

Radiology Pathology Case Presentation

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SCHOOL *of* MEDICINE



1. Introduction to the case
2. Timeline of events
3. CT scan diagnosis of current concern
4. Pathology results
5. CT-guided biopsy
6. Prognosis

Case

A 53-year-old man with a history of chronic hepatitis C, alcohol abuse, porphyria cutaneous tarda, and chronic sinusitis presents with a new liver lesion concerning for hepatocellular carcinoma.

Patient Timeline

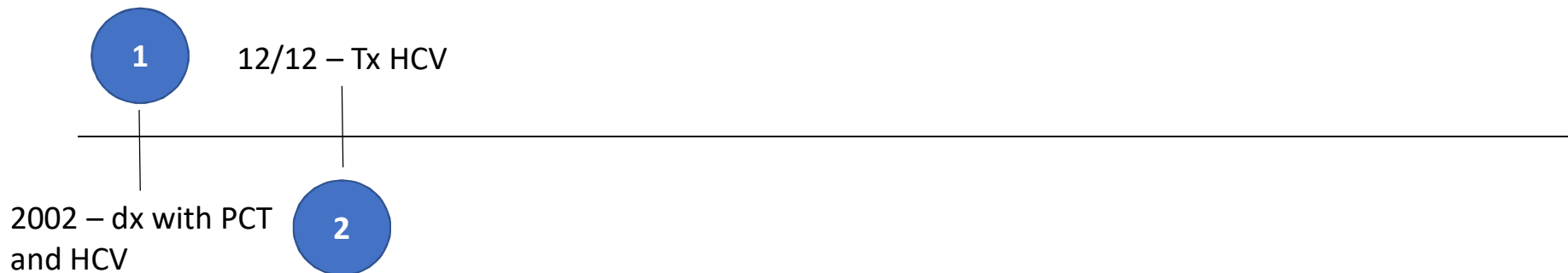
1. 2002 – developed skin lesions diagnosed as porphyria cutaneous tarda (PCT)
 - a. ~70% of cases of PCT are caused by Hep C
 - b. Per pt report, tested positive for Hep C at that time
 - c. Lost to follow-up. His HCV was left untreated



2002 – dx with PCT
and HCV

Patient Timeline

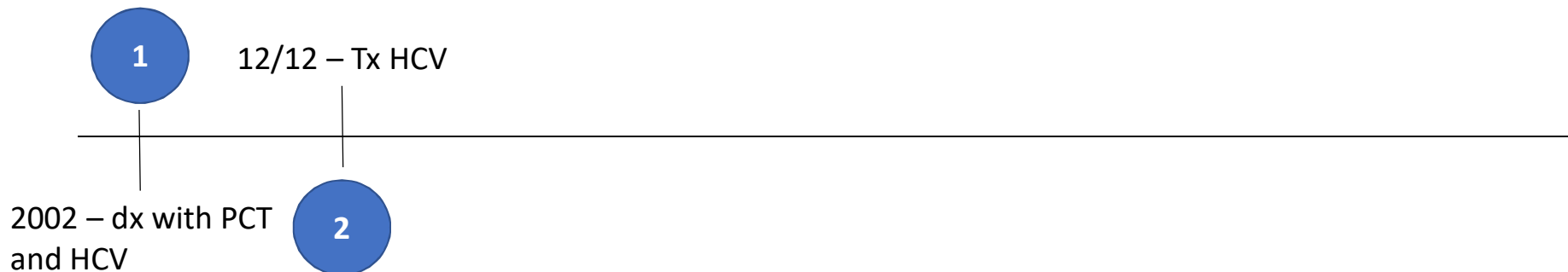
2. December 2012 – Presents to GI for HCV treatment
 - a. Risk factors for HCV:
 - i. Blood transfusions (1989)
 - ii. IVDA (1980s)
 - iii. Tattoos (1980s)
 - b. Repeat labs confirmed infection with a high viral load
 - c. Liver biopsy performed: mild fat, grade 2 inflammation, stage 2 to focal stage 3 fibrosis d/t HCV1



