

Rare Breast Pathology with Cyndroma of Breast on Surgical Resection

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Summary

Common breast pathologies include invasive ductal carcinoma, invasive lobular carcinoma, ductal carcinoma in situ, and lobular carcinoma in situ.

Cylindromas are usually associated with head or neck locations. Although they may appear to malignant, these solitary growths are typically benign.

This poster aims to educate on the presentation, pathology, and management of this rare form of breast pathology.

Presentation

The patient is a 79-year-old female with past medical history notable for obesity, obstructive sleep apnea, hypertension and previous basal cell carcinoma of the face who presented to emergency department for a fall.

The patient fell while walking up stairs and sustained injury to chest.

Work up at that time revealed an incidental finding of an area of calcifications and mass in left breast on trauma CT scan (Figure 1).

Diagnostic Course

Subsequent breast specific imaging resulted in multiple left breast core biopsies (Figure 2). She has a family history of breast cancer in her daughter.

With multidisciplinary planning, a left breast needle localization lumpectomy and axillary sentinel lymph node dissection was performed due to the initial diagnosis of cancer. An intraoperative specimen mammogram confirmed the removal of the biopsied mass. She recovered from the surgery well.

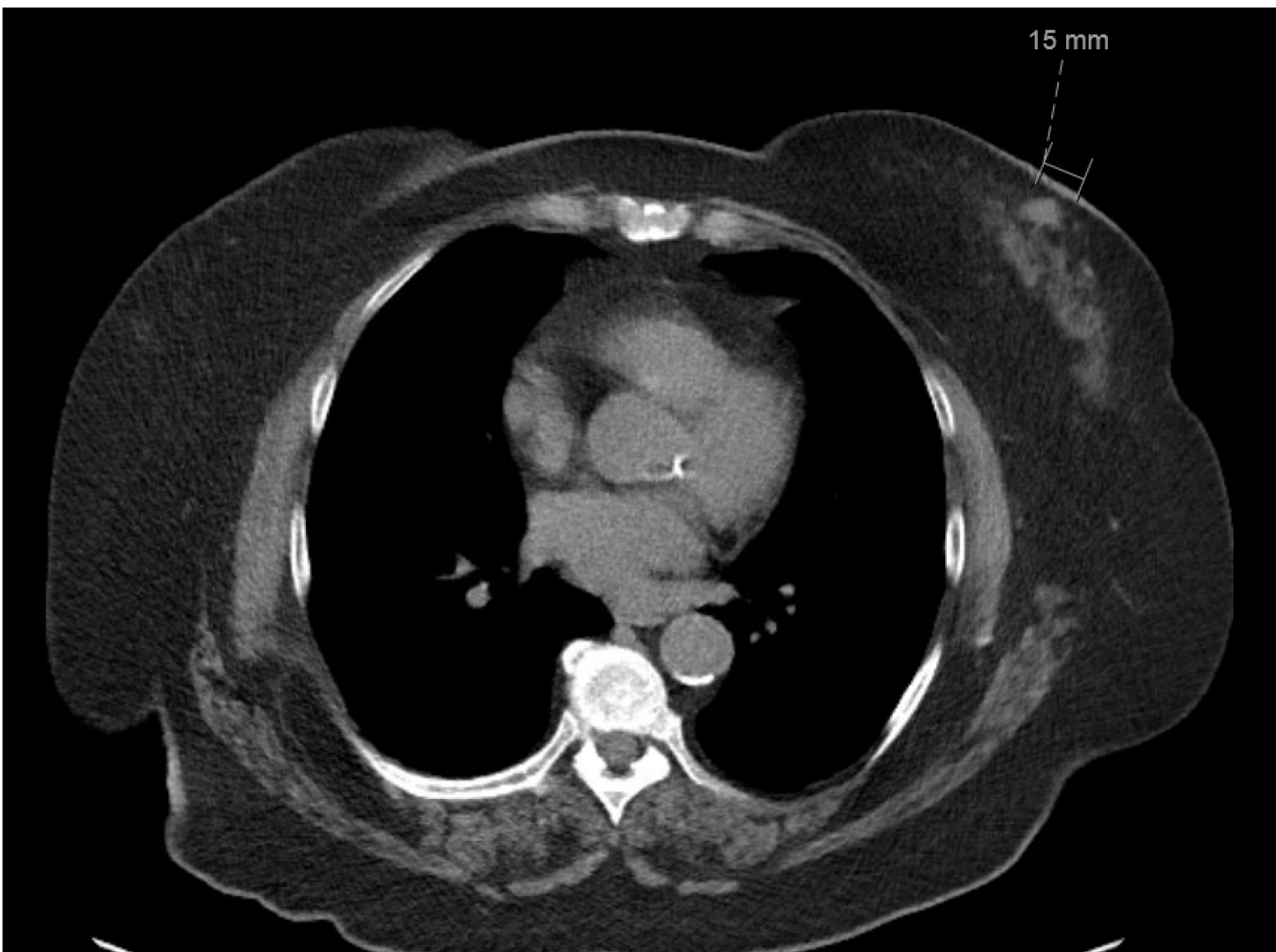


Figure 1 (left). CT chest without contrast showing 15 mm nodular asymmetric soft tissue density in the left breast upper inner quadrant.

