Structured Radiology Reports
Who are they for?

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Imaging Institute and Glickman Urologic Institute
Cleveland Clinic
Persistent mediastinal mass, in keeping with biopsy proven lymphangiomia, demonstrates interval decrease in size when compared to Chest MRI 5/25/2012. Aforementioned mass is predominately located within the anterior mediastinum. Aforementioned mass is predominately fluid in attenuation. Aforementioned mass contains high attenuation areas of which may be in keeping with proteinaceous content (e.g. blood products). Aforementioned mass contains few flecks of air.

Bones/Soft tissues: No suspicious osseous lesion.

Other: Nonspecific elevation of the left hemidiaphragm (not present on Chest MRI 5/25/2012).

Upper abdomen: Partially imaged upper abdomen is unremarkable.

**IMPRESSION:**

History of biopsy proven lymphangiomia in the thorax

1. Persistent mediastinal mass, in keeping with biopsy proven lymphangiomia, demonstrates interval decrease in size when compared to Chest MRI 5/25/2012. Aforementioned mass is predominately located within the anterior mediastinum. Aforementioned mass is predominately fluid in attenuation. Aforementioned mass contains high attenuation areas of which may be in keeping with proteinaceous content (e.g. blood products). Aforementioned mass contains few flecks of air.
QUESTION: Who are we dictating for?

- The referring physician
- The billing office / insurance company
- The radiologist (ourselves and ‘the next’ radiologist)
- The lawyers
- The compliance committee
- The patient
Who are we dictating for?

The referring physician

• Most obvious / traditional answer … but not the whole truth
• The most common person to read our reports … until now
• Communicate a diagnosis and information they want
  – No ‘one size fits all’ dictations
  – Generalists v. specialists
• Prefer numbers and words that are meaningful to them
• Do RPs want us to make recommendations / suggestions?
cc Omnipaque-300 following CT urogram protocol.

There is a large mass extending from the mid and inferior portions of the left kidney measuring 10.3 x 7.4 x 9.5 cm in AP, transverse, and cephalocaudal dimensions, respectively. This lesion enhances to be isoattenuating with the adjacent renal parenchyma. There is irregular low attenuation centrally with associated calcification. Inflammation in the adjacent fat is noted predominantly along the inferior aspect of the lesion. Carcinoma is suspected. The remainder of the left kidney and the right kidney show no further abnormality.

It is remarkable in that there are low attenuation lesions within the hepatic lobe the larger of which measures 2.1 cm, likely a cyst. Other lesions are seen within the left and right lobes, also for cysts. No intrahepatic biliary dilatation is seen. The gallbladder is non-distended. The spleen and pancreas appear within normal limits. There is fullness of the adrenal glands maintaining normal shape with no discrete focal abnormality seen.

The abdominal aorta is tortuous in its course with atherosclerotic without evidence of aneurysmal dilatation. There is no evidence of peritoneal lymphadenopathy or ascites.

Though the pelvis demonstrate no abnormal fluid collection or retroperitoneal pathology. Ureters are seen extending into the urinary bladder.

Bony degenerative changes are seen with no evidence of bony destruction identified.

**IMPRESSION:** Findings are suspicious for carcinoma of the right kidney. Probable cysts of the liver.
Survey of radiologists and referring clinicians
Bosmans JML et al. Radiology 2011;259:184-195

- Prefer common words instead of medical slang
- Do radiologists proofread thoroughly?
- The radiologist should adapt to the clinician
- Report should be short descriptions: Clinicians
- Report should be short descriptions: Radiologists
- A report should be prose: Clinicians
- A report should be prose: Radiologists

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
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<tr>
<td>49.0%</td>
<td>37.3%</td>
</tr>
<tr>
<td>17.6%</td>
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<tr>
<td>92.3%</td>
<td>2.6%</td>
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<td>54.4%</td>
<td>26.7%</td>
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<tr>
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<td>25.8%</td>
</tr>
<tr>
<td>14.5%</td>
<td>56.0%</td>
</tr>
<tr>
<td>12.8%</td>
<td>72.9%</td>
</tr>
</tbody>
</table>
The radiology report: IMPRESSION
Hall FM. AJR 2000;175:1239-1242

