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and depression. Fertility preservation and correction of unhealthy lifestyles were also examined. **Conclusions:** The final documents could be a reasonable bridge from evidence to decision in order to improve the clinical practice and customize the general follow-up approach of cHL and DLBCL survivors. **Keywords:** HL, lymphoma, survivorship, late toxicity, prevention, systematic review

**HL-444**

**Autoimmune Lymphoproliferative Syndrome: A Case Presentation**
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**Context:** Autoimmune lymphoproliferative syndrome (ALPS) is a disorder of lymphocyte homeostasis caused by defects in the FAS apoptotic pathway. ALPS is characterized by non-malignant lymphoproliferation, autoimmune disorders (primarily multilineage cytopenias), and an increased risk of B-cell lymphoma. **Patient:** A 4-year-old girl presented with severe anemia and splenomegaly. **Hb:** 5 g/dL; **Hct** 16.6%; **plt** 82 × 103; **WBC:** 2.3. Reticulocytosis, high LDH, and indirect bilirubin. Direct antiglobulin test (DAT) was negative, as was a super-Coombs assay. Osmotic gradient echctometry in red blood cells was compatible with antibody-mediated decreased surface-to-volume ratio. IVIG was given, with a good response, so the patient was diagnosed with warm-ab autoimmune hemolytic anemia. ALPS panel criteria were met, with increased double-negative T cells (DN1Cs) by flow cytometry. A pathogenic variant, c.755delA, was identified in FAS. **Interventions:** Sirolimus was targeted to a therapeutic dosage, with great response. The FAS gene is associated with autosomal dominant autoimmune lymphoproliferative syndrome (ALPS-FAS). Lymphadenopathy and hepatosplenomegaly, which are presenting symptoms in most affected individuals and usually manifest in early childhood, often improve with age. Autoimmunity typically develops 2–3 years later and shows no permanent remission with age. **Results:** Penetration of symptoms is highly variable, and some individuals are clinically unaffected. A more severe presentation is seen in individuals with biallelic pathogenic FAS variants. The risk of non-Hodgkin lymphoma is 60 times more than in healthy individuals and more than 150 times as high for Hodgkin lymphoma. **Conclusion:** Parental testing may clarify the inheritance of FAS gene mutations. **Conclusions:** Autoimmune lymphoproliferative syndrome should be suspected in children with lymphadenopathy, splenomegaly, and multilineage cytopenias. Sirolimus is a disease-modifying therapy that is well-tolerated and efficacious for these patients. **Keywords:** HL, ALPS, non-Hodgkin lymphoma, case

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**Aggressive B-Cell Lymphoma**

**ABCL-006**

High Grade Primary Bone Lymphoma with TdT Expression
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**Context:** Distinguishing mature B-cell lymphomas from immature or precursor B-cell neoplasms is important since different treatments are usually given. It is known that some mature B-cell neoplasms can have relatively immature morphologic features and present similarly to a leukemia. Expression of TdT in lymphomas that are typically negative for TdT can occur rarely and present a diagnostic challenge. This entity can present de novo or in the setting of a relapsed/refractory lymphoma, usually follicular lymphomas. **Objectives:** To describe a case of a high-grade primary bone lymphoma with TdT expression. **Setting:** A 35 yo man was admitted for severe bone pain, fever, and night sweats. Laboratory showed no abnormalities; HIV, HCV, and HBV serologies and blood cultures including atypical germs were negative. Magnetic resonance showed disseminated bone lesions predominant in column and pelvis. Bone marrow biopsy showed an infiltration by a CD20, CD 10 BCL2 positive high grade B cell lymphoma. MUM1 and TdT were negative. He initiated treatment with R-DA-EPOCH presenting refractory disease after 3 cycles: PET/CT uptake in both clavicles, humerus, scapula, dorsolumbar raquis, iliac bones and ribs. Max SUV was 20 in the 7th right rib. A new biopsy was done which result was consistent with a leukemia. A new biopsy was done which result was consistent with an infiltration by a CD20, CD 10 BCL2 and one positive for TdT and CD20 while the other was CD20 and TdT negative. High-grade lymphoma and areas of a B cell lymphoblastic like neoplasm was positive for CD10, PAX5, BCL2 and one positive for TdT and CD20. High-grade lymphoma and areas of a B cell lymphoblastic like neoplasm expressing TdT was the final diagnosis. His treatment was changed to R Hyper-CVAD plus triple intrathecal chemotherapy, and he is currently undergoing that treatment. Consolidation with allogeneic marrow transplant is planned. **Summary/Conclusion:** TdT positive neoplasms diagnostic is challenging. Whether this case represents a composite neoplasm (high grade lymphoma with lymphoblastic leukemia/lymphoma) or if it is a transformation from a previous asymptomatic lymphoma is a matter of debate. **Keywords:** acute lymphoblastic leukemia, B cell lymphoma, extranodal lymphoma, aggressive lymphomas, case