Patient Timeline

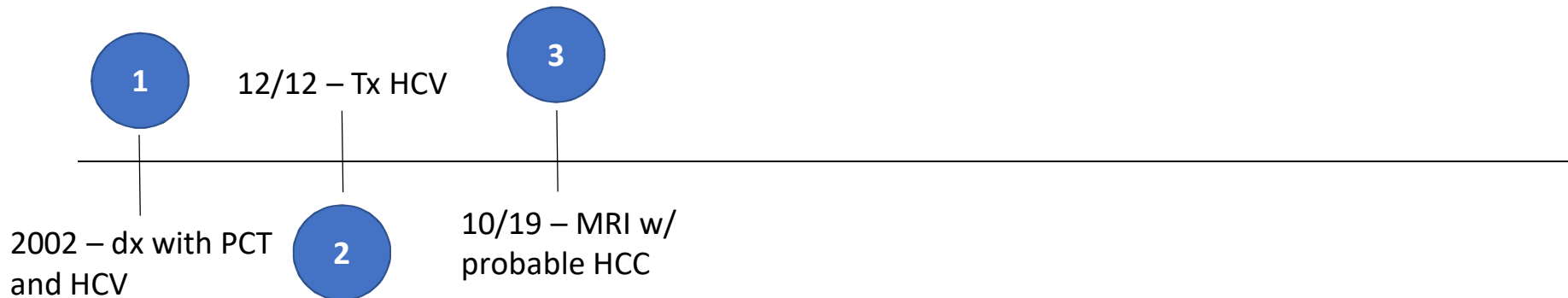
Additional social history:

- Started smoking 1 ppd around age 23 (30 pack year history)
- Long alcohol use history
 - 6-9 beers on weeknights, 12 beers on weekends
 - Attempted to quit at this time but unsuccessful



Patient Timeline

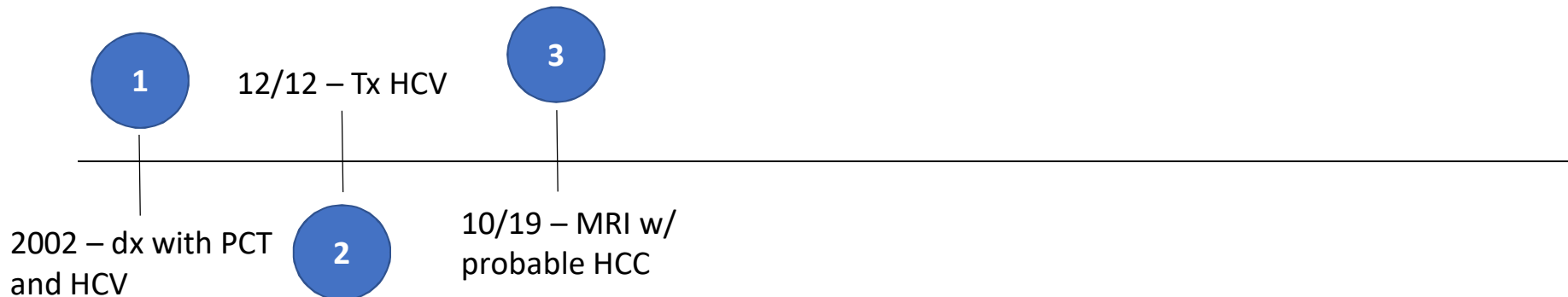
3. October 2019 – developed right sided abdominal pain, weight loss, N/V. OSH MRI revealed large necrotic right hepatic lobe tumor suspected to be hepatocellular carcinoma (HCC)



Patient Timeline

OSH MRI Results:

- Hepatic steatosis with an infiltrative, enhancing 10 cm mass in the right hepatic lobe suggestive of combined hepatocellular-cholangiocarcinoma. Tumor infiltrating right posterior portal vein and right hepatic vein.
- LR-M, TIV
 - LR-M: liver lesions probably malignant but appearance not compatible with HCC
 - LR-TIV: invasion of the portal vein (contraindication to liver transplant)