• Keep it short & address the clinical problem
• When there is a 98% chance that findings are cancer, etc., “go for the gusto” and omit the hedges.
• The Impression is:
  “An excellent gauge of the common sense and clinical judgment of the radiologist”

IMPRESSION:
INFLAMMATORY PERICECAL MASS WITH A LARGE AMOUNT OF PERITONEAL AND PELVIC FLUID . ACUTE APPENDIX IS CONSIDERED
Radiology recommendations: two types of responses

1) “THANKS!!” (I had no idea what to do next, this is really helpful)
   - General medicine, family practitioners, busy surgeons
   - Some will just go ahead and order whatever you recommend (yikes!)
   - Less experienced at or less interested in interpreting images

2) “Don’t box me into a corner” – I don’t need the study since the results are not going to change my management. But now I feel compelled to do it.
   - Oncologists, urologists, many other surgical subspecialties
Recommendations & suggestions

Hall FM. AJR 2000;175:1239-1242

- Often not helpful, sometimes inappropriate, or simply wrong
- If recommendation is obvious, it may be resented: most clinicians don’t find suggestions helpful when the NG tube is in a bronchus
- Some clinicians feel medicolegal pressure to act on our suggestions for additional imaging
- Patients now ask why the suggested test wasn’t done!

#impression – no more than 140 characters ~ you should be able to ‘tweet’ it to the referring LIP!
Who are we dictating for?
“Non-debatable” = THE PATIENT

Medicolegal • Malpractice and Ethical Issues in Radiology

To Whom Is the Radiologist Responsible?

**QUESTION:** Our radiology group has recently debated the question of to whom the radiologist has ultimate responsibility in the performance of a radiologic study—the referring physician, the patient, or the institution?

**DR. BERLIN’S REPLY:** In answer to your query, the answer to that question is totally nondebatable. Radiologists, like all other physicians, ethically, morally, and legally owe their duty solely to the patient whom they are treating or on whom they are consulting or performing a procedure.

From a business point of view, we radiologists want to treat our referring physicians well because they provide the bread that we butter. Naturally, it is also sound business practice to maintain good relationships with the institution in which we practice because without it we would become unemployed.

However, the courts do not care about referring physicians and the good will of institutions or medical centers. They care only about our relationship to the patient, and it is only the patient (or the patient’s family) who can sue us for medical malpractice.

Leonard Berlin
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Skokie Hospital,
Skokie, IL;
Rush Medical College,
Chicago, IL
(lberlin@live.com)

DOI: 10.2214/AJR.10.5520
WEB—This is a Web exclusive article.
Who are we dictating for?

The patient

• The patient is actually who we are dictating for!

• By doing an exam, radiologists enter a physician-patient relationship
  – NOT a physician - referring MD relationship
  – NOT a physician - billing office
  – Not a physician - lawyer relationship (not if we can help it!)
Who are we dictating for?

The patient

- Patients should be granted access to their radiology reports
  - Released to the electronic health record
- Physicians are much more tolerant of typo / dictation / speech errors than patients
  - So EDIT your reports carefully!
  - But you do not need to make them non-medical
- History needs to be accurate! – CPOE auto-populated history and indications are not always accurate (or billable)
How to edit your reports?

• I do my best proof-reading right *AFTER* I hit the sign-off button…

• Ideally, put in preliminary status and come back to reread and sign off
  – Doesn’t often happen in practice

• Spell checkers don’t catch everything
  – Two, to, too
  – Two 1.5 cm, 21.5 cm
Reporting for the Radiology Business Office

- Complete or limited abdominal US? RUQ = limited
- ‘Complete’ ONLY if the documentation supports it (images be damned!)
US documentation

• All diagnostic ultrasounds require permanently recorded images
• Requires a final, written report
• Complete vs. limited
  o 76700 - complete: a description of each element or the reason it could not be visualized (eg, obscured by bowel gas, resected, etc)
  o 76705 - If less than the required elements for a complete exam are reported, the "limited" code for that anatomic region should be used

