

infiltration by large atypical lymphoid cells with prominent nucleoli and a coarse chromatin structure. On immunohistochemical examination, neoplastic cells showed; CD20 (+, diffuse), CD3 (–), MPO (–), Tdt (–), CD1a (–), S100 (–), ALK (–), CD68 (–), CK (–), actin (–), vimentin (–) staining, and the Ki67 proliferation index was 70%. The pathology department reported the mass to be consistent with a diffuse large B cell lymphoma (centroblastic type). Cervical-thoracic-abdominopelvic CT was performed to determine the extent of the disease, and no masses, organomegaly, or enlarged lymph nodes were detected. Bone marrow aspiration and biopsy did not show bone marrow involvement. The patient received chemotherapy consisted of R-CHOP and was administered with six cycles. After chemotherapy, radiotherapy was given at a total dose of 40 Gy as 2 Gy per fraction. The strength of the bilateral lower extremity muscle groups showed daily improvement and the patient was able to walk normally with two courses of chemotherapy, after approximately six weeks. The patient remains in remission without clinical or radiological relapse under follow up after nearly 3 years.

**Conclusion:** The differential diagnosis of patients who present with a spinal mass should be made carefully. It must be considered that, although rarely, DLBCLs can present as massive disease-causing spinal compression, and that clinically significant improvement can be achieved by timely and effective treatment. In patients who present with spinal compression, early decompression, particularly by means of surgery, is of great importance. Considering that spinal DLBCL is a malignant disease, appropriate treatment approaches play a vital role in achieving neurological recovery, longer survival times, and better life quality.

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## PP 24

### Comparison of 68ga-psma and 18f-fdg pet/ct uptake in different lymphoma

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**Objective:** Few reports have documented the uptake of radiolabeled Prostate-Specific Membrane Antigen (PSMA) in lymphomas.<sup>1,2</sup> It is not known how PSMA uptake varies among various histological subtypes and how it correlates with 18F-FDG uptake in lymphomas. This study aimed to compare 68Ga-PSMA and 18F-FDG in different lymphoma subtypes.

**Methodology:** Nine randomly selected patients with biopsy-proven lymphoma with a median age 43 (32–70) years, 5 female – were submitted to whole-body 18F-FDG and 68Ga-PSMA PET/CT (time interval: 1–6 days between procedures). Lymphoma subtypes included: nodular-sclerosis Hodgkin's lymphoma (HL; 2 patients); diffuse large B-cell lymphoma

(DLBCL; 1); marginal-zone lymphoma (2); MALT lymphoma (ML; 1); follicular lymphoma (FL; 1); lymphoplasmacytic lymphoma (1); and B-cell non-Hodgkin's lymphoma, unspecified (BCNHL-U; 1). Eight patients were under initial staging and 1 (HL) with disease relapse after treatment. Two experienced nuclear physicians analyzed the images by consensus. The intensity of tracer uptake was visually classified as marked, moderate or mild. The affected sites (lymph node chains, spleen, diffuse bone marrow involvement and non-lymphatic focal lesions) were counted in both sets of images and their respective maximum SUV (SUVmax) were measured.

**Results:** PSMA PET/CT was positive in all patients except for one with ML. FDG PET/CT was positive in all patients. At visual analyses, FDG uptake was higher than PSMA uptake in all patients, except for one patient with BCNHL-U (both tracers with similar low-intensity uptake). The intensity of FDG and PSMA uptake was respectively classified as marked in 3/9 and 0/8 patients, moderate in 4/9 and 1/8 and mild in 2/9 and 7/8. One patient (FL) presented a “mismatch” uptake pattern with different parts of an extensive lesion presenting predominant uptake of PSMA or FDG. Brain infiltration in one patient (DLBCL) was more easily identified on PSMA than on FDG images. FDG detected a total of 58/58 and PSMA 43/58 affected sites in all patients with a median SUVmax of respectively 5.4 (2.0–31.1) and 2.8 (1.3–5.4),  $p < 0.0001$ . The median SUVs of the 43 lesions with uptake of both tracers was respectively 5.5 (2.0–28.9) and 2.8 (1.3–5.4) for FDG and PSMA,  $p < 0.0001$ .

**Conclusion:** Distinct lymphoma subtypes present PSMA uptake, with less intensity than FDG uptake. Although PSMA uptake is usually mild, several lymphoma subtypes might cause false-positive results in PSMA PET/CT performed to assess prostate cancer.

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## PP 25

### Prognostic value of pre-treatment neutrophil-lymphocyte and platelet-lymphocyte ratio in diffuse large B-cell lymphoma: a single-center experience

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**Objective:** The neutrophil-lymphocyte ratio (NLR) and platelet-lymphocyte ratio (PLR) as inflammatory biomarkers have emerged as prognostic factors for patients with cancer.

We aimed to explore the association between the NLR/PLR and prognosis in diffuse large B-cell lymphoma (DLBCL).

**Methodology:** The study was carried out retrospectively. A systematic search of the hospital database regarding DLBCL patients was performed between April 2004 and March 2019. Completely accessible data were included in the study.

