**Data S1**

*Immunohistochemical and molecular tests.* Primary antibodies: Mouse anti-TTF-1 (cat. no. ZM-0250); mouse anti-SMA (cat. no. ZM-0003); mouse anti-CD31 (cat. no. ZM-0044); mouse anti-CD34 (cat. no. ZM-0046); mouse anti-vimentin (cat. no. ZM-0260); mouse anti-Ki-67 (cat. no. ZM-0166; all from Beijing Zhongshan Golden Bridge Biotechnology Co., Ltd.).

Secondary antibody: Dako EnVision FLEX+, Mouse, High pH (Dako; Agilent Technologies, Inc.).

Molecular detection analyses included an EWSR1 gene isolation test and MDM2 gene amplification test performed at Fudan University Shanghai Cancer Center. Due to the lack of ownership, the information of the kit details or probe sequences for molecular testing is not available.

*Protocol used to perform the literature search and selection.* The databases: Web of Science; PubMed.

*Key words:* pulmonary embolism, pulmonary artery intimal sarcoma, case report.

Selection criteria: case report; review.