LETTER TO THE EDITOR / EDİTÖRE MEKTUP

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Current Status of Right Colon Adenocarcinoma: The Oncological Role of D2 and D3 Dissection

Sağ Kolon Adenokarsinomda Güncel Durum: D2 ve D3 Diseksiyonun Onkolojik Rolü

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The extent of lymphadenectomy in right-sided colon cancer remains one of the most debated topics in surgical oncology. The central question is whether extended nodal dissection beyond D2 confers a meaningful survival benefit. Efforts to align the Japanese D1/D2/D3 classification with Western concepts of complete mesocolic excision (CME) and central vascular ligation (CVL) are hindered by inconsistencies in anatomical boundaries and in procedural standardization. The CME philosophy emphasizes the integrity of the mesocolic fascia as an embryological plane to ensure an intact mesocolic envelope, whereas the Japanese D3 approach focuses on the systematic removal of apical lymph nodes along the feeding vessels. These differing conceptual frameworks complicate direct comparisons of the optimal extent of resection for right colon cancer.

The RICON trial by Balaban et al. (1) is an international multicenter randomized controlled trial (RCT) investigating the impact of D2 vs. D3 lymphadenectomy on 5-year overall survival (OS) in stage II-III right colon cancer. The trial addresses geographical heterogeneity in surgical technique and the well-recognised limitations of prior retrospective, single-institution series by applying strict eligibility criteria and a standardised surgical protocol. As one of the few prospective RCTs using 5-year OS as its primary endpoint rather than surrogate measures, RICON directly addresses a critical evidence gap and has the potential to meaningfully inform future surgical guidelines (1).

The RELARC trial compared laparoscopic CME with D2 dissection across 17 Chinese centers, initially confirming the short-term safety and feasibility of CME (2). However, long-term data published in the Journal of Clinical Oncology (2024) substantially tempered this optimism: no significant difference was found in 3-year disease-free survival [CME 86.1% vs. D2 81.9%; hazard ratio (HR)=0.74; p=0.06] or 3-year OS (CME 94.7% vs. D2 92.6%; HR 0.70; p=0.17), leading investigators to conclude that D2 should remain the standard of care (3). The COLD trial similarly compared D2 and D3 in a multicenter RCT; preliminary data from the first 100 patients confirmed D3 feasibility and safety with no significant increase in major perioperative complications and a higher nodal yield in the D3 arm, though mature survival data remain awaited (4).

A retrospective propensity-matched analysis by Desouza et al. (5) compared CME+D3 with CME+CVL, with both groups undergoing CME and the sole technical difference being additional excision of the surgical trunk of Gillot in the D3 arm. Despite a significantly higher nodal count in the CME+D3 arm (median 31 vs. 25; p=0.003), no improvement in disease-free or OS was observed at a median follow-up of 57 months (5). The D3 group also demonstrated a higher rate of chyle leak (5.6% vs. 0%; p=0.013), attributed to aggressive dissection along the superior mesenteric vein, cautioning against routine D3 adoption outside high-volume centers with dedicated expertise (5).

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The optimal extent of lymphadenectomy for right-sided colon cancer remains unresolved. Previous studies have shown that higher nodal yields do not necessarily translate into better oncological outcomes. The mature results of the RICON and COLD trials will be pivotal in determining whether D3 offers a tangible survival advantage or serves primarily as a staging tool, ultimately shaping future international surgical guidelines.

Keywords: Right-sided colon cancer, lymph node dissection, D2 dissection, D3 dissection

Anahtar Kelimeler: Sağ kolon kanseri, lenf nodu diseksiyonu, D2 diseksiyonu, D3 diseksiyonu

Footnotes

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