Deficiencies of Abdominal US reports

• 336,000 reports analyzed
• 60.6% exam titles erroneous or too ambiguous for coding
  – Complete = all 8 elements documents
    • 75.1%
  – Limited < 8 elements
    • 7.7% - 7 elements
    • 5.6% - 6 elements
    • 4.8% - 5 elements
    • 13.5% < 5 elements
• Conclusion – (if 6 or less)
  – 2.5% to 5.5% lost revenue

<table>
<thead>
<tr>
<th>Element</th>
<th>% missing</th>
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<tbody>
<tr>
<td>Spleen</td>
<td>41.2%</td>
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<tr>
<td>IVC</td>
<td>16.9%</td>
</tr>
<tr>
<td>Kidneys</td>
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<td>3.8%</td>
</tr>
<tr>
<td>GB</td>
<td>2.8%</td>
</tr>
<tr>
<td>Liver</td>
<td>0.8%</td>
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</tbody>
</table>
US - Retroperitoneum

COMPLETE or LIMITED?
US - Retroperitoneum

• **76770** Complete – Kidneys, abdominal aorta, CIA origins, and IVC, including any demonstrated retroperitoneal abnormality
  
  • Alternatively, if clinical history suggests urinary tract pathology, complete evaluation of the kidneys and urinary bladder also comprises a complete retroperitoneal ultrasound

• **76775** - Otherwise a “limited” CPT must be assigned

Dictating for the Billing Office

We know we need to dictate CT/MR contrast – but what contrast?
• With contrast =
  • Intravascular (CT, CTA, MRI, MRA, Interventional)
  • Intra-thecal (CT myelogram)
  • Intra-articular (CT Arthrography)

• BUT NOT – po / rectal, peritoneal, bladder

• “Musts” when documenting contrast are
  • route, volume, type and concentration
Dictation Patterns: Impact on Billing - examples

• **Contrast** - Procedure requested: lumbar spine CT following myelography
  – CPT 76131 L-spine wo contrast, 76132 L-spine with contrast, 76133 w/o and w/
  – With v. without contrast: **17% difference in reimbursement**
<table>
<thead>
<tr>
<th>Alone Code</th>
<th>CT Abdomen WO Contrast</th>
<th>CT Abdomen W Contrast</th>
<th>CT Abdomen WO/W Contrast</th>
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<tr>
<td>72192</td>
<td>74176</td>
<td>74178</td>
<td>74178</td>
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<tr>
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<tr>
<td>CT Pelvis</td>
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<tr>
<td>CT Pelvis</td>
<td></td>
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<tr>
<td>WO/W Contrast</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
What are ... ?

• CTA / MRA?
  • These include with contrast and 3D, +/- without

• CT Urograms, CT cystograms and CT Enterography?
  • these exams do not exist
  • terminology is for scheduling & reporting, not for billing

• CTU - CT Abd & Pelvis “without” and “with” +/- 3D
• CTE - CT Abd & Pelvis “with” contrast
• CT cystogram – CT Pelvis without +/- with IV contrast
Dictation Patterns: Impact on billing - examples

• **Number of Views** - Lumbar spine X-rays
  – CPT 72100 = 2 or 3 views v. 72110 = 4 or more views
  – **Reimbursement difference 38%** or in 2005 medicare $s: $14,400 for 1000 exams

• **Complete versus Limited Examinations, CPT-4** - Obstetric ultrasound
  – CPT 76805 OB US v 76815 Limited OB US (FH, Amniotic fluid, placenta)
  – Reimbursement difference approximately 33%
Are you dictating for lawyers?
Non radiology-risk cases

- Make the phone call! Document your phone call.
- How to document? State the facts: There is a radiopaque marker for a sponge in the left abdomen.
Defensive dictation verbiage is annoying to read!

• No overt evidence of malignancy
• Findings are consistent with possible appendicitis, however, malignancy cannot be completely excluded
• Occult pathology or microscopic disease cannot be excluded
Instead of:

• “There is a very large anastomotic leak.”

