## Peritoneal metastases from renal cell carcinoma: Images in urology

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'he following urological images are from a 58-yearold male diagnosed with renal cell carcinoma (RCC) and extensive peritoneal metastases at initial clinical workup. Briefly, he presented to the emergency department with a 5-day history of acute abdominal pain associated with abdominal distention, emesis and obstipation. Systemic history revealed a 15-kg weight loss over 6 months, but no relevant urinary complaints. On physical inspection, the patient had a tense and distended abdomen. Upon palpation, there were no signs of peritonitis, guarding or abdominal masses. Percussion revealed a tympanic resonance and a rectal exam revealed an empty ampulla. A plain abdominal radiograph demonstrated mild small bowel distension without signs of pneumoperitoneum. The following 3 images depict the localization and extension of RCC with peritoneal metastases (Fig. 1, Fig. 2, Fig. 3).

RCC metastasizes in bone, lymph node, lung, liver, adrenals and towards the contralateral kidney.<sup>1-3</sup> Metastasis to the mesentery, omentum or peritoneum is reported in only 2% of cases.<sup>4,5</sup> While extremely uncommon, peritoneal dissemination of disease can occur in 2 ways: (1) by direct perforation of the renal capsule and by subsequent exposure to the peritoneal surface or (2) through metastatic embolization achieving localization within the root of the mesentery and subsequent dissemination among the peritoneal surfaces and structures.<sup>6</sup>

**Competing interests:** Dr. Gonçalves, Dr. Benidir, Dr. Erbano, Dr. Jung and Dr. Luz all declare no competing financial or personal interests.

*Fig. 1.* A computed tomography scan of abdomen depicting a voluminous left-sided renal mass. The diameter was 90 mm and occupied the middle-third and lower-central aspects of the renal parenchyma.



*Fig. 2.* Multiple implants, ranging between 0.3 to 1 cm in diameter, within the mesentery and omentum. A histopathological diagnosis of RCC and clear cell subclassification was thereafter confirmed. In total, implants were identified in the abdominal wall peritoneum, mesocolon, small bowel, colon, liver and spleen.



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*Fig. 3.* Another image of multiple implants, ranging between 0.3 to 1 cm in diameter, within the mesentery and omentum. A histopathological diagnosis of RCC and clear cell subclassification was thereafter confirmed. In total, implants were identified in the abdominal wall peritoneum, mesocolon, small bowel, colon, liver and spleen. This paper has been peer-reviewed.

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