# 1369*****

55 y/o, Male, lung cancer

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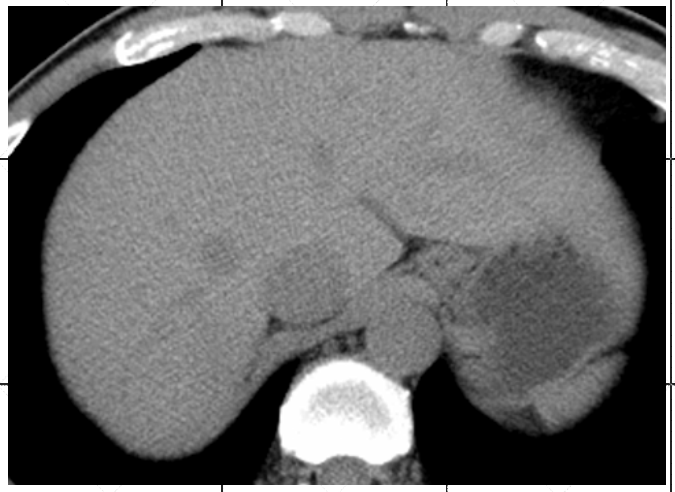
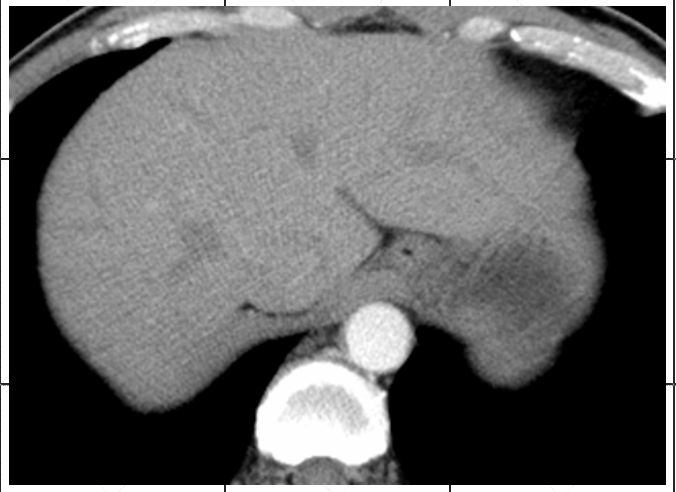
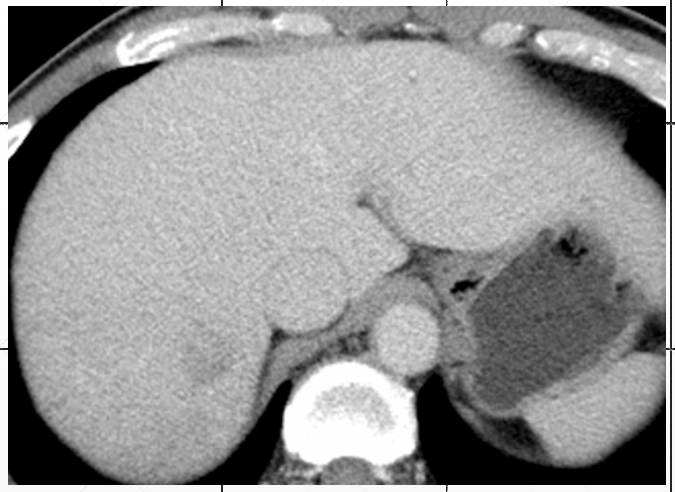
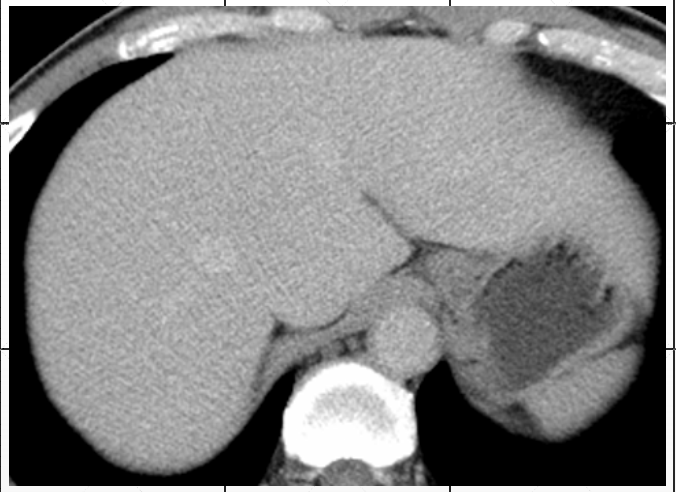
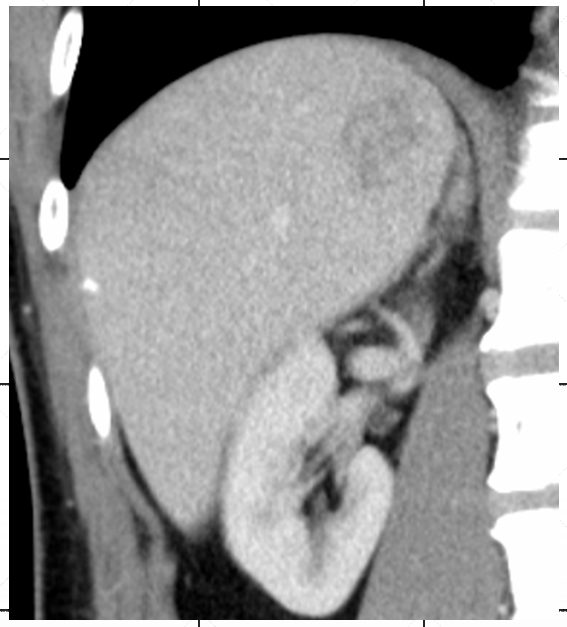
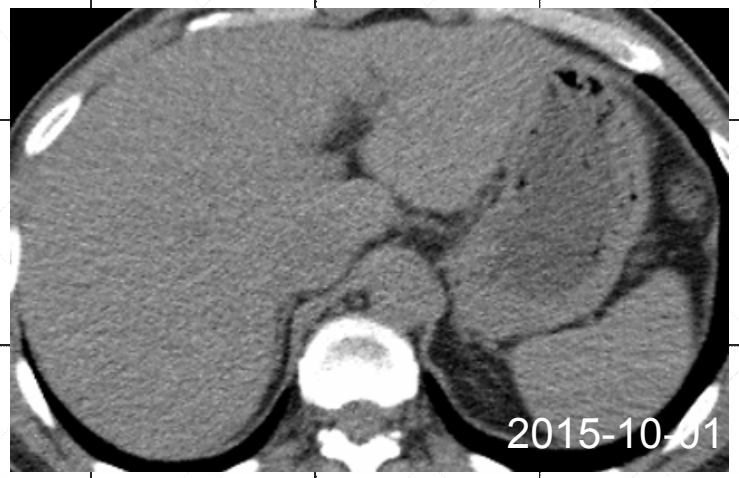
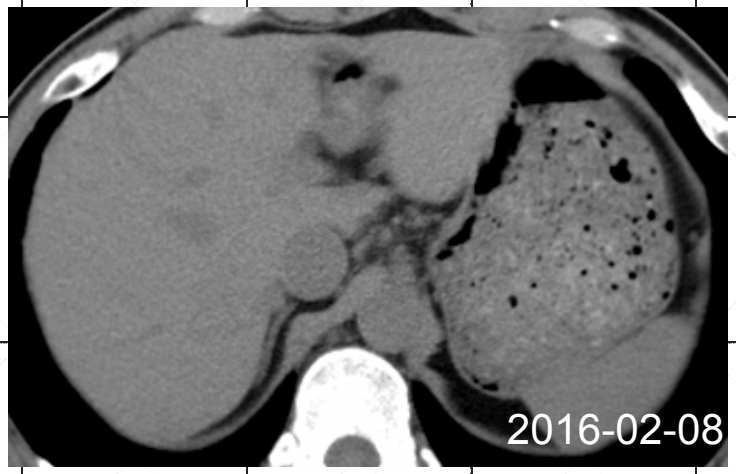
- 55 y/o, Male
- PHx: Lung minimally invasive adenocarcinoma (pTmisN0M0, stage IA) s/p wedge resection for about 1.5 years (2016-03-23), non-contrast chest CT f/u every 3-6 mo with stable condition
- Intermittent epigastric dull pain & fullness for months, abnormal abdominal sonographic findings at health examination
- 2017-11-30 CT → 2017-12-20 MRI

