

## CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

### Pediatric Radiology Quiz – Case 2

A 12-year-old girl presented with mild abdominal pain. Clinical examination revealed an abdominal mass, nausea and pseudodiarrhea. Laboratory tests were normal except from elevated creatinine levels. Ultrasonography (US) showed an abdominal mass with mass effect on adjacent structures (fig. 1).

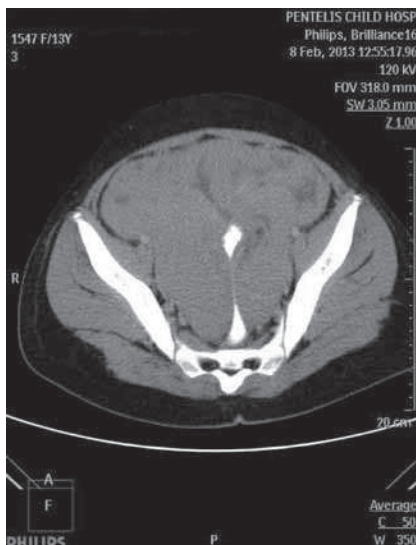


**Figure 1.** A well encapsulated, echogenic solid mass (sagittal ultrasound view) in the lower abdomen, pushing the urinary bladder and displacing the intestines.

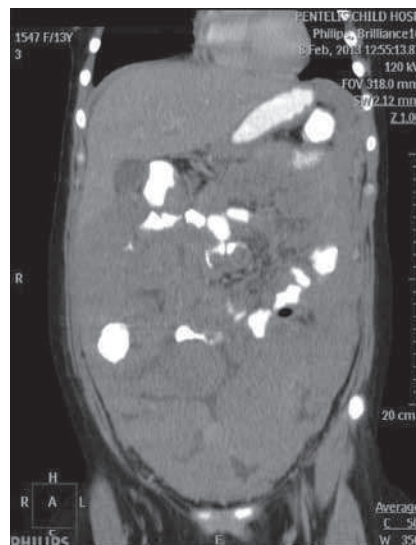
Dilatation of renal pelvis was also observed, bilaterally. Abdomen CT exam showed an abdominal mass that occupied the whole peritoneal cavity, with significant mass effects on adjacent solid organs, intestines and sigmoid colon (figures 2–4). Open biopsy confirmed the diagnosis.

#### Comment

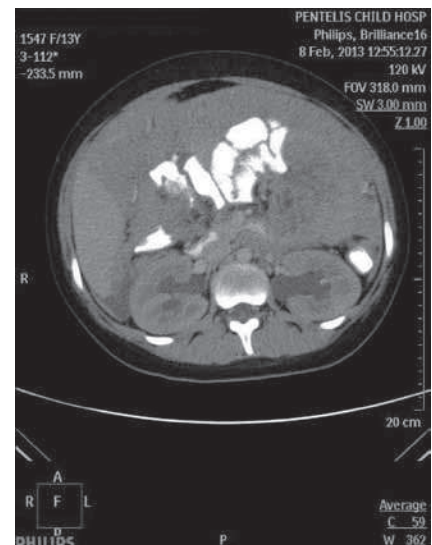
*Burkitt lymphoma is the most rapidly growing tumor in children. It is the most frequent subtype of non-Hodgkin's lymphoma in childhood and accounts for approximately 1/3 of these cases. Abdomen involvement occurs in about half of cases. Involvement of the mesenteric lymph nodes and retroperitoneum by Burkitt lymphoma commonly presents as abdominal and pelvic masses. These masses may be large, single or multiple, may have necrotic centers containing fluid or calcifications. The encasement of the major mesenteric vessels is common.*



**Figure 2.** Lower abdomen CT scan (axial view). A solid mass occupies the lower pelvis that encases sigmoid colon (hourglass configuration).



**Figure 3.** Abdomen CT scan (coronal view). A huge mass occupies abdomen cavity that displaces and encases intestines.



**Figure 4.** Upper abdomen CT scan (axial view). A solid mass occupies the upper peritoneal cavity that encases mesenteric vessels, displaces the adjacent structures. Note the renal pelvic dilatation and the small perihepatic fluid collection.

*Ultrasound (US) is the first imaging method used for a child that presents with an abdominal mass. CT usually follows US for a more detailed assessment of abdomen structures. Because of concerns about radiation risk to pediatric oncology patients, MRI's role is increasing for follow-up examinations.*

## References

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2. BIKO D, ANUPINDI SA, HERNANDEZ A, KERSUN L, BELLAH R. Childhood Burkitt lymphoma: Abdominal and pelvic imaging findings. *AJR Am J Roentgenol* 2009, 192:1304–1315

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