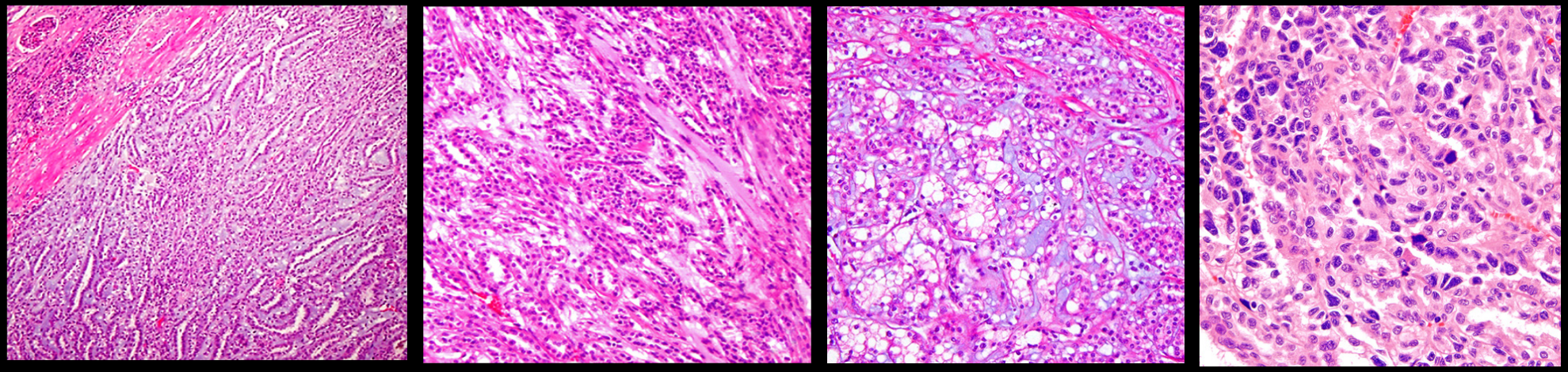

1A 1B 1C 1D

In view of varied histomorphologic features, possible differentials considered were: Mucinous tubular and spindle cell carcinoma, Papillary RCC, Clear cell RCC, MiT family translocation RCC, Collecting duct Carcinoma, Renal Medullary carcinoma, *SDH* deficient RCC, *FH* deficient RCC, *ALK* rearranged RCC, Metanephric adenoma and Metastasis.

In the primary panel of IHC, the tumor cells are immunoreactive for CK7 (focal), PAX8 and AMACR (Figure 2A) while being negative for CK20, CD10, CA9, CD117 and TTF1. Further, INI-1, Fumarate hydratase (*FH*) and *SDH-B* showed retained expression while TFE3 and HMB45 were negative. These excluded the possibility of Clear cell RCC, Metanephric adenoma, Collecting duct carcinoma, metastasis, *FH*-deficient RCC, *SDH-B* deficient RCC, MiT RCC, and Renal Medullary carcinoma. The Ki-67 proliferation index was low (10%). The tumor cells were diffusely immunoreactive for ALK immunohistochemistry along with break apart FISH assay positivity (Figure 2B and 2C). Further, NGS showed Fusion in the ALK gene (7 and 20): VCL.

The morphology and immunophenotype confirmed the rendered diagnosis. The patient was put on Crizotinib. A follow up CECT scan of the patient 3 months later showed skeletal metastasis. The patient is doing well on a 11 months follow up with disease remission.