• “The lesion was present but not reported on the prior study.”

Use:

• “There is an anastomotic leak with a 10 cm collection.”

• “…that has increased from the prior study.”

• **TIP: Rule of thumb – just state the facts, avoid subjective assessments**
Malpractice and Radiologists

• 20 years of claims in Cook County (Chicago) IL 1975-1994
• 12% of all lawsuits v physicians involved Rad procedures / rads
  – Slip and fall - decreasing
  – Radiation oncology - decreasing
  – Failure to order exam - increased from 20% to 30%
  – Complications – typically angiography - slight growth
  – Missed Dx – increased from 34% to 47% of total (largest increase = breast CA)
Errors in reporting laterality
Sangwaiya MJ et al AJR 2009;192:W239-244

• 13,821 reports with addenda, “left” and “right”
• 88 errors reported in addenda
  – 27 incorrect in the body
  – 29 incorrect in the impression
  – 32 incorrect in both

• **Tip:** Auto-capitalize LEFT and RIGHT in the body of your report. They stand out when proofreading to help you catch errors
Practical tips on how to reduce the risk of being sued
Raskin MM. J Am Coll Radiol 2006;3:689-693

- More than 75% of radiology lawsuits allege failure to diagnose or failure to communicate in a timely manner...
  - 1/3rd of these are lost by the radiologist

- Common errors
  - Perception – most common reason for suit (‘misses’)
    • Typically settled
  - Interpretation – perceived but incorrectly identified
    • You don’t know what you don’t know or didn’t think of
  - Failure to communicate – and failure to document when done
Who are we dictating for?

COMPLIANCE COMMITTEE

• Resident supervision: Certain phrases must be included in the report to insure that we are not overcharging medicare ...
  – Level 3 supervision of trainees for procedures
  – What exactly that means is subject to interpretation …
  – “Dr. Costello was present for the critical portions of the exam / procedure.”

• Ultrasound exams: “with imaging” or “images obtained and archived”

**TIP:** Include these phrases in your report template so you don’t forget them, and away from the findings section so they don’t bother anyone.
Medicare pays if the interpretation is performed by or reviewed with a teaching physician.

If teaching physicians signature is only signature?
  - Assumed they personally performed the interpretation / procedure

If a resident prepares and signs the report?
  - Teaching physician must indicate that he/she has personally reviewed the images and the resident’s interpretation

Columbia University settlement: $5.1 million for submitting improper claims to Medicaid, physicians failed to document their presence during services by residents (and billed as such)
Who else are we dictating for?

THE RADIOLOGIST

• Yourself – ways to make dictations easier / faster / more accurate and better

• The NEXT radiologist who reads your report needs to know what you saw and what you thought
  – For cancer treatment studies – RECIST 1.1 and WHO criteria are critical – need to follow the ‘lead’
  – Give slice position or image number for important findings

• Lists are more easily interpreted and read … structured reports?

• Remember - that next radiologist may be you!
Who are we dictating for? The radiologist

- Dictating multiple liver masses
Dictating multiple lesions?

- **Option 1:** There is a 3.3 x 2.4 cm lesion in segment VIII (image 24) that has increased from 2.6 x 2.1 cm on the prior study. There is a 2.9 x 2.6 cm lesion in segment VII (image 29) that has increased from 1.9 x 1.8 cm on the prior study. There is a 2.3 x 2.1 cm lesion in segment VI (image 45) that has increased from 2.0 x 1.6 cm on the prior study. There is a 2.0 x 1.4 cm lesion in segment IV (image 49) that has increased from 1.4 x 1.1 cm on the prior study.

- **Option 2:**
  - Segment VIII: 3.3 x 2.4 cm lesion (image 24) increased from 2.6 x 2.1 cm.
  - Segment VII: 2.9 x 2.6 cm lesion (image 29) increased from 1.9 x 1.8 cm.
  - Segment VI: 2.3 x 2.1 cm lesion (image 45) increased from 2.0 x 1.6 cm.
  - Segment IV: 2.0 x 1.4 cm lesion (image 49) increased from 1.4 x 1.1 cm.
Imagine" scanning a surgical report for data ....
Dictating for the Radiologist:
To use or not to use “boys re-ignition” …. Will VR simplify you life?

