

PERBANDINGAN KATEGORI NI-RADS PADA KANKER NASOFARING RESIDIF DAN NON-RESIDIF BERDASARKAN MODALITAS CT-SCAN KONTRAS

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INTISARI

Latar Belakang: Kanker nasofaring merupakan keganasan kepala dan leher yang banyak ditemukan di Asia Tenggara dengan angka kekambuhan tinggi. Membedakan lesi residif dari perubahan pasca terapi pada CT-scan kontras sering menjadi tantangan diagnostik. *Neck Imaging Reporting and Data System* (NI-RADS) menawarkan sistem pelaporan terstandar untuk menilai kemungkinan residif, namun penelitian terkait penggunaannya pada kanker nasofaring di Indonesia masih terbatas.

Tujuan: Membandingkan kategori NI-RADS antara kanker nasofaring residif dan non-residif berdasarkan modalitas CT-scan kontras.

Metode: Penelitian *cross sectional* retrospektif dilakukan di RSUP Dr. Sardjito Yogyakarta pada Juli - September 2025. Sebanyak 66 pasien kanker nasofaring pasca terapi dengan status *complete response* yang memiliki hasil CT-scan kontras dievaluasi. Dua dokter spesialis radiologi menilai kategori NI-RADS (1–4) secara independen. Analisis data menggunakan uji Chi-square dan regresi logistik dengan tingkat signifikansi $p < 0,05$.

Hasil: Dari total 66 pasien, 19 (28,88%) merupakan kelompok residif dan 47 (71,2%) non-residif. Terdapat perbedaan bermakna antara kategori NI-RADS dengan status kekambuhan ($p < 0,001$). Sebagian besar kasus residif berada pada NI-RADS 3 (78,9%) dan NI-RADS 4 (15,8%), sedangkan kelompok non-residif dominan pada NI-RADS 1 (78,7%) dan NI-RADS 2 (14,9%). Reliabilitas inter-observer tergolong sedang (ICC = 0,459; $p = 0,122$). Analisis multivariat menunjukkan bahwa status residif merupakan satu-satunya prediktor independen terhadap skor NI-RADS tinggi (RR = 419,5; 95%CI: 23,17–7594,73; $p < 0,001$).

Kesimpulan: Kategori NI-RADS pada CT-scan kontras menunjukkan perbedaan signifikan antara kanker nasofaring residif dan non-residif. Skor NI-RADS tinggi (3–4) sangat banyak ditemukan pada kelompok residif, sedangkan kategori NI-RADS 1-2 sangat banyak pada kelompok non-residif.

Kata Kunci: Kanker nasofaring, NI-RADS, residif, CT-scan kontras.

COMPARISON OF NI-RADS CATEGORIES BETWEEN RECURRENT AND NON-RECURRENT NASOPHARYNGEAL CARCINOMA ON CONTRAST-ENHANCED CT IMAGING

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ABSTRACT

Background : Nasopharyngeal carcinoma (NPC) is one of the most common head and neck malignancies in Southeast Asia, characterized by a high recurrence rate. Differentiating recurrent lesions from post-treatment changes on contrast-enhanced CT scans often poses a diagnostic challenge. The Neck Imaging Reporting and Data System (NI-RADS) provides a standardized reporting system to assess the likelihood of recurrence; however, studies evaluating its application in nasopharyngeal carcinoma within the Indonesian population remain limited.

Aim of The Study : To compare NI-RADS categories between recurrent and non-recurrent nasopharyngeal carcinoma using contrast-enhanced CT imaging.

Methods : A retrospective cross-sectional study was conducted at Dr. Sardjito General Hospital, Yogyakarta, from May to August 2025. Sixty-three post-treatment NPC patients who had achieved complete response and underwent follow-up CT scans were included. Two independent radiologists evaluated NI-RADS categories (1–4). Data were analyzed using Chi-square and logistic regression tests, with a significance level of $p < 0.05$.

Results : Of the 66 patients, 19 (28.8%) were classified as recurrent and 47 (71.2%) as non-recurrent. A significant association was found between NI-RADS category and recurrence status ($p < 0.001$). Most recurrent cases were categorized as NI-RADS 3 (78.9%) and NI-RADS 4 (15.8%), while non-recurrent cases were predominantly NI-RADS 1 (78.7%) and NI-RADS 2 (14.9%). The inter-observer reliability was moderate (ICC = 0.459; $p = 0.122$). Multivariate analysis revealed that recurrence status was the only independent predictor of high NI-RADS scores (RR = 419.5; 95% CI: 23.17–7594.73; $p < 0.001$).

Conclusion : Contrast-enhanced CT-based NI-RADS categories demonstrated a significant difference between recurrent and non-recurrent nasopharyngeal carcinoma. High NI-RADS scores (3–4) were predominantly observed in recurrent cases, whereas low NI-RADS categories (1–2) were more common in non-recurrent cases.

Keywords : Nasopharyngeal carcinoma, NI-RADS, recurrence, Contrast-enhanced CT scan.