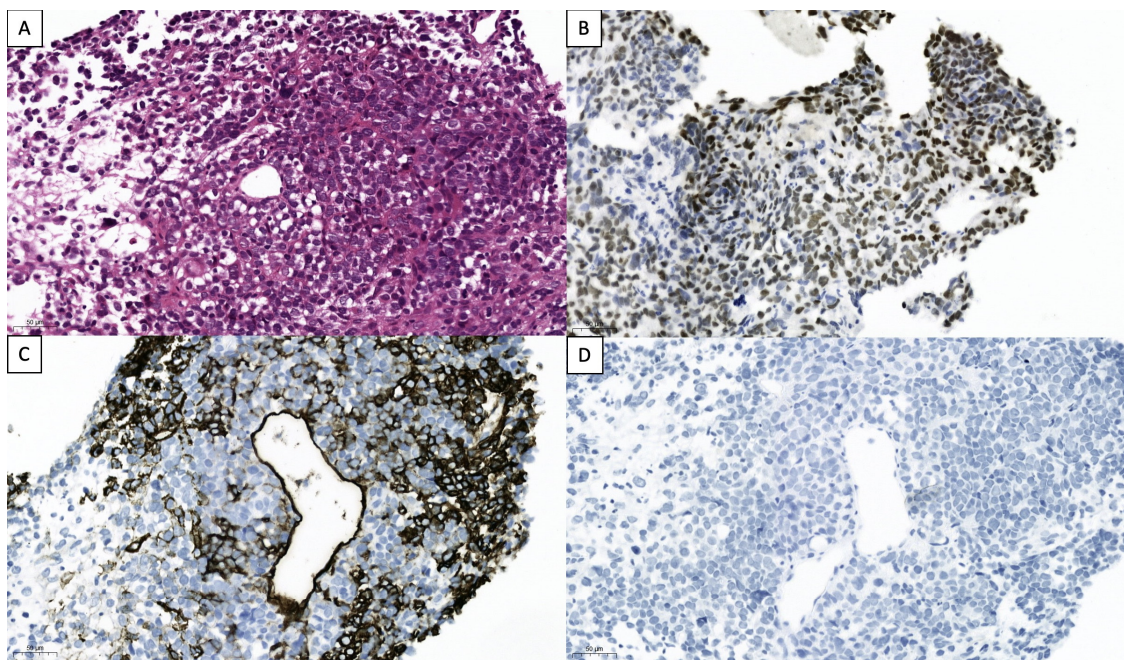


## Solitary fibrous tumor in pelvic cavity: A Case Report

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Solitary fibrous tumors (SFT) are rare mesenchymal tumors. Usually, they occur in pleural location, but uncommon in pelvic cavity. SFT is histologically diagnosed, and molecular study help with diagnosis. A 58-year-old man presents to the emergency department with a week history of dyspnea. He already diagnosed suspected of GIST in 2019, but has not been treated. In rectal exam, mucosa lesion was not found. Contrast-enhanced CT scans showed growing pelvic mass and liver, lung metastasis. A liver biopsy was performed in consideration of the size and metastasis of the tumor. A histologic evaluation revealed malignant spindle and epithelioid cell tumor, morphologically similar to GIST, but c-kit and dog-1 markers were negative. In NGS (Next generation sequencing), NAB2-STAT6 gene fusion, which is characteristically found in SFT, was confirmed. By additional immunochemistry such as STAT6, malignant SFT was confirmed. Now, the patient is treated with systemic chemotherapy. Although pelvic SFT is a very rare disease, in most cases it was founded by gross feature and histologic findings after surgical resection. But in this case, the size of the tumor is too huge to get a specimen through surgical excision. For histological confirmation, fine needle aspiration biopsy in liver was done, but it looked very similar to GIST histologically. But with c-kit negative, we could guess it was not GIST. It could be diagnosed as malignant SFT by confirming NAB2-STAT6 gene fusion in NGS. Like in this case, if tumor was not operable, NGS will be helpful for accurate diagnosis.



• Fig.1 The microscopic features of biopsy specimen (A) Haphazard arrangement of epithelioid cells arranged around branching and dilated vasculature (hematoxylin and eosin staining,  $\times 200$ ). (B) The tumor cells are positive for STAT6 immunochemical staining, which is highly sensitive and specific surrogate for *NAB2-STAT6* gene ( $\times 200$ ). (C) The tumor cells are positive for CD34 immunochemical staining ( $\times 200$ ). (D) The tumor cells are negative for C-kit (CD117) ( $\times 200$ ).