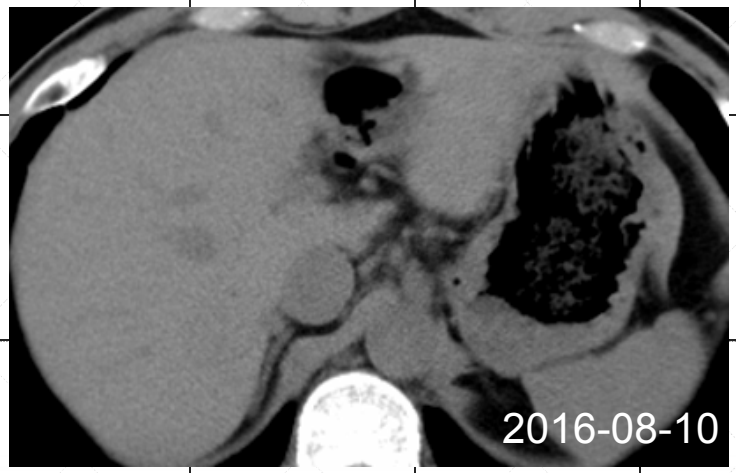






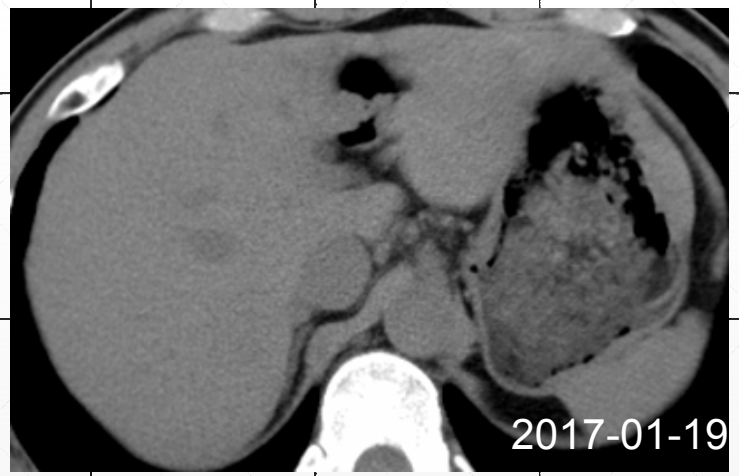
Suspect a 2 cm nodule at S7 of liver parenchyma, which is equivocal on pre-contrast study.