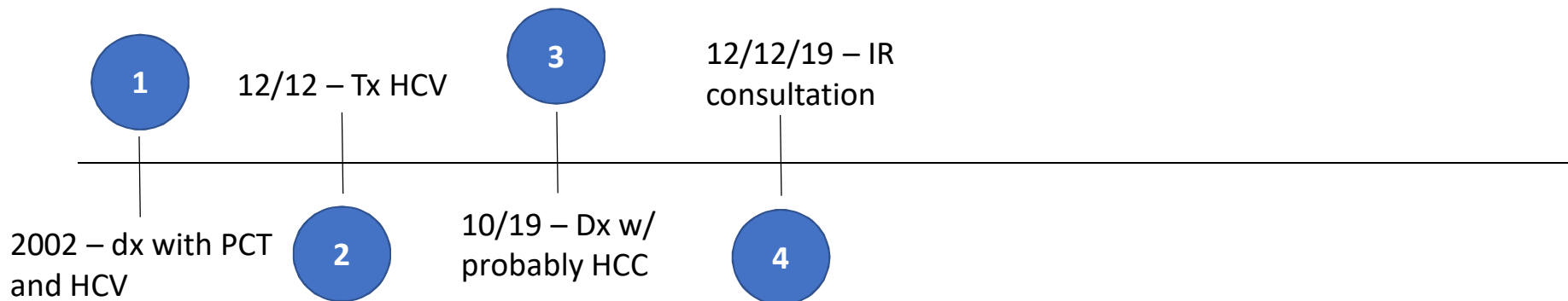
Patient Timeline

OSH MRI Results:



Patient Timeline

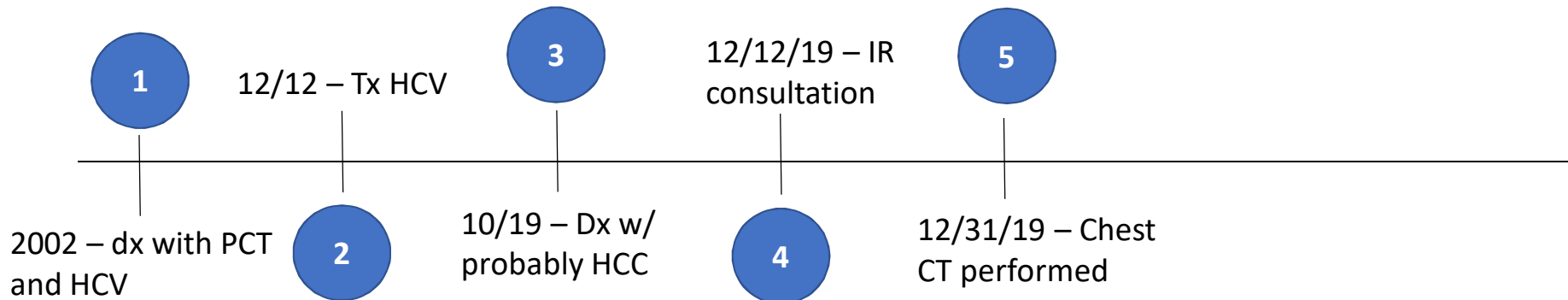
4. 12/12/19 - Referred to IR for further work-up and treatment
- Ablation not at option d/t tumor size (optimal for tumors < 3 cm)
 - Transarterial chemoembolization (TACE) not safe due to occlusion of right posterior portal vein and right hepatic vein
 - Surgery not precluded as no evidence of extra-hepatic disease
 - Staging CT ordered



