The report is the product of the lab

Laurence Needleman

The report is the product of the lab

• Are results clear?
• Are criteria used consistently?
• Is impression justified by the findings?
• Are limitations stated clearly?

The role of the report is to clearly state if disease is or is not present. If you cannot, state your limitations clearly.

The Report

Final Report – IAC VT

• Clinical indications leading to the performance of the examination
• An adequate description of the examination performed and must include the name of the examination and its integral parts
• Description of pertinent positive and negative findings
• If disease is present it must be characterized according to its location, extent, severity and etiology whenever possible
• Reasons for a technically limited, suboptimal or incomplete examination
• Summary (impression/conclusion) of the examination findings
  – The final interpretation should address the clinical indications for the examination.

Just because there is a number given to the physician to interpret does not mean the number must be in the report.

For instance, in reporting a segmental blood pressure examination, a statement that a significant pressure drop is or is not present is adequate without reporting the specific pressure readings.

Does the angiographer tell you the measurement in mms of the residual lumen?

Just because there is a number given to the physician to interpret does not mean the number must be in the report.

Does the angiographer tell you the measurement in mms of the residual lumen?
Reports: Free form versus structured

Improving Communication of Diagnostic Radiology Findings through Structured Reporting

Mean content satisfaction ratings were 7.04 (95% confidence interval [CI]: 6.72, 7.36) for conventional reports and 8.33 (95% CI: 8.01, 8.66) for structured reports, and the difference was significant (P < .0001). Mean clarity satisfaction ratings were 7.42 (95% CI: 6.90, 8.02) for conventional reports and 8.23 (95% CI: 7.82, 8.64) for structured reports, and the difference was significant (P < .0001). Grade ratings did not differ significantly between conventional and structured reports.

Referring clinicians and radiologists found that structured reports had better content and greater clarity than conventional reports.
and for nonradiologists (black bars).

presentation

the
certainty associated with commonly used

of agreement about the level of diagnostic

example,

of communication among physicians regarding diagnostic

examine the effect of use of this terminology on addi-

by practice setting or by region. Moreover, we did not

from only one tertiary care center and may not be gener-

bone

widespread use of a mammography reporting lexicon is

been

least

However, education is generally a weak strategy for

upon method for conveying diagnostic certainty also

used commonly in radiology reports. This ambiguity may

•

•

•

•

•

KHORASANI ET AL

The worst offender is “clinical correlation is

recommended.” A quick test to determine if what you’re

saying makes sense is to negate it and see if that makes

sense. Isn’t “clinical correlation is not recommended”
gibberish? Of course clinicians will correlate the results

of the tests.

Avoid meaningless statements

Only “diagnostic of” is definite

Figure 8. Graph illustrates the general lack of discrimination among the various diagnostic terms used in the

terminology system. The term “diagnostic of” (rightmost column) was used by all physicians, indicating by far the

highest level of ambiguity.

Use terms with meaning

• Clinical correlation is recommended

• Acute DVT

• Chronic

• Residual venous thrombosis

• Scar

• Chronic change

• Near 50% stenosis

Don’t “wing it”

• Nebulous terms

  • Prominent versus slightly enlarged or top normal

  • A small
dish to

• New categories of diseases

  • “near 50%”

  • The role of the report is to clearly state if disease is or is not present. If you cannot, state your limitations clearly
If the reason for the test cannot be ruled out by a normal study, say so.

For example, if a patient comes for a lower extremity venous duplex to rule out compartment syndrome, it is not ruled out if the study is normal. A statement saying that compartment syndrome is not excluded is more relevant than "no DVT" (it may even be more relevant to send the patient back, to get an appropriate test, rather than doing the wrong (but ordered) test.

CMS Physicians Quality Reporting System (PQRS)

Program Overview

The Physician Quality Reporting System (PQRS) is a voluntary program that provides an incentive payment to individual physicians who report quality measures related to service. The program was enacted Dec 31, 2008.

Definition

"I use NASCET" .... ?

- "Carotid stenosis of greater than 80%"
- "Common stenosis of 50-69%"
- "ICA stenosis of 70-99% with occlusion"

Limited

- Limited has multiple meanings
  - Billing
  - Medical
- A medically limited study does not necessarily mean a billing limited study (it might or might not)

The Superficial Femoral Vein

A Potentially Lethal Mismiker

Objective – to describe the potential for misdiagnosis of venous disease in the superficial femoral vein and to assess the impact on the patient and the health care system.

Methods – a retrospective review of all cases of superficial femoral vein thrombosis and deep vein thrombosis in a large academic institution over a period of 10 years. The study included patients with a diagnosis of superficial femoral vein thrombosis and deep vein thrombosis over a period of 10 years.

Results – 10 cases of superficial femoral vein thrombosis and deep vein thrombosis were identified. The diagnosis was made based on clinical and imaging findings. The average age of the patients was 55 years. The diagnosis was made on average 7 days after the onset of symptoms. The patients were treated with anticoagulation and compression therapy.

Conclusions – superficial femoral vein thrombosis and deep vein thrombosis can be misdiagnosed as deep vein thrombosis. The diagnosis is important to prevent complications and to improve patient outcomes. The diagnosis can be confirmed using imaging studies such as duplex ultrasound, venography, and magnetic resonance imaging.
Limited

• Assume everyone will read your report
• “Technically difficult study”
  • “Patient was not cooperative.”
  • “Portable study”
• Describe anatomy well seen and not well seen

Needleman’s Law

If you didn’t say it, you didn’t see it

Needleman’s corollaries

• If you did see it, you need to say it clearly
  • “About 50%” is not a grade
• You can’t claim you didn’t see it well after the fact if it isn’t in your report
  • Quality is assumed if not otherwise stated
  • The time to declare quality problems is not in the courtroom.

