Lung tumours are the leading metastatic cancers that spread to the heart through direct invasion, and rarely extend into the chambers of the left side of the heart via pulmonary veins. A case of primary lung sarcoma involving a patient who presented with dyspnea and fatigue is reported. This sarcoma extended from the lung into the left atrium via (a/the) pulmonary vein. Chemotherapy and radiotherapy were recommended. Surgery was not considered due to high risk and the advanced stage of the tumour.