Patient Timeline

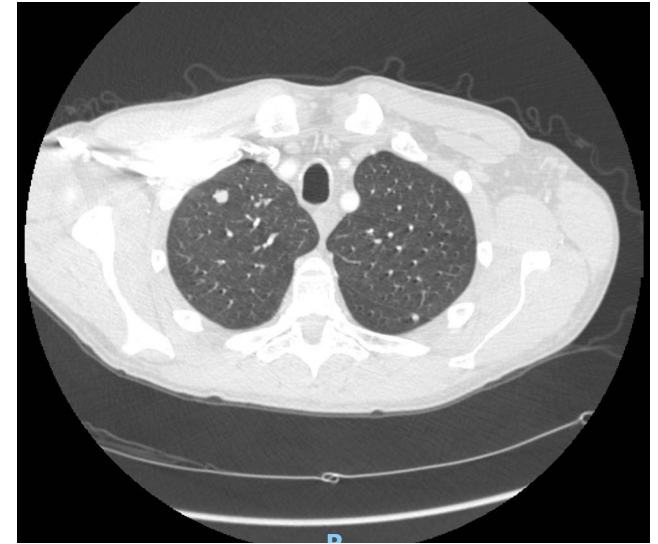
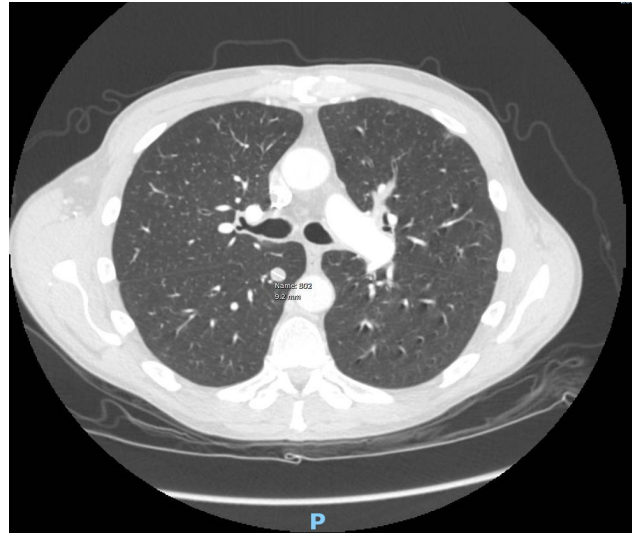
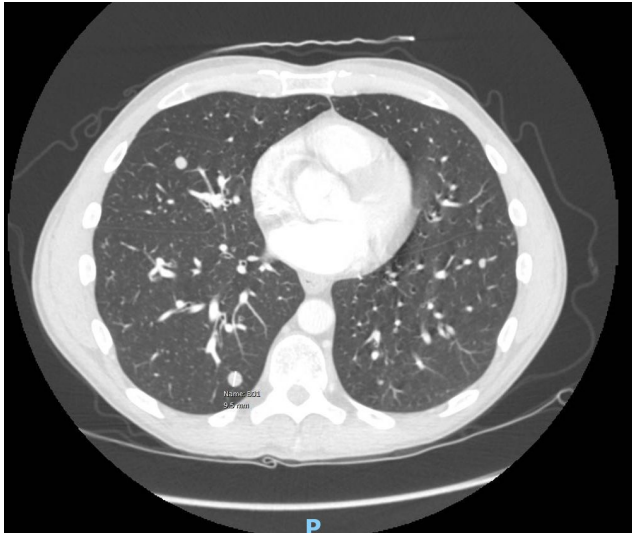
5. Chest CT done 12/16/2019:

- Multiple (~40) subcentimeter pulmonary nodules, consistent with metastatic disease
- No lymphadenopathy or osseous lesions



