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Wandering Accessory Spleen Revealed by Serial CT: The Diagnostic Value of Vascular Pedicle Identification

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ABSTRACT

Wandering accessory spleen is a rare entity characterized by ectopic splenic tissue that can change position due to its vascular pedicle, potentially mimicking an abdominal mass or lymphadenopathy. We report the case of a 62-year-old woman with stage IV invasive breast carcinoma undergoing oncological follow-up. Serial CT examinations performed between August 2024 and June 2025 demonstrated a small solid lesion with progressive changes in location, initially considered as lymphadenopathy. On August 28, 2024, the lesion was located in the left para-aortic region, adjacent to the left kidney. On May 28, 2025, it was identified in the celiac-mesenteric region, more to the right. A complementary arterial-phase CT performed on June 11, 2025 showed the lesion in the mesenteric region, more laterally positioned to the left, with enhancement similar to the orthotopic spleen and an identifiable vascular pedicle. These findings supported the diagnosis of a wandering accessory spleen. A second, stable accessory spleen with a visible vascular pedicle was also identified. This case highlights the importance of comparing serial CT examinations and recognizing the vascular pedicle when evaluating a mobile ectopic abdominal lesion, particularly in oncological patients.

KEYWORDS

Wandering accessory spleen; Ectopic splenic tissue; CT imaging; Vascular pedicle; Lymphadenopathy.

MAIN ARTICLE

INTRODUCTION

Accessory spleens are congenital anomalies resulting from incomplete fusion of splenic tissue during embryologic development. They consist of normally functioning splenic tissue with their own arterial and venous vascular supply and are relatively common, with reported prevalence ranging from approximately 10% to 20% [1–3]. Most accessory spleens are small and are located near the splenic hilum or inferior pole, although atypical locations may occasionally be encountered [1–3].

Recognition of an accessory spleen is clinically important because ectopic splenic tissue may mimic lymphadenopathy or another abdominal mass, particularly when it is located away from the splenic hilum. On contrast-enhanced CT, an accessory spleen typically demonstrates attenuation and enhancement characteristics similar to those of the orthotopic spleen.

Identification of a vascular pedicle supplying the lesion provides an additional diagnostic clue and may help distinguish ectopic splenic tissue from other solid abdominal lesions [1,3,4].

A wandering accessory spleen (WAS) is a rare variant characterized by an ectopic accessory spleen attached to a relatively long vascular pedicle, allowing mobility within the abdominal cavity. Consequently, the lesion may occupy different locations on successive imaging examinations. Comparison with previous examinations can therefore provide an important diagnostic clue, while thin-section CT with multiplanar and three-dimensional reconstructions may allow identification of the vascular pedicle connecting the ectopic splenic tissue to the splenic vessels. This characteristic vascular configuration has been described as the “Jokari sign” [2].

The diagnosis of WAS can be particularly challenging in patients with known malignancy, in whom an ectopic abdominal nodule may initially be interpreted as metastatic lymphadenopathy. Correct recognition is important not only to avoid diagnostic errors but also because a wandering accessory spleen may rarely undergo torsion, with subsequent vascular compromise and infarction [5,6].

We report a case of a wandering accessory spleen identified on serial CT examinations in a 62-year-old woman undergoing oncological follow-up for stage IV invasive breast carcinoma. The lesion was initially interpreted as lymphadenopathy but demonstrated changes in apparent location on successive examinations while maintaining a relatively stable size. Complementary arterial-phase CT demonstrated enhancement similar to that of the orthotopic spleen and allowed identification of its vascular pedicle. A second, stable

accessory spleen with a visible vascular pedicle was also identified. This case highlights the importance of reviewing serial imaging studies and recognizing the vascular pedicle when evaluating a mobile ectopic abdominal lesion, particularly in an oncological setting.

CASE REPORT

A 62-year-old woman with stage IV invasive ductal breast carcinoma, undergoing systemic treatment, was followed with serial contrast-enhanced computed tomography (CT) examinations as part of her oncological surveillance.

