

Structured reporting system

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Outline

Introduction

- Problems of modern medicine

- Standards

- Typical workflow of a radiologist

Structured reporting system

- Radiological report as a tree

Areas of interest of modern medicine

- ▶ increasing variety of diagnostic techniques and procedures
- ▶ unsatisfiable demand for medical services
- ▶ bureaucracy
- ▶ huge volumes of data to process and store. **Healthcare Informatics**

Healthcare Informatics vs Computer Science

Healthcare standards

- ▶ medical nomenclature SNOMED CT, LOINC
- ▶ exchange protocols and formats HL7, DICOM

Open... **examreport.pdf** **Viewer** **File** **Edit** **View** **Tools** **Window** **Help**

15/10/2011
SDM 047M
DOB: 15/11/1965
FILE #112845
#PREFORMED SCAN WITH ABDOMEN WITH CONTRAST
DATE:
15/10/2011

arterial phase (series 15 image 35) may reflect a renal compromise. Stable mild calcifications is again noted in the left kidney. No mass is identified in the kidneys. No masses seen along the right ureter.

Postoperative changes are seen from a distal pancreatectomy and cholecystectomy following previous cholangitis.

Procedure: There is dilatation of the pancreatic duct in the body and tail (series 6 image 23) No recurrent mass is seen in the pancreas or anastomosis.

There is mild prominence of the biliary ducts in the left hepatic lobe (series 7 image 20). No filling defect is seen within common duct.

Spleen and adrenal glands are unremarkable. No free fluid or lymphadenopathy seen. No bowel obstruction is identified. Anterior abdominal hernia is again noted entrapping small bowel without evidence of strangulation (series 7 image 35).

There is marked S-shaped scoliosis of the thoracolumbar spine. No net osseous new lesions are identified.

IMPRESSION: Interval development of marked cholecystitis/hydronephrosis in the right kidney. No discrete stone or mass in the visualized portions of the right ureter. Unchanged CT scan of the abdomen and pelvis with and without contrast for further evaluation.

1. Stable mild polycysticis in the left kidney.

2. Postoperative change from previous Whipple procedure. No recurrent mass in the pancreas or anastomosis.

3. Mild prominence of the biliary ducts in the left hepatic lobe.

4. No lymphadenopathy or metastatic lymph lesions.

5. Anterior abdominal wall hernia contains small bowel without evidence of strangulation or obstruction.

7. Marked S-shaped scoliosis of the thoracolumbar spine. [National Radiologist]

15/10/2011 11:07:00
Made in Canada

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Areas of optimization

- ▶ radiologists are **very BAD** at typing on keyboard
- ▶ speech recognition has problems with capturing medical language

Reporting ontology

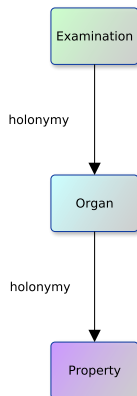
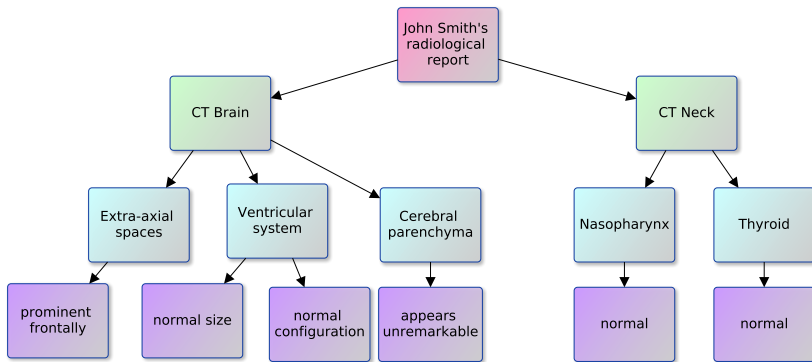


Figure: Types of entities and relations between them

Radiological report as a tree



Textual representation

John Smith

date: 02.04.2005

CT Brain

Extra-axial spaces: prominent frontally.

Ventricular system: normal size; normal configuration.

Cerebral parenchyma: appears unremarkable.

CT Neck

Nasopharynx: normal.

Thyroid: normal.