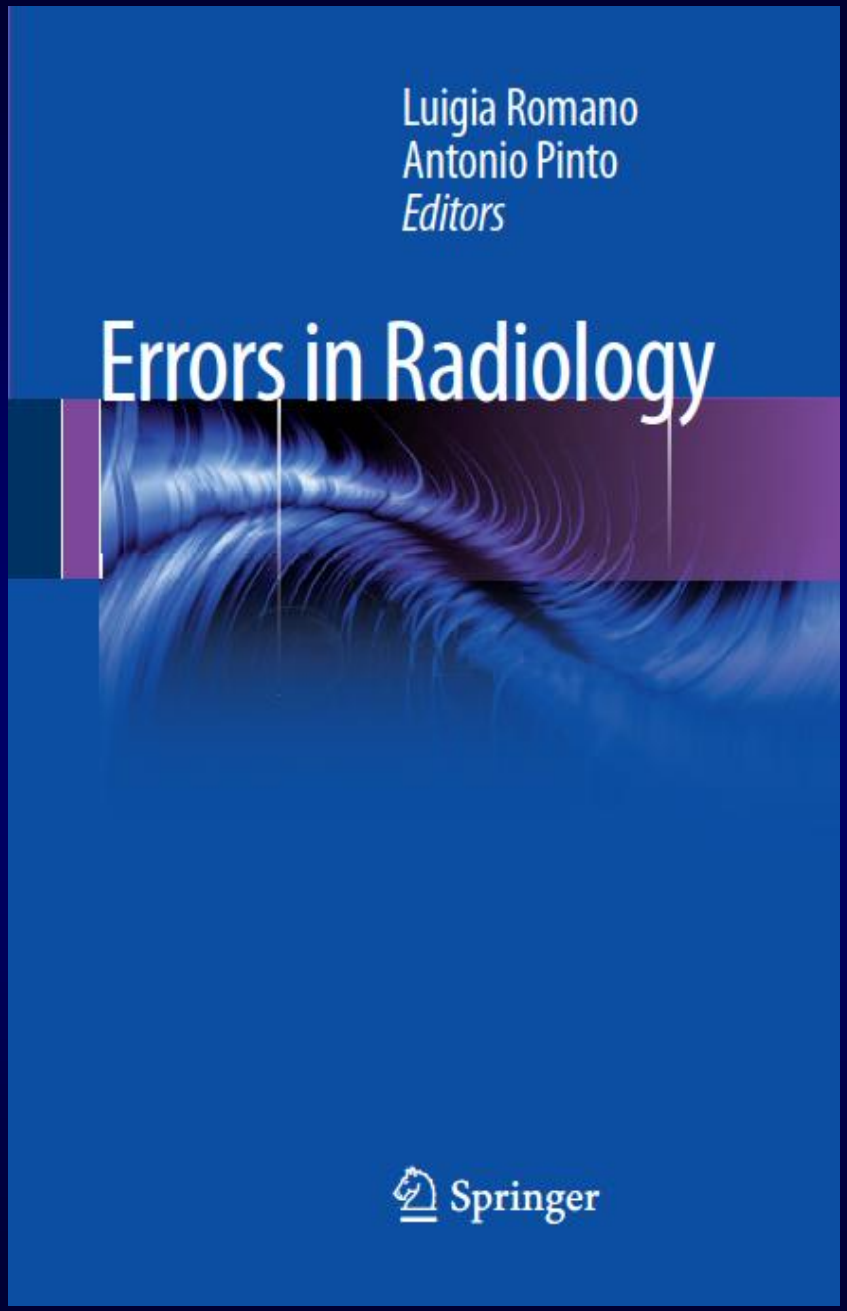
SEMINARS IN ULTRASOUND, CT, AND MRI
ERRORS AND MALPRACTICE IN RADIOLOGY
33:4, AUGUST 2012, PP 273-382
ELSEVIER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