

noncurative. Partial responses and stable disease remain the rule rather than the exception. Complete responses are rare to nonexistent. The effect of these agents appears to suspend the disease in time rather than reversing its course. This becomes even more apparent when examining the lack of objective tumor response rates (1% in this trial) in patients who do respond to therapy. Although patients may have improved progression-free survival, we have yet to identify the *magic bullet* of targeted therapy. Multiple novel agents currently being investigated in phase 2 trials undoubtedly will add to our treatment algorithms [5]; however, we must still continue to explore and identify new pathways to pinpoint cytotoxic avenues of therapy to cure rather than to sustain patients with advanced RCC. Additionally, we must exploit existing preclinical models to identify, in a rapid fashion, the most appropriate first, second, and so forth lines of therapy and the best sequence of agents to use.

Secondary to this and other clinical trials, we are now able to design algorithms, based on level 1 or 2 evidence, to better select appropriate therapy for patients. It is evident, however, that individual responses to targeted therapy vary depending on histology, prognostic features, and previous therapy. One potential weakness of this trial is that only patients with clear-cell histology and relatively good prognosis were included, thereby barring generalization of its results to other subsets of patients with advanced RCC. Additionally, this trial brings up the question of how to manage patients who become refractory to mTOR or other newer inhibitors. Questions such as these need to be addressed in future trials. Nonetheless, the study by Motzer et al is an important addition to

our existing treatment regimen, especially since VEGF-targeted agents are currently the standard of care in the first-line management of patients with advanced RCC.

Conflicts of interest: The authors have nothing to disclose.

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Re: Intraoperative Thrombus Embolization during Nephrectomy and Tumor Thrombectomy: Critical Analysis of the University of California-Los Angeles Experience

Shuch B, Larochelle JC, Onyia T, Vallera C, Margulis D, Pantuck AJ, Smith RB, Beldegrun AS

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Experts' summary:

The authors report their experience with tumor embolus (TE) during radical nephrectomy with concomitant tumor thrombectomy of the inferior vena cava (IVC) or renal vein. The rate of TE was 1.8%, with all five cases being level ≥ 1 thrombi. The mortality

rate was 60%. The authors state that TE is a rare and catastrophic event, and they identified risk factors as preoperative embolic events, bland thrombus, and tumor thrombus extension into the IVC. They conclude that adjunctive techniques such as IVC filter and endoluminal occlusion catheters should be considered in high-risk patients, but prompt diagnosis and embolectomy may be lifesaving.

Experts' comments:

In our opinion, these procedures require experience with liver mobilization techniques and significant preoperative preparation. We have performed >100 cases of radical nephrectomy with IVC thrombectomy without intraoperative TE. We agree that meticulous surgical technique [1,2], proper preoperative

work-up, and medical optimization, including expert anesthesia, are mandatory. Additionally, cranial control of the IVC above the tumor thrombus is essential. Even with level 4 thrombi, this is possible without sternotomy or cardiopulmonary bypass (CPB) [3]. In cases of level 3 thrombi, the Pringle maneuver can be avoided if the thrombus can be milked below the major hepatic veins and vascular clamps can be applied.

We have never placed an IVC filter. If the IVC is completely occluded, the risk of embolus is negligible. In level 3 or 4 thrombi, the optimum location of placement is unclear for avoiding complications. Most important, a filter creates a reaction that increases the difficulty of the surgery.

Several patients have presented to us with a tumor thrombus into the pulmonary arteries (PA). These conditions were misdiagnosed as pulmonary emboli (PE) caused by bland thrombus and anticoagulation was started. The treatment should be prompt surgical extirpation of all tumors (including PA) under CPB.

Patients with occlusive level 3 or 4 thrombi may have Budd-Chiari syndrome [4]. This possibility adds significant complexity to the maneuvers necessary to mobilize the liver, as massive congestion may lead to liver injury during handling. All efforts should be made to milk the thrombus below the hepatic veins to minimize hepatic manipulation. If this is not possible, CPB should be initiated. Major hepatic veins should be inspected and tumors removed to avoid PE.

Cardiothoracic surgery should be available. If an intraoperative TE is noted, immediate CPB, along with sternotomy and embolectomy, should be performed, as reflected by the authors.

Conflicts of interest: The authors have nothing to disclose.

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Re: Radical Nephrectomy with and without Lymph-Node Dissection: Final Results of European Organization for Research and Treatment of Cancer (EORTC) Randomized Phase 3 Trial 30881

Blom JH, van Poppel H, Maréchal JM, Jacqmin D, Schröder FH, de Prijck L, Sylvester R; for the EORTC Genitourinary Tract Cancer Group

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Expert's summary:

The authors report on the final results comparing complete lymph node (LN) dissection and radical nephrectomy (RN) for renal cell carcinoma (RCC) versus RN only. In the prospective randomized phase 3

study, only patients with clinically LN-negative, non-metastatic, and resectable disease (mostly T2-T3) were included. Among the included 772 patients, 40 were not eligible for analysis. The complication rate did not differ between 362 patients randomized to LN dissection and RN and 370 patients treated with RN only. With a 12-yr median follow-up, 135 patients had died of disease, 67 without and 68 with LN dissection. There was no difference in time to progression, progression-free survival, or overall survival between the groups. LNs were palpably enlarged in 51 of 346 (15%) evaluable patients with LN dissection. Ten of these 51 (20%) patients with palpably enlarged LNs had metastases. Only 4 of 311 (1%) patients without palpable LNs at dissection had LN metastases. For