**ABCL-013**

Factors Associated with SARS-CoV-2 Infection and Outcome in Patients with Solid Tumors or Hematological Malignancies: A Single-Center Study
Anouk Goudsmit*, Edouard Cubilier, Anne-Pascale Meert, Philippe Aftimos,
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ABCL-018

Muscle Loss During Immunotherapy for Diffuse Large B-Cell Lymphoma and its Clinical and Prognostic Associations

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**Context:** Cancer induced cachexia is associated with poor prognosis in patients with diffuse large B-cell lymphoma (DLBCL) but it is unknown how and to what extent curable lymphoma treatments affect musculoskeletal system. **Objective:** To investigate how immunotherapy affects muscle mass and whether this has prognostic consequences in newly diagnosed DLBCL patients.

**Design:** Retrospective cohort study including period from 2005-2019. **Setting:** Tertiary hematologic center. **Patients or Other Participants:** 104 newly diagnosed adult DLBCL patients with unfavorable features (proliferative index Ki67+ ≥80% and/or International Prognostic Index (IPI) ≥2 points) treated with the R-DA-EPOCH regimen with available baseline and end of treatment CT scans. **Methods:** Psoas muscle area (PMA) at L3 vertebra level was compared between revision and baseline CT scans. **Main Outcomes Measures:** PMA change during immunotherapy, overall survival (OS), progression free survival (PFS).

**Results:** Small but significant decline in PMA was observed during immunotherapy period (average loss 5%; P=0.016) with 57.7% patients experiencing muscle loss. In the multivariate logistic regression analysis higher body surface area (OR 17.98 for each m²; P=0.034), higher number of cycles with dose reduction (OR 2.86 for each cycle; P=0.039) and weaker response to therapy (OR 3.09 for each response category; P=0.052) were recognized as independent contributors to the PMA loss. Age, sex, baseline psoas muscle index, body mass index, Ki-67, Ann Arbor and R-IPI staging systems had no significant association with the extent of PMA loss. A total of 25/104 (24%) of patients experienced ≥21% PMA loss (ROC curve analysis defined optimal cut-off level) which was associated with significantly worse overall (OS; HR=8.58; P<0.001) and progression free survival (PFS; HR=6.75; P<0.001) in univariate analyses. In multivariate analyses, both ≥21% psoas muscle loss and non-achieving response to therapy remained independently associated with inferior OS and PFS. **Conclusions:** Muscle loss occurs in approximately half newly diagnosed DLBCL patients with unfavorable disease features during R-DA-EPOCH immunotherapy, and if pronounced, this is associated with worse clinical outcomes irrespective of achieved response to therapy. The most relevant predictors of muscle loss during chemotherapy period seem to be immunotherapy related, i.e., associated with the dose, toleration and efficacy of immunotherapy. **Keywords:** diffuse large B-cell lymphoma, sarcopenia, psoas muscle, R-DA-EPOCH, survival

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**ABCL-021**

**FRONT-MIND: A Phase III, Randomized, Double-Blind, Placebo-Controlled Study Comparing Efficacy and Safety of Tafasitamab + Lenalidomide + R-CHOP vs R-CHOP Alone for Newly-Diagnosed High-Intermediate and High-Risk Diffuse Large B-Cell Lymphoma (DLBCL)**

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