# Primary pulmonary malignant melanoma mimicking Plasmacytoma of Lung

강릉아산병원 내과

**장윤실, 정복현**

We present a case of Metastatic malignant melanoma in a patient initially diagnosed with Plasmacytoma of Lung. A 66-years-old male with 2.9cm sized lung nodule, right upper lobe observed on the chest computed tomography(CT) was admitted to rule out Lung cancer (Figure 1- A, B). The patient with 20-years-smoking-experience had dizziness, nausea and runny nose from 15 days before. But, There were no specific lab findings and no skin lesions. Positron emission tomography-computed tomography(PET-CT) showed 3cm hypermetabolic mass in the lung right upper lobe(RUL) and Hypermetabolic enlarged Lymph node in the right inguinal area (Figure 2). On the Percutaneous needle aspiration(PCNA) biopsy of lung, Plasmacytoma was considered in the differential diagnosis prior to Immunohistochemical test, and we proceeded with oncology follow up. Blood tests, Bone marrow test, Urine tests, Serum Immunoelectrophoresis(IEP) and Urine IEP were performed for excluding Multiple myeloma(MM), but there were no specific findings. Also, Right inguinal biopsy was conducted accroding to the previous PET-CT result. The biopsy result surprisingly showed METASTATIC MALIGNANT MELANOMA with Immunohistochemical tests that HMB45, S-100 and Vimentin were positive (Figure 3- A, B, C). The test was different from previous lung Bx result. Therefore, we conducted Immunohistochemical tests on biopsy previously performed in lung. The immunostain of Lung showed that HMB45, S-100, MUM1 and Vimentin were positive, Cytokeratin, CD56, CD20, CD3 and CD138 were negative, supporting the diagnosis of MALIGNANT MELANOMA (Figure 4 - A, B, C, D, E). In conclusion, Metastatic malignant melanoma was finally diagnosed and started treatment. Plasmacytoma is a malignant tumor composed of plasma cells in the absence of bone involvement. Immunohistochemical analysis of Plasmacytoma showed immunoreactivity for S-100, HMB-45, and Vimentin, suggesting the diagnosis of Melanoma metastasis. CD138 is a well-known marker for plasma cells. We emphasize need to use multiple markers for the immunophenotyping of plasma cells and being aware of non-hematopoietic cells mimicking plasma cells.

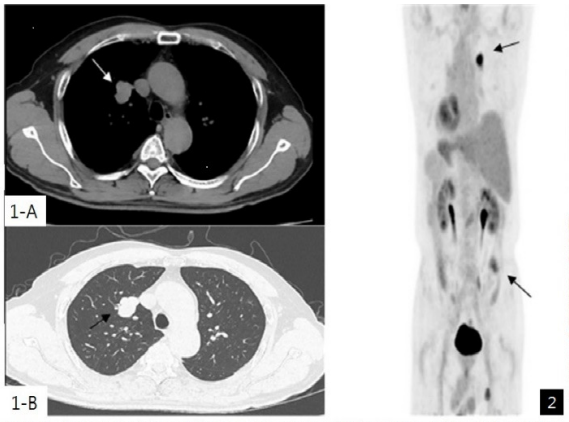


Figure 1. chest computed tomography imaging (A : soft tissue Window setting , B : lung window setting )
Figure 2 Positron emission tomography-computed tomography(PET-CT) imaging

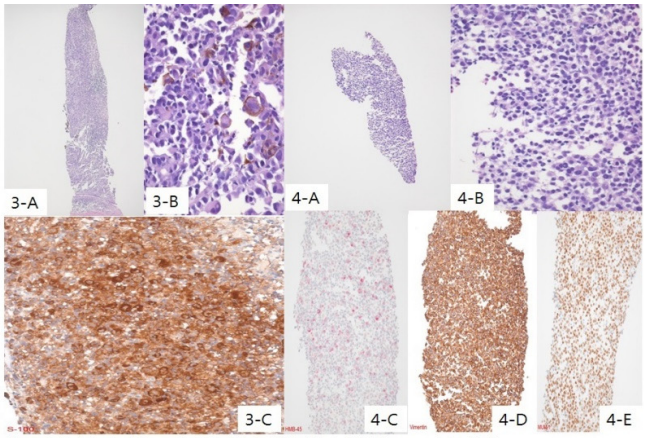


Figure 3. Right inguinal Biopsy (A : H&E x100, B : H&E x400, C : S-100 Immunostain(positive)
Figure 4. Lung Biopsy (A : H&E x100, B : H&E x400, C : HMB45, D : Vimentin, E : MUM 1 Immunostain(positive) )