

## Renal cell carcinoma with extensive tumor thrombus



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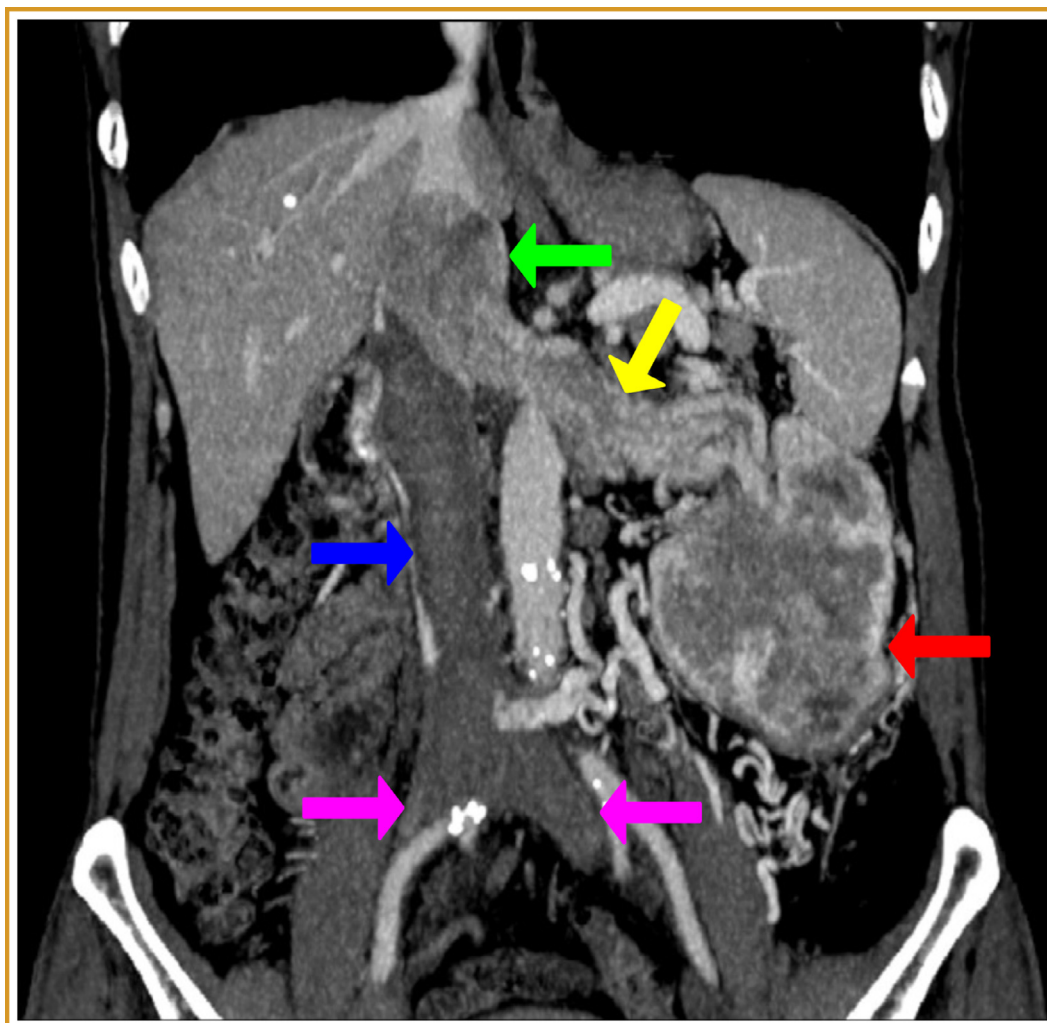


FIGURE 1.

### CASE PRESENTATION

**A** 60-year-old man presented to the emergency department with a 8 h history of swelling of right lower limb. Duplex ultrasonography showed extensive deep venous thrombosis in both legs. Laboratory evaluation revealed the following: D2 polymer level, 10.59 mg/L (reference range, 0–0.55 mg/L); prothrombin activity, 66.10% (reference range, 75 to 130%); plasma

fibrinogen 4.14 g/L (reference range, 2–4 g/L); and the level of neuron-specific enolase was elevated (32.34 ng/mL; reference range, 15.7–17.0 ng/mL). Abdominal enhanced computed tomography (CT) (Fig. 1) demonstrated an irregular left renal mass (red arrow) with enhancing tumor thrombus into the left renal vein (yellow arrow) and into the inferior vena cava to more than 2 cm above the renal vein but below the hepatic veins (green

arrow). Extensive venous thromboses were revealed in the distal part of the inferior vena cava (blue arrow) and the bilateral iliac veins (purple arrows). 18-fluorine-fluorodeoxyglucose positron emission tomography/computed tomography ( $^{18}\text{F}$ -FDG PET/CT) displayed slightly increased FDG metabolisms in the left kidney, left renal vein and inferior vena cava. Left renal cell carcinoma with level-II tumor thrombi was diagnosed according to the Mayo Clinic grading system of inferior vena cava tumor thrombus.

Renal cell carcinoma is associated with a particular biologic propensity for vascular invasion because up to 10% of patients have tumor thrombus growth along the renal vein into the inferior vena cava.<sup>1</sup> Radical nephrectomy with inferior vena cava tumor thrombectomy facilitated by vascular bypass can produce long-term freedom from disease in the absence of distant metastases or positive lymph nodes.<sup>2</sup>

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## CONFLICT OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this manuscript.

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