Pros
- Turn – around time
- Cost – eliminate transcription service
- Cost – quicker billing

Cons
- Accuracy
- Distraction
- Cost – equipment, maintenance
- Who’s ‘paying’? – Radiologist as ‘editor’
When you feed everything that needs to go into a dictation ... is structured reporting the answer?
Example of **structured language** report
ACR White Paper / NASCI

Computed tomography (CT) of the heart was obtained using prospective electrocardiography (ECG) triggering initially without the use of contrast media. A [<>]-slice multidetector CT coronary angiogram was subsequently obtained using retrospective ECG gating. [<>] mL of [<>] contrast was administered intravenously. In preparation for the examination, the patient received [<>] mg [intravenous < oral] [metoprolol], <calcium channel blocker> for heart rate/rhythm control and [<>] mg sublingual nitroglycerin [spray < tablet] for coronary vasodilation. Before medication administration, the heart rate was [<>] beats per minute and blood pressure was [<>] mm Hg. At the time of CT, the heart rate was [<>] beats per minute and the blood pressure was [<>] mm Hg. [There were no complications < >]. [ECG tube modulation was used to reduce the radiation exposure]. ECG tube modulation was not used because of rhythm [<>]. ECG tube modulation was used to reduce the radiation exposure. 

The LM [has no stenosis] [has moderate stenosis] [is occluded] [is nonvaluable] with [no] [noncalciﬁed] [mixed] [calcified] plaque. 

The proximal right anterior diagonal branch (D1) [have no stenosis] [have mild stenosis] [have severe stenosis] are occluded [are nonvaluable] with [no] [noncalciﬁed] [mixed] [calcified] plaque.

There is a ramus intermedius branch that [has no stenosis] [has mild stenosis] [has moderate stenosis] [has severe stenosis] [is occluded] [is nonvaluable] with [no] [noncalciﬁed] [mixed] [calcified] plaque.
What is a structured report?

Example of itemized report with prose
From Sistrom CL and Langlotz CP. J Am Coll Radiol

Facilitates “complete abdominal US” documentation - includes reference to all the elements of the report.

Table 1. Example of abdominal ultrasound findings in a structured format

<table>
<thead>
<tr>
<th>LIVER:</th>
<th>Demonstrates diffuse increased echogenicity, likely due to fatty infiltration. There are no focal lesions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GALLBLADDER:</td>
<td>Normally distended with no gallstones. There is no pericholecystic fluid, wall thickening, or sonographic Murphy’s sign.</td>
</tr>
<tr>
<td>BILIARY:</td>
<td>No intrahepatic ductal dilatation is identified. The common duct measures 6 mm at the porta hepatis.</td>
</tr>
<tr>
<td>PANCREAS:</td>
<td>Limited visualization due to gas in the stomach and colon.</td>
</tr>
<tr>
<td>SPLEEN:</td>
<td>Measures 9.9 cm in length and is normal.</td>
</tr>
<tr>
<td>KIDNEYS:</td>
<td>The right kidney measures 11.9 cm. There is an echogenic structure within the inferior pole of the right kidney with posterior shadowing, likely a renal stone. It measures 8 mm. There is no right hydronephrosis or hydroureter. The left kidney measures 12.3 cm and is normal.</td>
</tr>
<tr>
<td>VASCULAR:</td>
<td>The abdominal aorta is nonaneurysmal.</td>
</tr>
<tr>
<td>OTHER FINDINGS:</td>
<td>The bladder was empty and not evaluated.</td>
</tr>
<tr>
<td>IMPRESSION:</td>
<td>No gallstones and no evidence of cholecystitis. There is an 8 mm stone within the inferior pole of the right kidney without evidence of hydronephrosis.</td>
</tr>
</tbody>
</table>
Opinions / commentary
Weiss DL, Langlotz CP. Radiology 2008;249:739-747

• Header sections and organ-based subsections are useful
• Prose likely better if SHORT and DIRECT