**Results:** Overall, 122 patients included in the study. There were 64 males and 58 females. At the time of diagnosis, the mean age was  $51.3 \pm 14.3$  years, whereas 26 (21.3%) were under 40 years, 26 (21.3%) between 40–49 years, 35 (28.7%) between 50–59 years, and 35 (28.7%) were over 60 years old. Approximately 50% were at an advanced stage. At the time of diagnosis, the mean NLR was 3.8 with an absolute neutrophil count of  $4852.4/\mu\text{L}$  (0.600–16.000/ $\mu\text{L}$ ), and the absolute lymphocyte count of  $1757.9/\mu\text{L}$  (0.100–15.000/ $\mu\text{L}$ ). The mean PLR was 213.6, with a mean platelet count of  $250,000/\mu\text{L}$  (range 260,000–715,000/ $\mu\text{L}$ ). ROC analysis gave the cut-off point for PLR as  $>152.86$ , and NLR  $>3.05$ . All patients (90.2%) received R-CHOP based therapy. The median follow-up time was 69 months (range 3–244). During the follow-up period, 8.2% of patients died. Patients with high NLR levels showed more frequent B symptoms ( $p=0.034$ ). Patients with high PLR levels had a statistically significant lower overall survival (OS) and progression-free survival (PFS) ( $p=0.012$  and  $p=0.004$ , respectively). In patients with high NLR levels, the OS rate proved to be shorter, but this finding has not achieved a statistical significance. However, PFS was statistically significantly shorter ( $p=0.022$ ). In the multivariate analysis of PLR and clinical factors in terms of non-progressive survival, age, IPI score, and high PLR level are independent risk factors for non-progressive survival ( $p=0.013$ ,  $p=0.039$  and  $p=0.031$ , respectively). In multivariate analysis of NLR and clinical factors, age and IPI score are independent risk factors for non-progressive survival ( $p=0.026$  and  $p=0.046$ , respectively).

**Conclusion:** This study demonstrated that elevated pre-treatment PLR was significantly associated with poor prognosis in DLBCL patients. PLR could be helpful as a potential prognostic biomarker to guide clinical decision-making and select individualized treatment strategies for DLBCL patients.

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PP 26

## Two diseases in a single lymph node: nodular lymphocyte predominant hodgkin lymphoma and kaposi's sarcoma

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**Objective:** Kaposi's Sarcoma (KS) is the most common low-grade mesenchymal angioproliferative disease seen in

patients infected with the human immunodeficiency virus (HIV). Lymph node involvement is rare in classical KS, but it is common in endemic and epidemic (AIDS-related) KS. Kaposi's sarcoma-associated herpesvirus (KSHV), also known as human herpesvirus type 8 (HHV8), was first described in HIV-associated KS. Nodular lymphocyte predominant Hodgkin Lymphoma (NLPHL) is a rare lymphoma with an incidence of 0.1 to 0.2/100,000/y. Significant histological feature is the presence of CD20 (+) CD15 (–) CD30 (–) variants in a nodular infiltration lymphocyte pattern of Reed-Sternberg cells. The coexistence of Hodgkin's disease (HD) and KS is a rare condition.

**Case report:** A 41-year-old male patient presented to the hematology outpatient clinic with painless swelling in the left armpit. There were no B symptoms at the patient's presentation. He had a history of RAI due to hyperthyroidism in 2004 and using 100 mcg of Levothyroxine. He also had a history of 7 packs/year of cigarette (exsmoker) and alcohol use as a social drinker. On physical examination, a well-demarcated, flip, painless lymphadenomegaly (LAM) was detected in the left axillary region, and hepatosplenomegaly (HSM) was not present. The laboratory results were as follows: wbc: 8300 UL; 15.1 g/dL, lymphocyte: 1450 mm<sup>3</sup>, plt: 197,000 UL, albumin: 4.5 g/L, calcium: 10.9 mg/dL, ldh: 156 U/L, uric acid: 6.5 mg/dL. The serological tests were negative, other biochemical parameters were normal. The peripheral smear of the patient was evaluated as normal morphology. An excisional lymph node biopsy was taken from the left axilla. The pathology result was interpreted as nodular lymphocyte predominant Hodgkin's lymphoma (NLP) classical type and Kaposi's sarcoma with diffuse HHV-8 positivity. Bone marrow biopsy revealed no Kaposi's or Hodgkin's lymphoma infiltration. PET-CT imaging was performed for lymphoma staging. Lymphoproliferative disease involvement was observed at the left axilla level 2, 3 in bilateral, cervical, left infraclavicular, retropectoral area and along the medial line of the spleen. It was evaluated as stage II S. No additional lesion was detected in the patient evaluated by dermatology for Kaposi's sarcoma. Gastroscopy and colonoscopy were performed for gastrointestinal tract involvement and evaluated with biopsy. Helicobacter Pylori was observed in gastroscopy and eradication treatment was given. No pathological finding was seen in colonoscopy. By evaluating as early-stage NLP Hodgkin's Lymphoma, the patient was initiated on radiotherapy.

**Methodology:** Except for the need for an impaired immune system for the development of KS, it is thought that the relationship of KS with HD may be related to common pathogenic mechanisms instead of a direct causal relationship.

**Results:** Recently, HD and KS development has been associated with EBV and HHV-8, respectively. Although there are cases of KS and classical HD coexistence in the same lymph node, the coexistence of KS and NLPHL subtype in the same lymph node is quite rare.

**Conclusion:** Although KS is most commonly associated with immunodeficiency due to HIV infection or other causes of immunosuppression, it was not associated with any immunodeficiency status in our case. Due to the fact that KS and NLPHL were present in the same lymph node as two separate primers and were not immunosuppressed, we presented our