Patient Timeline

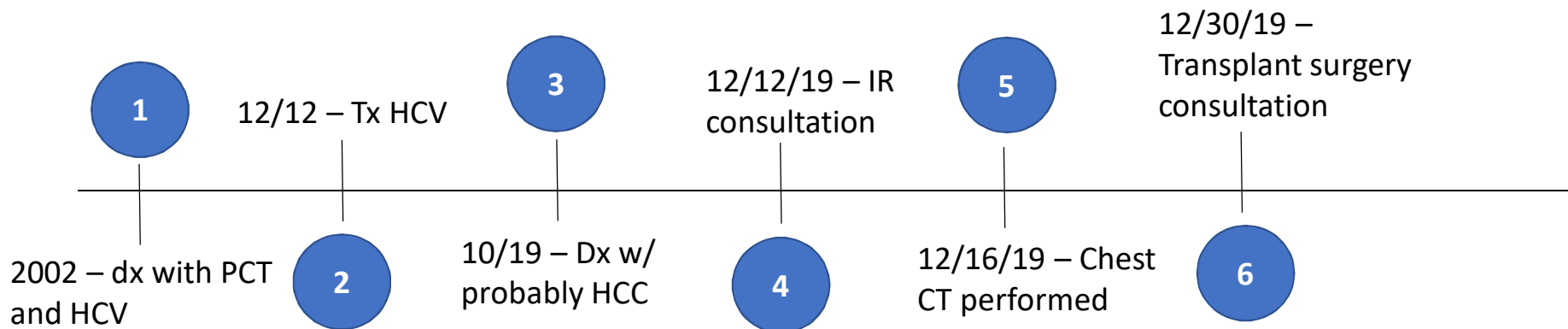
Chest CT (12/16/2019)



Patient Timeline

6. 12/30/2019 - Consultation with transplant surgery

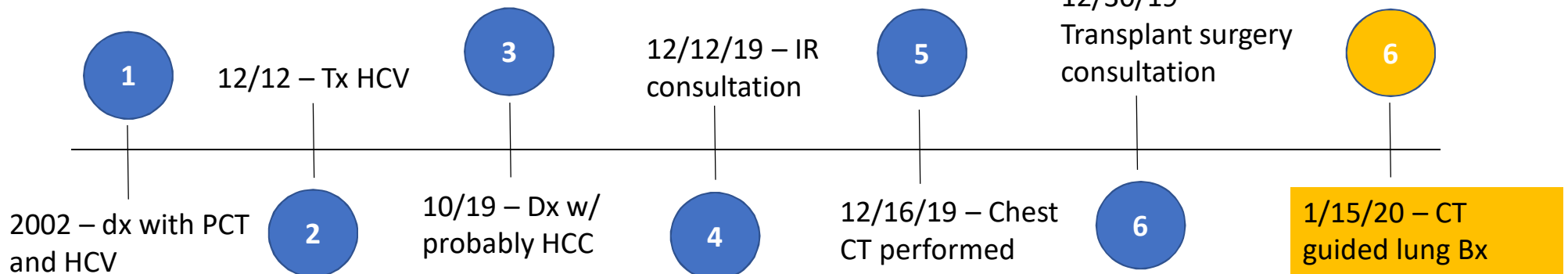
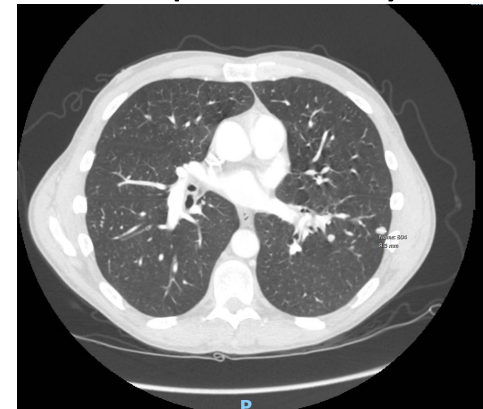
- Discussed with patient that though the tumor is technically resectable, would only make sense if cancer was limited to the liver
- Recommended biopsy of lung nodules to rule out metastasis