The first CT examination, performed on August 28, 2024, demonstrated a small, well-defined nodular lesion measuring 12.8×11.0 mm in the left para-aortic region, adjacent to the left renal area (Figure 1). In the context of the patient's known metastatic malignancy, the lesion was initially considered to represent an enlarged lymph node. A subsequent CT examination performed on January 27, 2025, showed a similarly sized lesion, measuring approximately 12.3×11.0 mm, without significant dimensional progression.

On May 28, 2025, follow-up CT was performed without contrast and during the portal venous phase. The lesion remained small, measuring approximately 12.3×11.0 mm. However, its apparent anatomical position differed from that described on previous examinations, raising uncertainty regarding its exact origin (Figure 2).

An additional arterial-phase acquisition was performed on June 11, 2025. The lesion measured 12.4×11.2 mm and demonstrated marked enhancement, with attenuation and enhancement characteristics similar to those of the spleen. Careful review of the arterial-phase images demonstrated a vascular pedicle supplying the lesion. In addition, a native accessory spleen with its own vascular pedicle was identified, providing an important anatomical clue to the splenic origin of the ectopic lesion (Figure 3).

The combination of splenic-like enhancement, identification of a vascular pedicle, the presence of a native accessory spleen with a pedicle, and the stability of the lesion over serial examinations strongly supported the diagnosis of ectopic splenic tissue rather than lymphadenopathy. The apparent variation in the lesion's location between successive examinations, together with its stable size and splenic-type enhancement, raised suspicion of a mobile ectopic splenic structure. Identification of the vascular pedicle on arterial-phase CT provided the key diagnostic clue.

The final diagnosis was therefore an ectopic accessory spleen in an unusual mesenteric location, associated with a native accessory spleen, initially misinterpreted as a lymph node in the context of the patient's underlying advanced breast malignancy.

DISCUSSION

Accessory spleens are common congenital anomalies resulting from incomplete fusion of splenic tissue during embryologic development. They are usually small, asymptomatic, and located near the splenic hilum or inferior pole. Their recognition is clinically important because ectopic splenic tissue may mimic lymphadenopathy or another abdominal mass, particularly when located away from the expected splenic region. On contrast-enhanced CT, an accessory spleen typically demonstrates enhancement characteristics similar to those of the orthotopic spleen, and identification of a vascular pedicle may provide an additional diagnostic clue [1,3,4].

A wandering accessory spleen (WAS) is a rare variant characterized by an accessory spleen attached to a relatively long vascular pedicle, allowing mobility within the abdominal cavity. Consequently, its position may vary between successive imaging examinations. This mobility is an important diagnostic clue and may be particularly valuable when the lesion is located far from the orthotopic spleen [2].

The diagnostic challenge is especially relevant in oncological patients, in whom a small solid abdominal nodule may readily be interpreted as metastatic lymphadenopathy. In our patient with stage IV invasive breast carcinoma, the lesion was initially considered to represent lymphadenopathy because of its para-aortic location and the underlying malignant disease. However, comparison of serial CT examinations demonstrated an apparent change in the lesion's location despite minimal variation in size. This discrepancy between positional changes and dimensional stability was an important clue suggesting a mobile ectopic structure rather than a conventional lymph node.

A particularly close imaging analogy can be found in the report by Vander Maren and Verbeeck, which described a woman with breast carcinoma in whom an abdominal enhancing nodule initially raised concern for metastatic disease. Review of previous CT examinations demonstrated a change in the lesion's location, and thin-section CT with curved multiplanar and three-dimensional reconstructions subsequently revealed a long vascular pedicle connecting the lesion to the splenic vessels. This characteristic configuration was termed the “Jokari sign” [2]. Our case similarly demonstrates the diagnostic value of reviewing prior examinations and tracing the vascular supply of an unusual abdominal nodule.

In the present case, the complementary arterial-phase acquisition was particularly useful. The lesion demonstrated enhancement similar to that of the orthotopic spleen, supporting its splenic nature. More importantly, a vascular pedicle supplying the lesion was identified. Demonstration of a vascular connection to the splenic circulation is a strong argument in

favor of accessory splenic tissue and may help distinguish it from lymphadenopathy or other solid abdominal masses [1–4]. Multiplanar reconstructions are particularly helpful in following the course of the vascular pedicle and confirming its relationship with the splenic vessels.