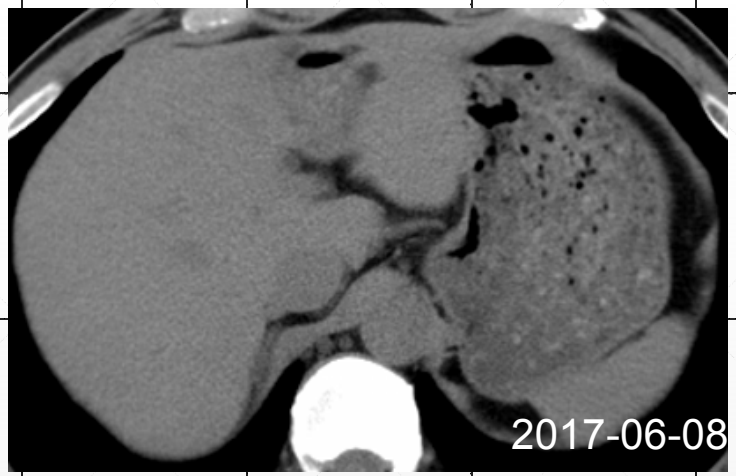
Serial CT studies since 2015-10

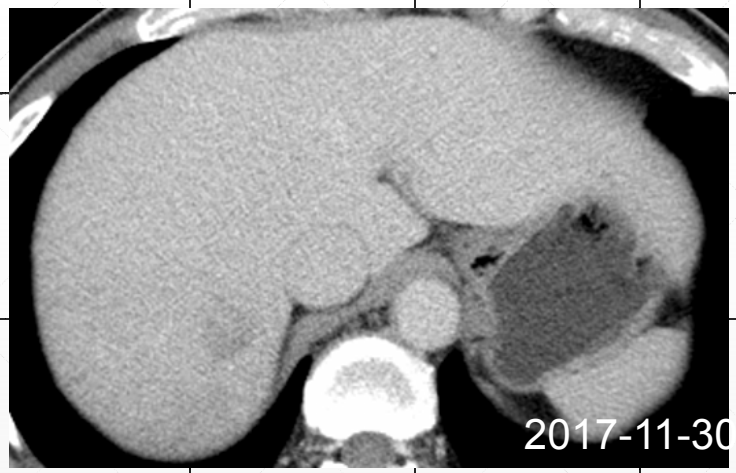


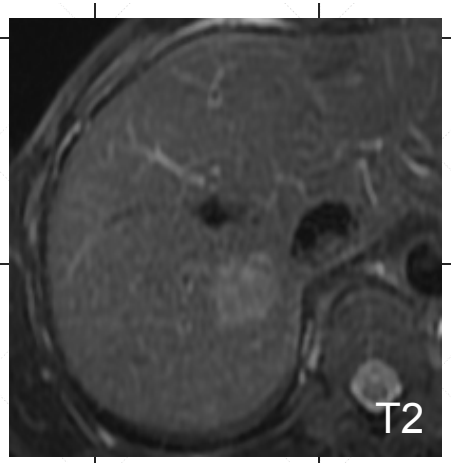



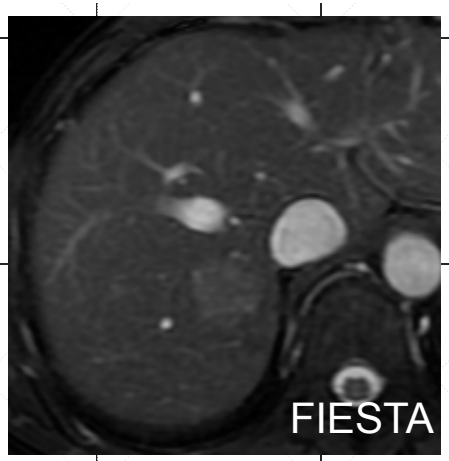



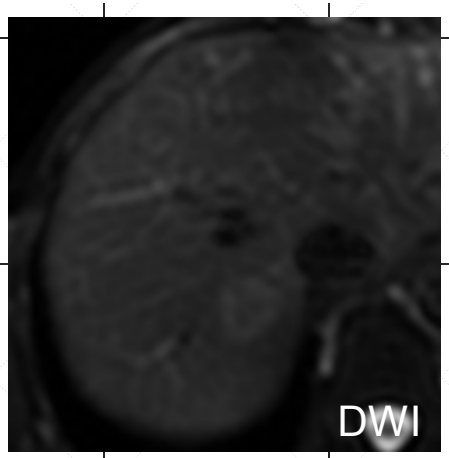



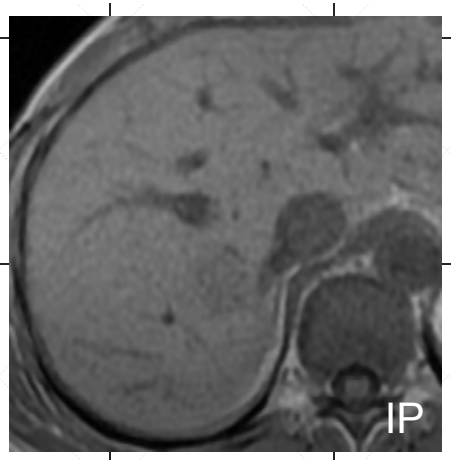



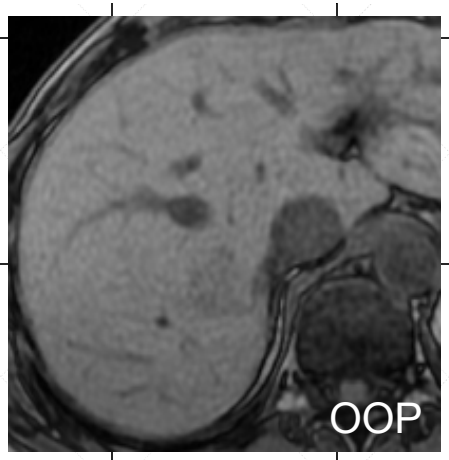