Patient Timeline

7. 1/15/2020 – CT guided lung biopsy

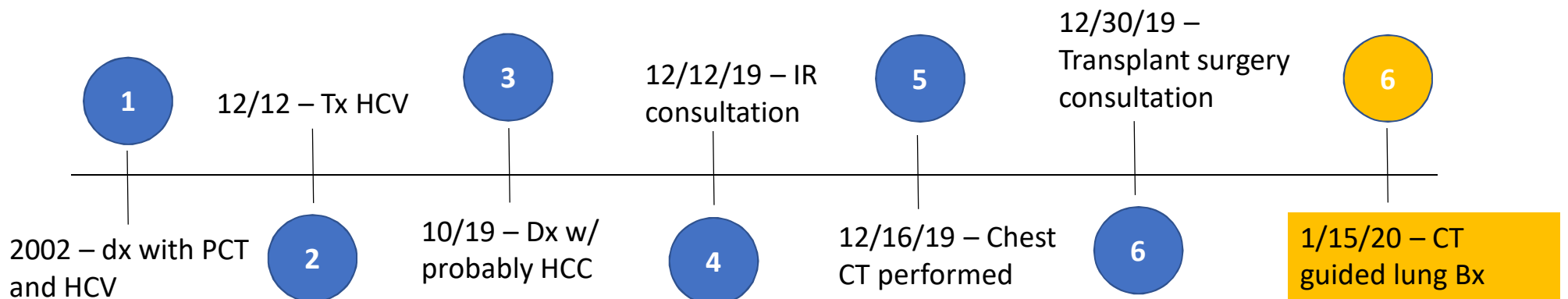
- Imaging revealed overall increase in size and number of pulmonary nodules
- Left lower lobe pulmonary nodules targeted:



Patient Timeline

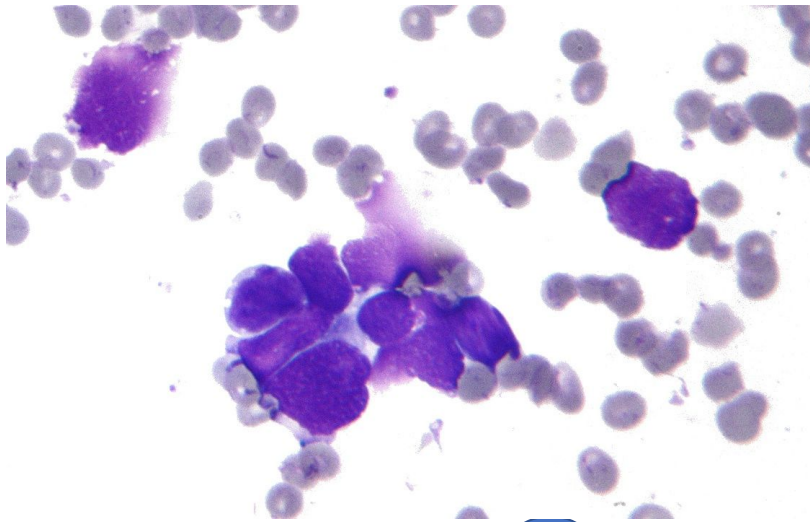
7. 1/15/2020 – CT guided lung biopsy

- 22-gauge FNA was performed:
 - Cells were obtained but definitive diagnosis difficult due to excessive blood
 - Sample insufficient for definitive diagnosis



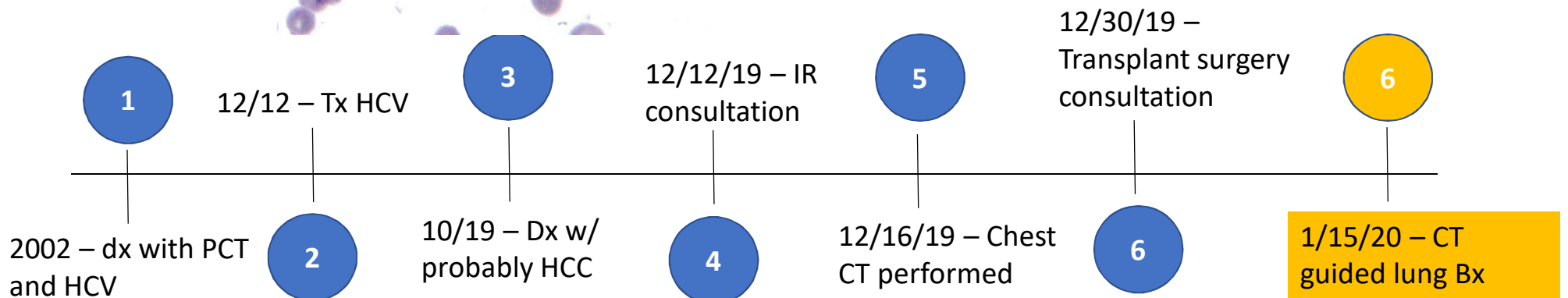
Patient Timeline

Example FNA of metastatic carcinoma to the lung



Suspicious features:

