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CT Scan Kontras Pasien Hepatoblastoma
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

HUBUNGAN ANTARA KLASIFIKASI *PRE-TREATMENT EXTENT OF TUMOR* (PRETEXT) DENGAN *VASCULAR INVOLVEMENT* PADA CT *SCAN* KONTRAS PASIEN HEPATOBLASTOMA

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INTISARI

Latar Belakang: Hepatoblastoma merupakan tumor ganas primer hati tersering pada anak. Klasifikasi *PRE-Treatment Extent of Tumor* (PRETEXT) menggambarkan luas keterlibatan parenkim hati, sedangkan *vascular involvement* menunjukkan hubungan tumor dengan vena porta, vena hepatika, dan vena kava inferior. Kedua parameter penting untuk stratifikasi risiko, penilaian resektabilitas, dan perencanaan terapi, tetapi hubungan langsung antara klasifikasi PRETEXT dan *vascular involvement* pada CT *scan* kontras masih terbatas. Penelitian ini bertujuan mengetahui hubungan antara klasifikasi PRETEXT dengan *vascular involvement* pada CT *scan* kontras pasien hepatoblastoma.

Metode: Penelitian analitik observasional dengan desain *cross-sectional* menggunakan data sekunder retrospektif pada pasien hepatoblastoma yang menjalani CT *scan* abdomen kontras pra-terapi di RSUP Dr. Sardjito Yogyakarta periode 1 Januari 2021–31 Desember 2025. Pengambilan sampel menggunakan *total sampling*. Klasifikasi PRETEXT dan *vascular involvement* dinilai secara independen oleh dua dokter spesialis radiologi. Hubungan antarvariabel dianalisis menggunakan uji bivariat dengan tingkat kemaknaan $p<0,05$.

Hasil: Sebanyak 28 pasien dianalisis, terdiri atas 10 pasien dengan *vascular involvement* dan 18 pasien tanpa *vascular involvement*. Lokasi dominan tumor berbeda bermakna antara kedua kelompok (p=0,001), sedangkan usia, jenis kelamin, BBLR, riwayat keluarga, kadar AFP, jumlah lesi, volume tumor, diameter terbesar, dan jenis terapi tidak menunjukkan perbedaan bermakna. *Hepatic venous involvement* ditemukan pada 9 pasien dan *portal venous involvement* pada 1 pasien, tanpa keterlibatan vena kava inferior. Terdapat hubungan bermakna antara klasifikasi PRETEXT dan *vascular involvement* (p=0,003), dengan 70% kasus *vascular involvement* berada pada PRETEXT IV. Keterlibatan vena dan portal secara terpisah tidak berhubungan bermakna dengan PRETEXT (p=0,800).

Kesimpulan: Klasifikasi PRETEXT berhubungan bermakna dengan *vascular involvement* pada CT *scan* kontras pasien hepatoblastoma. PRETEXT yang lebih tinggi menunjukkan kecenderungan keterlibatan vaskular yang lebih besar.

Kata kunci: *Blood Vessels; Hepatoblastoma; Liver Neoplasms; Neoplasm Staging; Tomography, X-Ray Computed*.

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ASSOCIATION BETWEEN THE PRE-TREATMENT EXTENT OF TUMOR (PRETEXT) CLASSIFICATION AND VASCULAR INVOLVEMENT ON CONTRAST-ENHANCED CT IN PATIENTS WITH HEPATOBLASTOMA

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ABSTRACT

***Background**: Hepatoblastoma is the most common primary malignant liver tumor in children. The PRE-Treatment Extent of Tumor (PRETEXT) classification describes the extent of liver parenchyma involvement, while vascular involvement indicates the tumor's relationship with the portal vein, hepatic veins, and inferior vena cava. Both parameters are crucial for risk stratification, resectability assessment, and treatment planning; however, data regarding the direct relationship between PRETEXT classification and vascular involvement on contrast-enhanced CT scans remain limited. This study aimed to determine the association between PRETEXT classification and vascular involvement in hepatoblastoma patients undergoing contrast-enhanced CT scans.*
***Methods**: This was an observational analytic study with a cross-sectional design, utilizing retrospective secondary data from hepatoblastoma patients who underwent pre-treatment contrast-enhanced abdominal CT scans at Dr. Sardjito General Hospital, Yogyakarta, between January 1, 2021, and December 31, 2025. Total sampling was employed. PRETEXT classification and vascular involvement were independently assessed by two radiologists. The association between variables was analyzed using bivariate tests with a significance level of $p<0.05$.*
***Results**: A total of 28 patients were analyzed, comprising 10 patients with vascular involvement and 18 without. The dominant tumor location differed significantly between the two groups ($p=0.001$), whereas age, gender, low birth weight, family history, AFP levels, number of lesions, tumor volume, maximum diameter, and type of therapy showed no significant differences. Hepatic venous involvement was observed in 9 patients and portal venous involvement in 1 patient; no inferior vena cava involvement was found. A significant association was found between PRETEXT classification and vascular involvement ($p=0.003$), with 70% of cases involving vascular involvement falling into the PRETEXT IV category. Separate analyses of hepatic venous and portal venous involvement showed no significant association with PRETEXT classification ($p=0.800$).*
***Conclusion**: PRETEXT classification is significantly associated with vascular involvement in hepatoblastoma patients undergoing contrast-enhanced CT scans. Higher PRETEXT stages indicate a tendency toward greater vascular involvement.*
***Keywords**: Blood Vessels; Hepatoblastoma; Liver Neoplasms; Neoplasm Staging; Tomography, X-Ray Computed.*