- A faint and small hypodense lesion in S7 of the liver

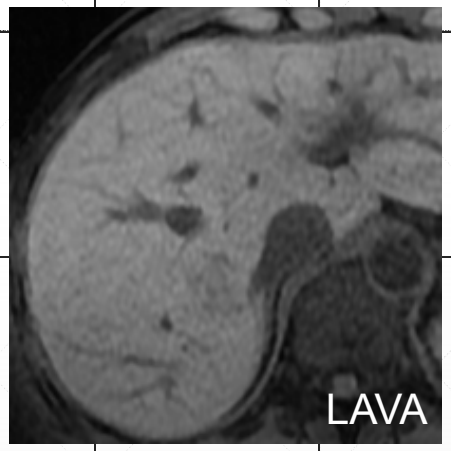


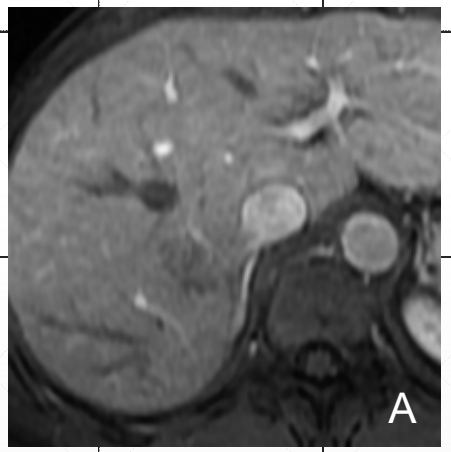



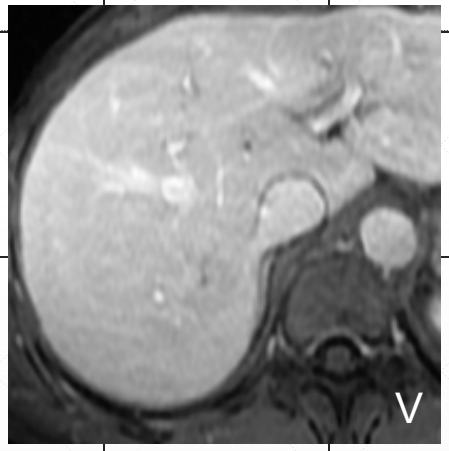



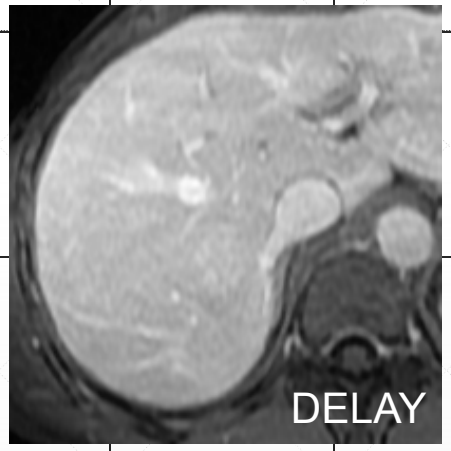



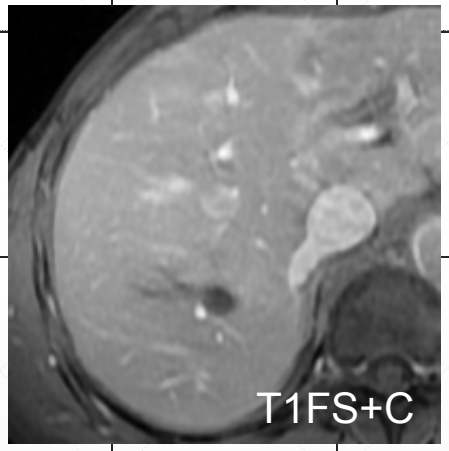



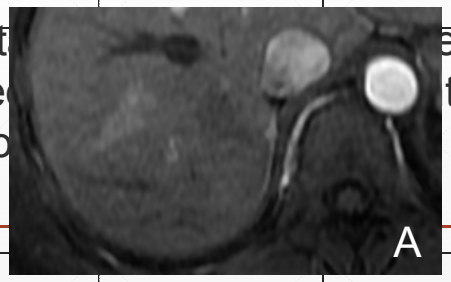



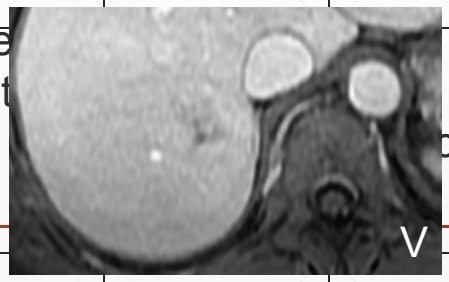



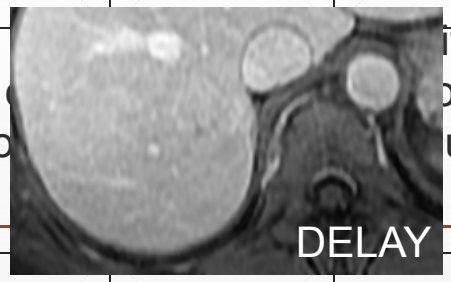