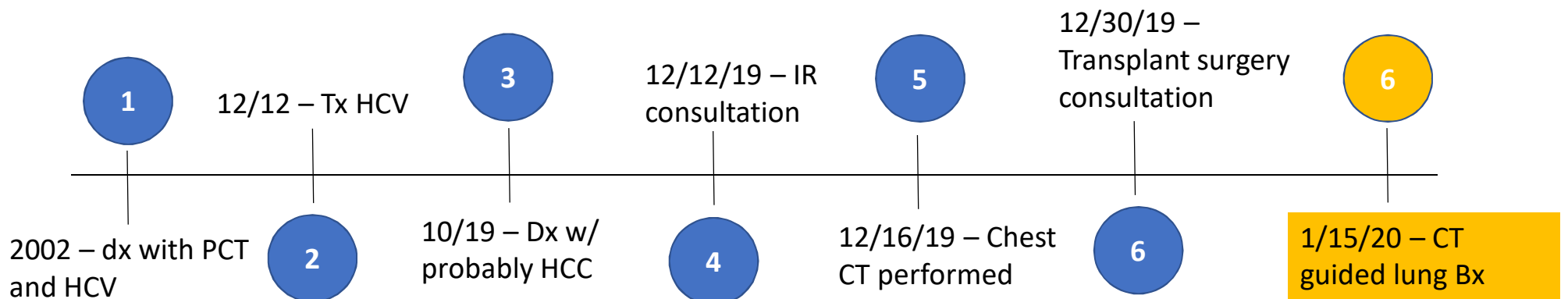
- Marked variability in nucleus size (enlarged)
- High mitotic count
- Loss of structural and functional differentiation
- Poorly organized



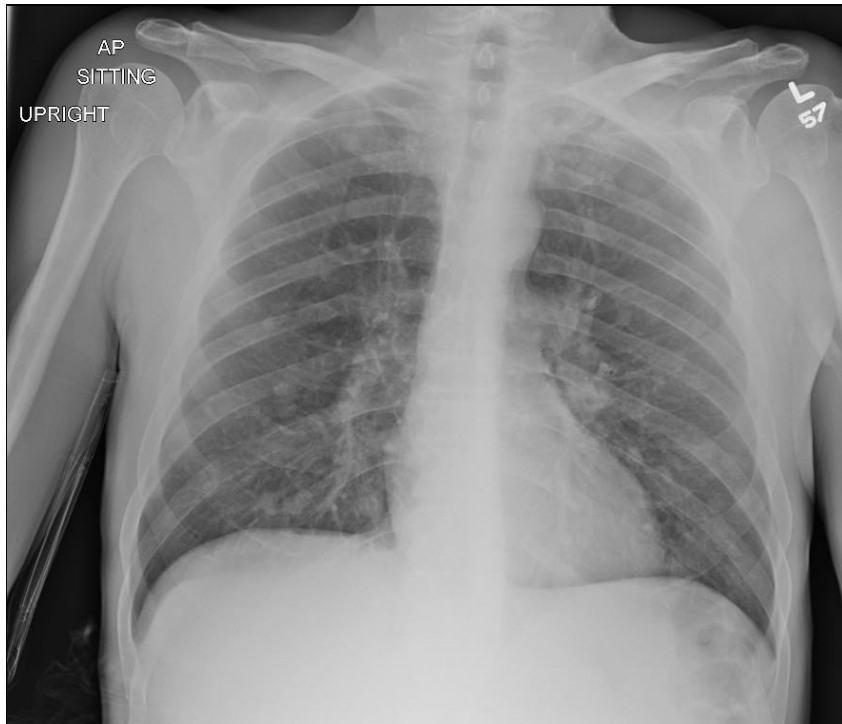
Patient Timeline

7. 1/15/2020 – CT guided lung biopsy

- 22-gauge FNA was performed:
 - Cells were obtained but definitive diagnosis difficult due to excessive blood
 - Sample insufficient for definitive diagnosis
- 3 core biopsies obtained, results pending
- Blood patch used to seal entry site

