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| **OP500** | Prognostic Value Of Different F-18 FDG PET/CT Quantitative Analytical Methodologies In Pediatric Hodgkin’s Lymphoma |
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| **hide abstract**  Introduction and aim of work: Assessment of the individualized SUVs, PET-derived total metabolic tumor volume (TMTV) and the product of both parameters, termed total lesion glycolysis (TLG) in both initial and interim PET if it carries a better PPV in early assessment of response to therapy in pediatric Hodgkin?s lymphoma (PHL) patients. Patients and Methods: Retrospective analysis of PET/CT results was performed on 60 patients (42 males and 18 females; mean age 8.7?4.2 years). To assess the prognostic value of initial and interim 18F-FDG PET/CT, different semi-quantitative parameters such as SUVmax, SUVmean, Total lesion glycolysis (TLG) and TMTV of all lesions using SUVmax & mean including SUV2.5 and 40% of SUVmax as cut-off values were calculated. Follow up for 24 months from initial treatment with calculation of Disease Specific Survival (DSS). According to the recommendations of Deauville criteria interim PET (PET2) results were identified into three groups; PET2-negative (PET2-ve), PET2-positive (PET2+ve), and PET2-minimal residual uptake (PET2-MRU), the cut-off between PET2+ve and PET2-MRU was 3-4 in the 5-point scale. Results: Out of the 60 interim-PET scans, 50 scans were considered as PET2-ve (83.3%), 5 scans as PET2+ve (8.3%) and 5 scans as PET2-MRU (8.3%). The risk of the disease and the visual scoring assessment were significantly correlated with patient's outcome (whether Negative or Residual/Relapse) (p <0.0001). Different results were obtained; the most important were TLGmax2.5 (cut-off 2.5), TLGmean2.5 (cut-off 2) and TMTV2.5 (cut-off 0.75 ccm) in interim PET showed the highest sensitivity, specificity, PPV and NPV (58.5%, 97.9%, 87.5% and 90.3% respectively for the 3 parameters). Conclusion: TLGmax2.5, TLGmean2.5 and TMTV2.5 are the most relevant parameters for predicting the outcome in patients with PHL, and can add a significant prognostic insight to interim PET response assessment. This may guide clinicians in their choice of therapeutic strategy. | |