A 3x2cm space-t ity on T2WI and
DWI, no identifie on portovenous
phase & more co udotumor




Stable condition on
MRI f/u after 4 mo

# Differential diagnosis

Solitary hepatic nodule with delayed, persistent contrast enhancement

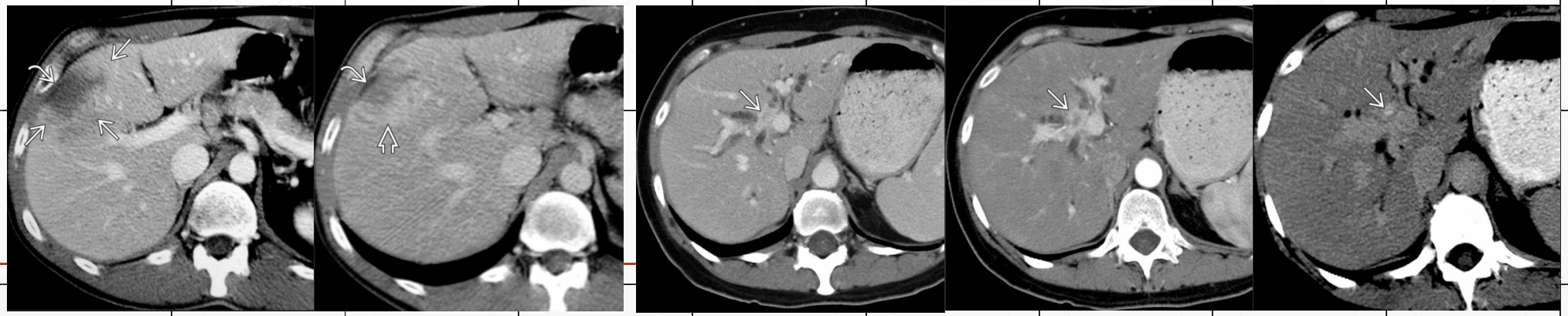
- Cholangiocarcinoma
- Hepatic metastasis
- Inflammatory pseudotumor