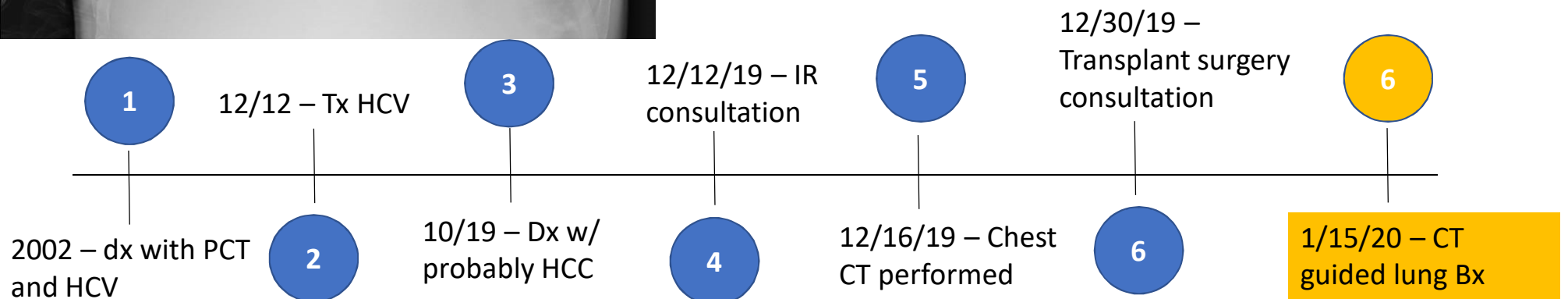


Post-procedural Chest X ray:



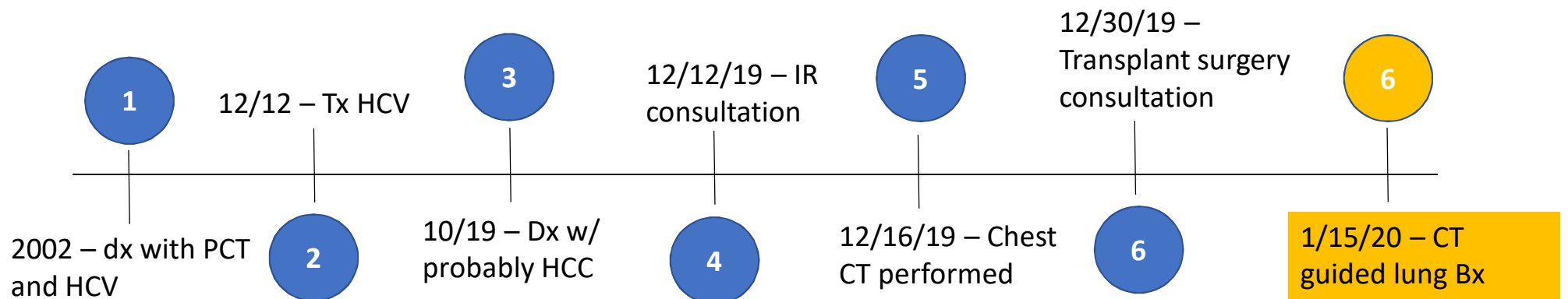
Findings:

- No post-lung biopsy pneumothorax
- Innumerable scattered lung nodules



Prognosis

- Prognosis of HCC is poor, due to high recurrence and rapid metastasis
- 34.5% of pts with HCC have mets to the lung
- 1-year survival for patients with extrahepatic mets is only about 25%
- Overall 5-year survival for HCC is 10%



Thank you