**Findings:**

Liver: No masses or fatty infiltration  
Spleen: Normal size without focal lesion  
GB / biliary system: No gallstones or bile duct dilation  
Pancreas: No mass. calcification or pancreatic duct dilation  
Bowel: …  
Lymph nodes: …  
Kidneys: …  
Adrenal glands: …
Improve accuracy by importing data

• Contrast usage documentation
  – From technologist?
  – From the injector itself would be better!
• Dose data (DLP, CTDIvol)
  – Required in some states
  – But what does it mean?
• Sequence data
  – MR sequence names are in the DICOM header – why not auto-enter them into the report?
  – Same with CT “sequences” / scan phases
Other ways to improve your reports: Decrease the NOISE!

noise
By Richard Nordquist, About.com Guide
Definition:

In communication studies and information theory, anything that interferes in the communication process between a speaker and an audience.

Noise can be external or internal, and it can disrupt the communication process at any point.
Language of the radiology report
Hall FM. AJR 2000;175:1239-1242

• **Omit** words from most reports without changing the meaning:
  – provided, obtained, taken, or submitted for interpretation
  – appearances; is seen, visualized or identified
  – as stated above, as described above, or as noted above
  – please note, as noted, of note, or note is made of
  – is remarkable for; unremarkable
  – if clinically indicated; as well as; at this time
  – however; in addition to; in nature; otherwise normal
  – quite; unique; some and somewhat
CT: The liver has a nodular, lobular contour with a small right lobe and enlarged left and caudate lobes. There is ascites, splenomegaly and multiple varices. These findings are compatible with the clinical diagnosis of cirrhosis.

RESULT: Sonographic examination demonstrates the liver to have a coarse echogenicity and a lobular contour. This suggests a diagnosis of cirrhosis. Clinical correlation is needed. No focal mass is seen. The visualized pancreas is unremarkable. Part of the head and tail are obscured by shadowing from bowel gas. The gallbladder is surgically absent. The common duct is normal in size and measures 5 mm. Survey exam of the right kidney demonstrates no hydronephrosis.

IMPRESSION:
Sonographic appearance of the liver suggests possible cirrhosis. Further evaluation with CT scan may be helpful, if clinically indicated.

Patient has known cirrhosis. 6th study for liver transplant / HCC screening
Standardizing the degree of ‘certainty’
Panicek and Hricak, AJR 2016;207:1

<table>
<thead>
<tr>
<th>Lexicon</th>
<th>Degree of radiologist certainty</th>
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</thead>
<tbody>
<tr>
<td>Consistent with</td>
<td>&gt; 90%</td>
</tr>
<tr>
<td>Suspicious for, Probable, Probably</td>
<td>~ 75%</td>
</tr>
<tr>
<td>Possible, Possibly</td>
<td>~ 50%</td>
</tr>
<tr>
<td>Less likely</td>
<td>~ 25%</td>
</tr>
<tr>
<td>Unlikely</td>
<td>&lt; 10%</td>
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</table>

From Memorial Sloan Kettering. “For ease of communication, the lexicon itself is included in each radiology report.”
Remember: Radiology exams are OPEN BOOK!
Radiology is an OPEN BOOK exam!

• For years, radiologists complained about not getting any history or having access to the medical chart.
• NOW, with EMRs, we complain that there is too much information and we can’t find it.
• What to search for besides clinical hx & old studies?
  – Operative reports (remember that colonic gas you reported? They don’t have a colon!)
  – Pathology reports (check LN +/-, tumor size & grade, margins +/-, TAH or TAH/BSO?)
  – Lab work (tumor markers, WBC count, U/A, β-HcG, bilirubin, albumin / protein)
Heart: Normal in size.

Mediastinal and hilar findings: No enlarged lymph nodes in mediastinum or hilar regions.

Lymph nodes: No enlarged axillary or supraclavicular lymph nodes.

Bony structures: No significant abnormalities.

Upper abdomen findings: There is a 2.3-cm low-density mass in the liver anteriorly image at SP-836. There may be a smaller low density mass just anterior to this on the same image.