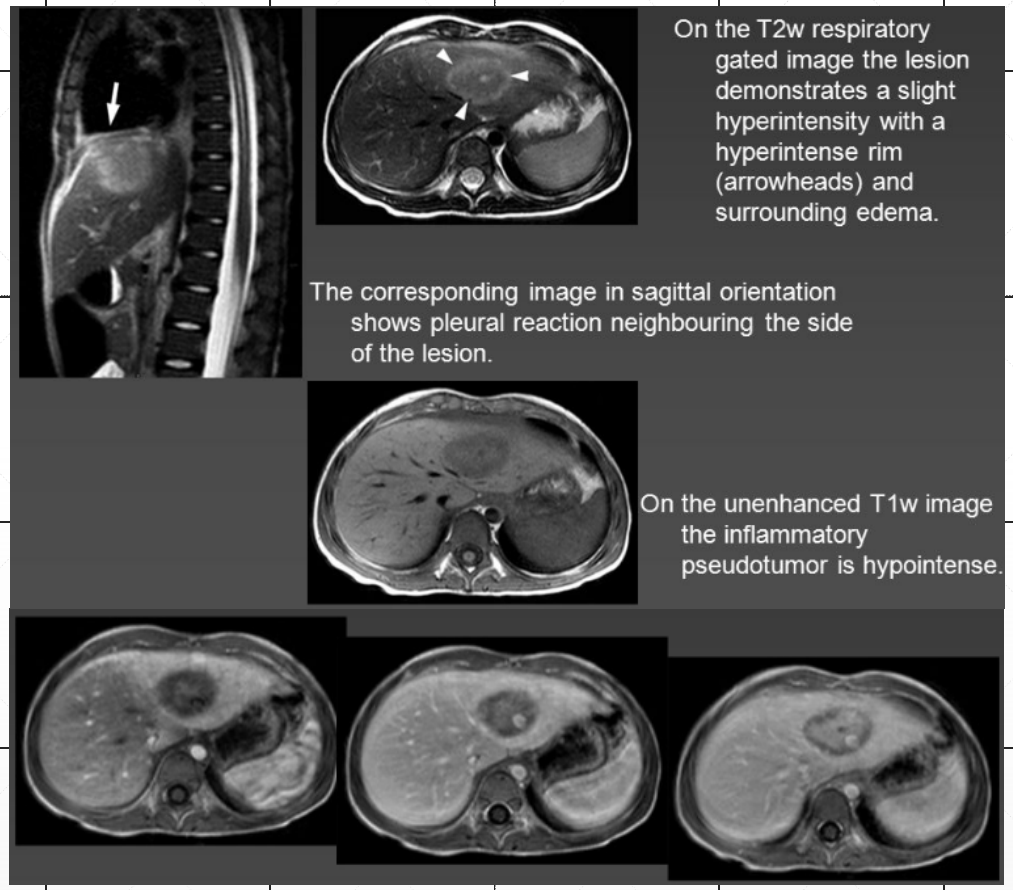
# Pathology

- Sono-guided biopsy: negative for malignancy
  - Focal mild chronic inflammatory cell infiltration in portal tracts and pericentral venous areas
  - Normal expression of Hep-par-1
  - Negative for cytokeratin
  - Normal vascular distribution in liver, demonstrated by immunostain for CD34

# Discussion: Inflammatory pseudotumor of liver

- Heterogeneous group of lesions occurring in liver and bile ducts (among other organs) characterized by fibroblastic and myofibroblastic proliferation with inflammatory infiltrate
- 2 main types that mimic cholangiocarcinoma
  - Large, solitary, peripheral mass, often with hyperdense delayed, persistent contrast enhancement due to fibrous stroma (± retraction of overlying hepatic capsule)
  - Small mass in hepatic hilum appearing identical to Klatskin tumor (short segment stricture with dilation of ducts upstream)






- MR findings:
  - T1WI: Commonly hypointense to liver
  - T2WI: Iso- to slightly hyperintense to liver
  - T1WI C+: Variable enhancement pattern
    - Homogeneous, heterogeneous, peripheral, ± internal enhancement
    - Delayed, persistent enhancement on 10-minute series following gadolinium-based contrast administration
      - Corresponds to fibrous stroma

| |
|---|
| Airway |
| Lung |
| Orbit |
| Stomach |
| Testis |
| Esophagus |
| Liver |
| Spleen |
| Pancreas |
| Kidney |
| Adrenal gland |
| Retroperitoneum |
| Diaphragm |
| Mesentery |
| Bladder |
| Heart |
| Thyroid |
| Tonsil |
| Fourth ventricle |
| Spinal cord meninges |
| Central nervous system |
| Maxillary sinus |
| Nasal cavity |
| Nasopharynx |
| Larynx |
| Trachea |

- Age: may present at any age
- Gender: male predominance
- Epidemiology
  - Most frequently found in lung and orbit
  - Liver and biliary inflammatory pseudotumors are rare
  - More common in Asian population
- Pathogenesis: unknown
  - Genetic mutation
    - Aberrant expression of *ALK* gene has been identified in > 68% of inflammatory myofibroblastic tumors (IMTs)
    - IMT is considered neoplastic counterpart of inflammatory pseudotumor
  - Autoimmune disease
    - Linked in some case to other IgG4-related sclerosing diseases (may cause tumor-like masses with vascular and ductal obstruction), such as autoimmune pancreatitis, cholangitis, and kidney, lungs, retroperitoneum, mediastinum, thyroid masses

- Natural History & Prognosis
  - Percutaneous core biopsy is needed for definite diagnosis
  - Rapid change in tumor size and findings on follow-up imaging
  - Response to steroid medication may be both diagnostic and therapeutic
    - Small lesions typically resolve completely
  - Excellent prognosis for hepatic parenchymal type with no recurrence after resection
    - If aggressive or metastatic: consider crizotinib