Another distinctive feature of our observation was the presence of a second, stable accessory spleen with a visible vascular pedicle. This additional finding provided a useful internal radiological reference for the enhancement pattern and vascular anatomy of accessory splenic tissue and further supported the splenic origin of the mobile lesion. Multiple accessory spleens have been reported, although most patients have a single accessory spleen [1,7]. Splenosis is an important differential diagnosis when ectopic splenic tissue is encountered. Both accessory spleens and splenotic implants may demonstrate enhancement similar to that of the orthotopic spleen. However, splenosis usually develops after splenic trauma or surgery and consists of autotransplanted splenic fragments without a demonstrable vascular connection to the splenic vessels. In contrast, the presence of a vascular pedicle favors an accessory spleen [2].

The mobility of a wandering accessory spleen is clinically relevant because a long vascular pedicle may predispose to torsion. Torsion can result in vascular compromise, ischemia, infarction, hemorrhage, and acute abdominal pain. CT findings may include twisting of the vascular pedicle and decreased or heterogeneous enhancement of the ectopic splenic tissue [2,5,6]. In our patient, no imaging feature suggestive of torsion or ischemia was identified, and the lesion maintained enhancement characteristics similar to those of the orthotopic spleen during follow-up.

This case emphasizes two complementary principles in abdominal CT interpretation. First, comparison with previous examinations may reveal positional changes that are not apparent on a single study. Second, systematic assessment of the vascular pedicle may establish the origin of an otherwise indeterminate mass. These two elements are particularly important in oncological patients, in whom diagnostic anchoring on metastatic disease may lead to misinterpretation of benign ectopic splenic tissue.

The main limitation of this case is the absence of histopathological confirmation.

Nevertheless, the diagnosis was strongly supported by the combination of serial positional changes, relative dimensional stability, splenic-type enhancement, identification of a vascular pedicle, and the presence of a second accessory spleen with its own vascular pedicle.

Overall, a wandering accessory spleen should be considered in the differential diagnosis of a small abdominal mass demonstrating splenic-type enhancement, particularly when its

location changes on serial imaging. Recognition of the vascular pedicle, together with careful review of previous CT examinations and appropriate multiplanar reconstructions, can establish the diagnosis and prevent erroneous interpretation as metastatic lymphadenopathy in patients undergoing oncological surveillance.

CONCLUSION

A wandering accessory spleen is an uncommon but important diagnostic consideration when a small abdominal mass shows atypical or changing locations on serial CT examinations. In an oncological patient, such a lesion may easily be mistaken for metastatic lymphadenopathy. The combination of positional variability, splenic-type enhancement, and identification of a vascular pedicle should prompt consideration of ectopic splenic tissue. Careful comparison with previous examinations and systematic evaluation of the vascular pedicle, particularly on arterial-phase CT with multiplanar reconstructions, can establish the diagnosis and prevent unnecessary diagnostic or therapeutic interventions.

FIGURES:

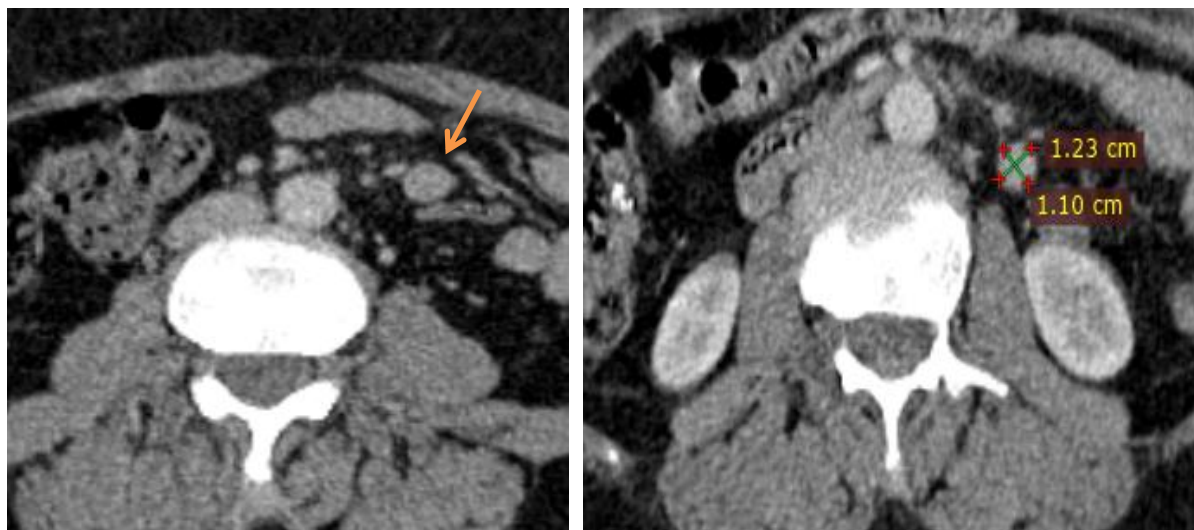


Figure 1. Initial CT appearance of the lesion. Contrast-enhanced CT obtained on August 28, 2024, showing a small, well-defined nodular lesion measuring 12.8×11.0 mm in the left para-aortic region, adjacent to the left kidney (arrow), initially interpreted as lymphadenopathy in the context of the patient's known breast carcinoma.

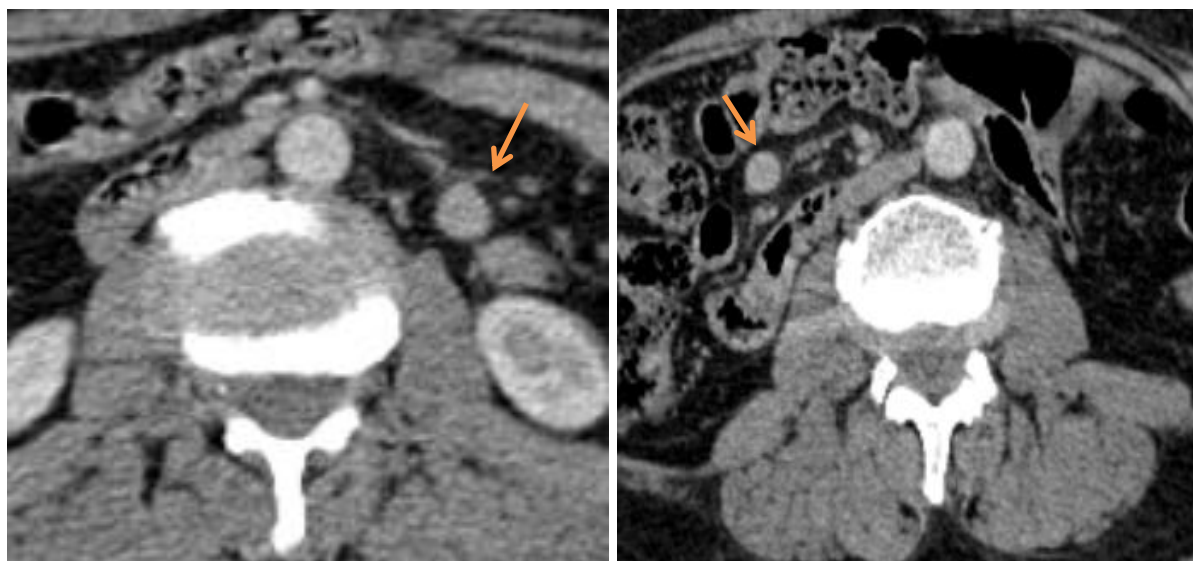


Figure 2. Serial CT demonstrating positional change of the wandering accessory spleen. Axial contrast-enhanced CT images obtained on (A) August 28, 2024, showing the lesion in the left para-aortic region adjacent to the left kidney (arrow), and (B) May 28, 2025, showing the same lesion in the celiac-mesenteric region (arrow). Despite its relatively stable size, the lesion demonstrates a marked change in location between the two examinations.



Figure 3. Arterial-phase CT demonstrating the splenic origin and vascular supply of the accessory splenic tissue. (A) Axial arterial-phase CT image showing the wandering accessory spleen (arrow), with intense enhancement similar to that of the orthotopic spleen and a clearly identifiable vascular pedicle (arrowhead). (B) Axial arterial-phase CT image showing a second, stable accessory spleen (arrow) with its own visible vascular pedicle (arrowhead).

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