IMPRESSION:
1. Noncalcified nodule right midlung field. Etiology uncertain. This should be correlated clinically. If no further evaluation is performed at this time follow up in 3 to 6 months recommended

2. Low density mass or possibly 2 masses are seen in the liver. Ultrasound recommended
Cardiologist orders Liver vascular US study

Associated Diagnoses
Liver mass [573.9]

Comments
Abnormal CT
Limited imaging through the upper abdomen reveals a stable cystic appearing lesion of the liver.

IMPRESSION:

1. The pericardium appears normal; no evidence of constrictive physiology.

2. Residual enhancement likely reflecting scar (which has reduced since the prior scan) in the lateral wall epicardium consistent with the prior history of myocarditis. Normal left ventricular size and systolic function.

3. No significant valvular lesions noted.
**IMPRESSION:**

* Large cystic appearing lesion involving the pancreatic tail. This represents a macrocystic lesion such as a serous cystadenoma or mucinous cystadenoma versus a pseudocyst. Additional evaluation with EUS may be helpful.
Radiology exams are open book … MRI 06.21.13
L-Spine MR 16 months earlier

... think outside the box for comparison studies ...

*T/L-Spine, Chest and Cardiac studies are often useful comparisons for upper abdominal (liver, pancreas, adrenal and kidney) pathology
Structured reports: When you can, be organ system or disease specific

CT Urogram or 3-phase renal CT: Kidneys, ureters and bladder go 1st!
Disease specific dictation: CTE for Crohn disease

- Gastroenterology & colorectal surgery
  - Presence of disease
  - Small bowel, colon, both
  - Length, location, number of involved bowel loops
  - Strictures, fistulae, abscess
  - Obstruction
  - Associations – renal stones, sacro-ileitis, PSC
Pancreatic carcinoma / pancreatic cystic lesions

- General / pancreatic surgeon
  - Size and location
  - Characterization: calcifications, cystic
  - Staging – liver mets, LNs, carcinomatosis
  - Resectability – arterial and venous involvement
History: “Abdominal pain”

- Internist, oncologist
- Findings:
  - DDx
  - Studies for further assessment
  - Amenable to Bx?
EXAMINATION: CT ABDOMEN AND PELVIS WITH IV CONTRAST

HISTORY: Signs and symptoms. Relevant clinical diagnoses.

TECHNIQUE: CT of the abdomen and pelvis was performed using standard technique, scanning from just above the dome of the diaphragm to the symphysis pubis.

Contrast:
ContrastAdminRoute1: ContrastDose1 ml of Contrast1
ContrastAdminRoute2: ContrastDose2 ml of Contrast2

CT Radiation dose: Integrated Dose-length product (DLP) for this visit = CTDLP mGy*cm.
CT Dose Reduction Employed: DoseReduction
COMPARISON: Comparison
EXAMINATION: CT ABDOMEN AND PELVIS WITHOUT IV CONTRAST

Liver: No mass.
Biliary: No bile duct dilation. [GB: pick-list, no default]
Spleen: No mass. No splenomegaly.
Pancreas: No mass or duct dilation.
Adrenals: No mass.
Kidneys: [pick-list, no default]
GI tract: No dilation or wall thickening. [Other findings, appendix, diverticulosis, hiatal hernia]
Lymph nodes: No abdominal or pelvic lymphadenopathy.
Mesentery/Peritoneum: No ascites or mass.
Vasculature: The celiac axis and SMA are patent. The portal vein and branches, splenic vein, SMV, and hepatic veins are patent. [Other findings / AAA, IVC filter]
Pelvis: No mass, ascites or fluid collection. [Male / female organs. Bladder]
Bones/Soft Tissues: [pick-list, no default]
Lower thorax: [pick-list, no default]
CT Kidney / Abdomen with IV Contrast

Kidneys, adrenals and ureters:

Right kidney: Normal, without mass or calculus.
Right renal vasculature
   - renal vein(s): single.
Right ureter: Single ureter. No hydronephrosis.
Right adrenal: Normal, no nodules or thickening
Let’s talk!