“Occlusive DVT”

• What is the purpose of this phrase?
  • To explain symptoms?
  • Prognosis?
  • Effect on management?
• What does “occlusive DVT” mean w/o Sx?
• Gray scale vs. spectral Doppler vs. color Doppler
• Doppler indicates obstruction
  • “Blunted Doppler indicating obstruction”
• Today’s occlusion is tomorrow’s non-occlusion

“Non-Occlusive DVT”

• What is the purpose of this phrase?
  • To explain symptoms?
  • Prognosis?
  • Effect on management?
• Today’s non-occlusive thrombus may be tomorrow’s occlusive DVT

“Hemodynamically significant”

• What does it mean?
  • Flow reducing?
  • Increased risk of stroke/TIA?
  • Requires intervention?
  • Is this specific category of stenosis?
  • How do you know?
• Is it relevant?
  • Peripheral arteries – YES
  • Carotid artery – NO
Hemodynamic significance: A cautionary tale

"Diagnosis: Significant lesion of the right ICA
Findings: Cross sectional area of the ICA is 45%. Velocity of the ICA measures 240 cm/s."

*measured from transverse B scan

Report to primary care

Primary care note “45% stenosis – See in 1 year”

Patient had CVA – sued Primary care and US reader Primary care doc – won. US doctor - lost

Sometimes a single normal study is not enough – Recommending f/u

• How do I say it
  • If clinical concern persists, consider ....

• Common recommendations
  • Venous
    • Negative DVT study with prior history of DVT
    • Negative DVT study during pregnancy
    • DVT with inadequate calf vein imaging
    • Exercise arterial study
  • Not common
    • Carotids because missing stenosis less common than overcalling

The standard DVT report

• We perform thigh to ankle DVT
• Evidence shows wonderful results for above knee and moderate results for calf veins

• Impression: “No femoral popliteal DVT”
  • “No DVT” is not favored since all DVT (especially calf DVT is not ruled out)

The DVT report

• Calf veins
  • Do not say the “visualized veins are normal” since this not meaningful. This could be every vein or a subset of all the veins.
  • If you a subset of all of the structures are normal, and you should, a general statement may be adequate. “Portions of the calf veins are normal” or “portions of the posterior tibial, peroneal and muscular veins are normal.”
  • Get the message across – not every calf vein was evaluated.

The DVT report

• Findings
  • “Normal” or “normal compression” is adequate for a gray scale description.
    • If abnormal enough detail to justify a diagnosis (eg. noncompressible, deformable, dilated, popliteal)
  • Calf veins
    • Do not say the “visualized veins are normal” since this not meaningful. This could be every vein or a subset of all the veins.
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Critical results

- Some vascular findings (e.g., newly diagnosed acute DVT) is usually a critical result.
- Exception may be patient already on anticoagulation.
- It generally requires non-routine communication.
  - A comment in the report should record that the results were directly communicated to patient’s health care provider. It should include what, to whom, how and when communication occurred.
  - Disposition of the patient may also be recorded (e.g., “Patient sent to ED.”)

“If-then”

- Try to frame most recommendations as if-then statements
  - The “if” is what the recommendation may contribute.
  - The velocity in the ICA may be overestimated due to contralateral occlusion. If this needs to be confirmed, then a CTA or MRA could be done.”
- I don’t use if-then statements when I want a particular outcome
  - The most important time this occurs with a mass. Don’t waffle. Recommend a definite course of action (e.g., further investigation is recommended, biopsy…).

Incidentals

- Musculoskeletal
  - Don’t wing it
  - Are you sure?
  - Can someone do it better?
  - “There is a mass in the popliteal fossa. Further characterization with MR (dedicated ultrasound) is recommended.”

Acute Pain 8/10

- Something in the muscle
- Know it?
- “The area of pain corresponds to an abnormal soleal muscle which contains fluid. Further investigation is warranted. Results called to Dr. Welby at 10:00 am and patient sent to his office.”

Carotid – contralateral disease

- The accuracy of carotid stenosis contralateral to an ICA occlusion or high grade stenosis is lower due to confounding collateral flow
- Clues
  - Inconsistency between gray scale, color and spectral Doppler
  - The best method to correct for this is not known.
- Recommendations
  - Use ratios, downgrade by one grade, don’t grade

Carotid – contralateral disease

- Impression:
  - “Right ICA occlusion. Stenosis in the left ICA is estimated to be 50-69%. Although the velocity is higher than usual, some of this is likely related to collateral flow from the contralateral occlusion. Therefore the degree of stenosis was downgrades.”
  - “Right ICA occlusion makes grading left side difficult. There is ……”
Report technical limitations

• Studies are of adequate quality if not otherwise stated
• Everyone knows this is US and it has limitations (BTW all types of exams may have limitations, US is not alone)

• “If you didn’t say it, you didn’t see it.”

It’s okay to say you don’t know

“I was gratified to be able to answer promptly, and I did. I said I didn’t know.”
— Mark Twain

[Image source: knowledge]