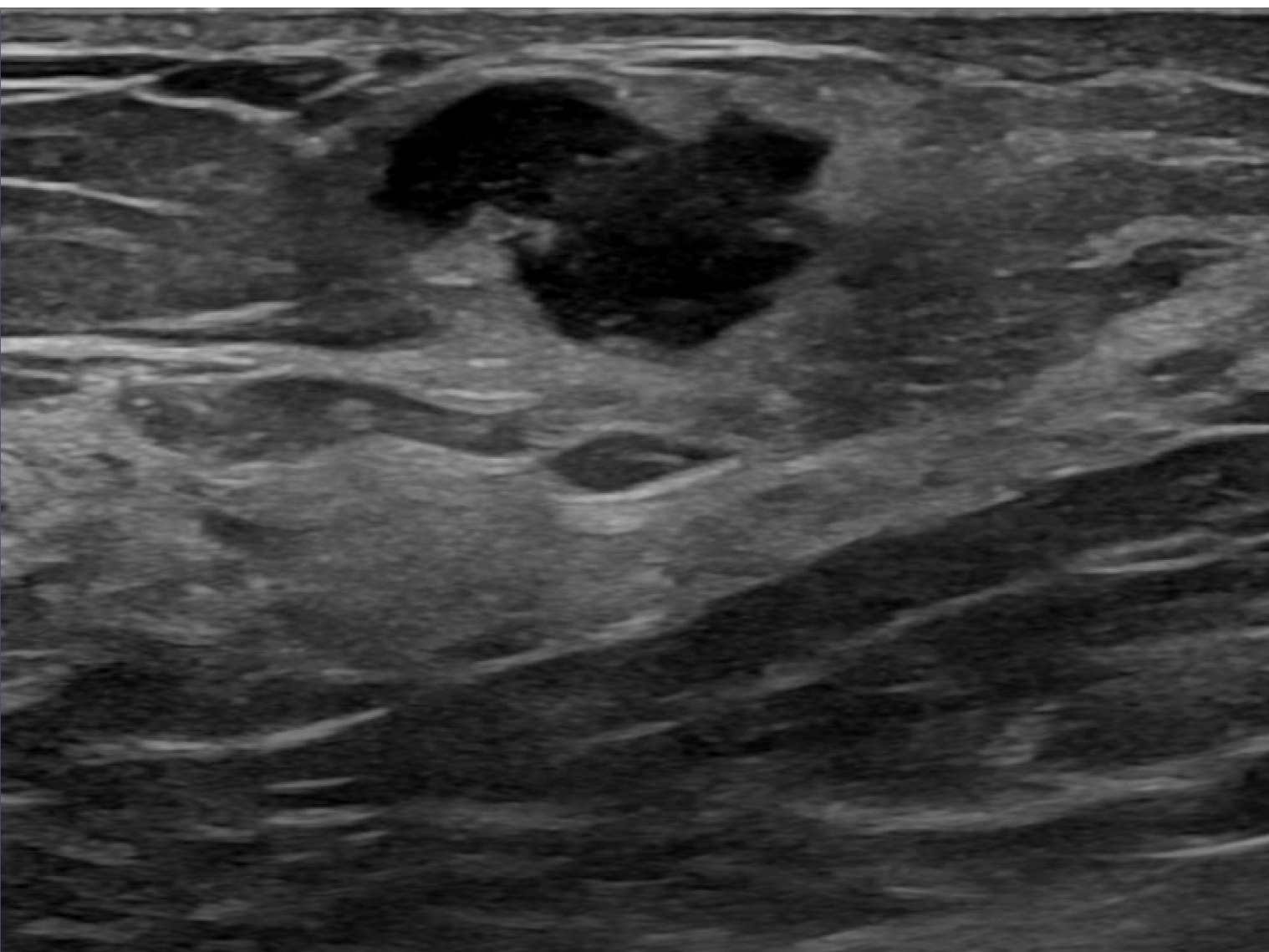


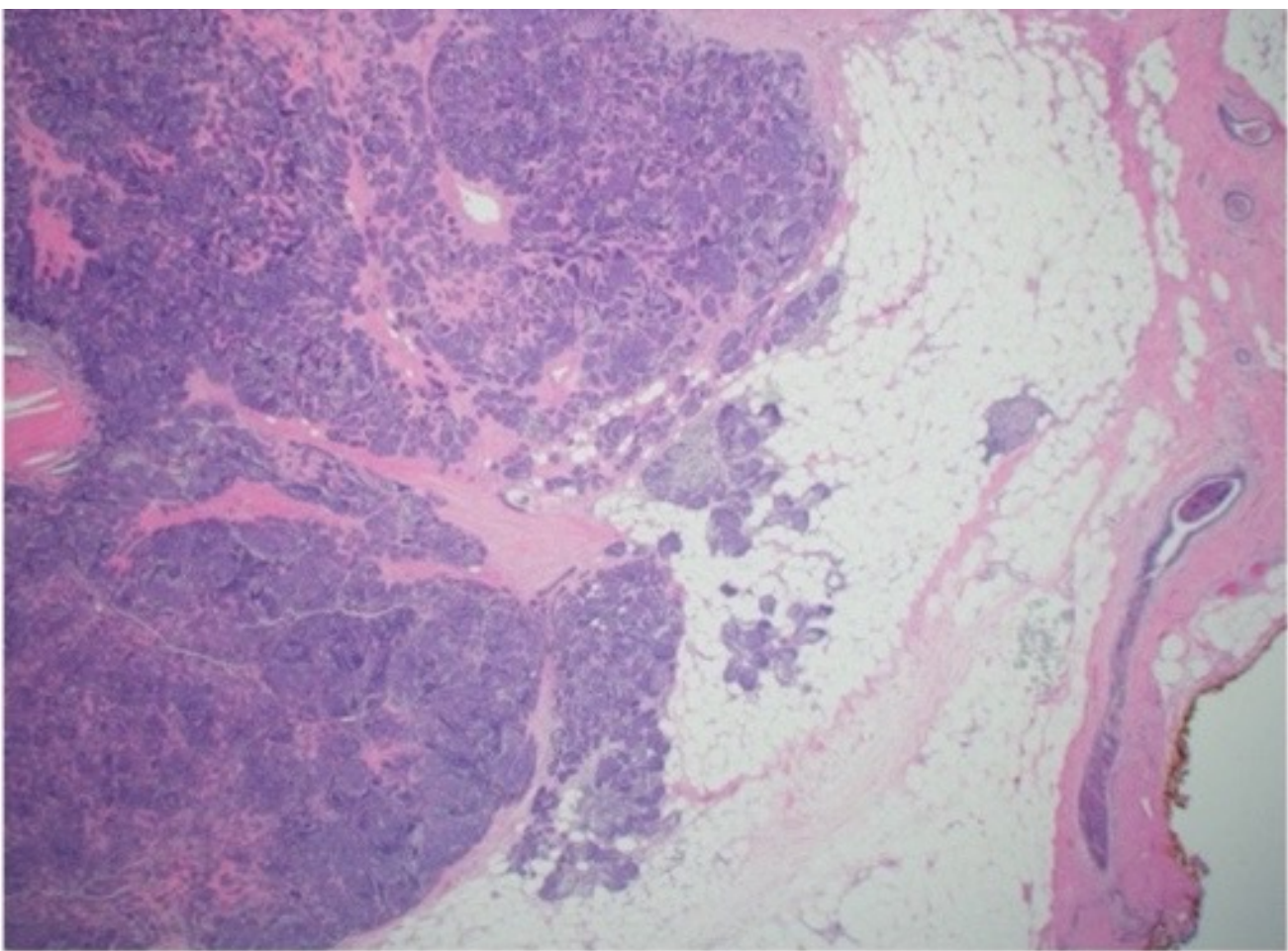
Figure 2 (right). Targeted ultrasound of the mass in the inner left breast was performed and demonstrates a 14 x 10 x 9 mm irregular hypoechoic mass with vascular flow at 11:00 2 cm from the nipple.

Pathology

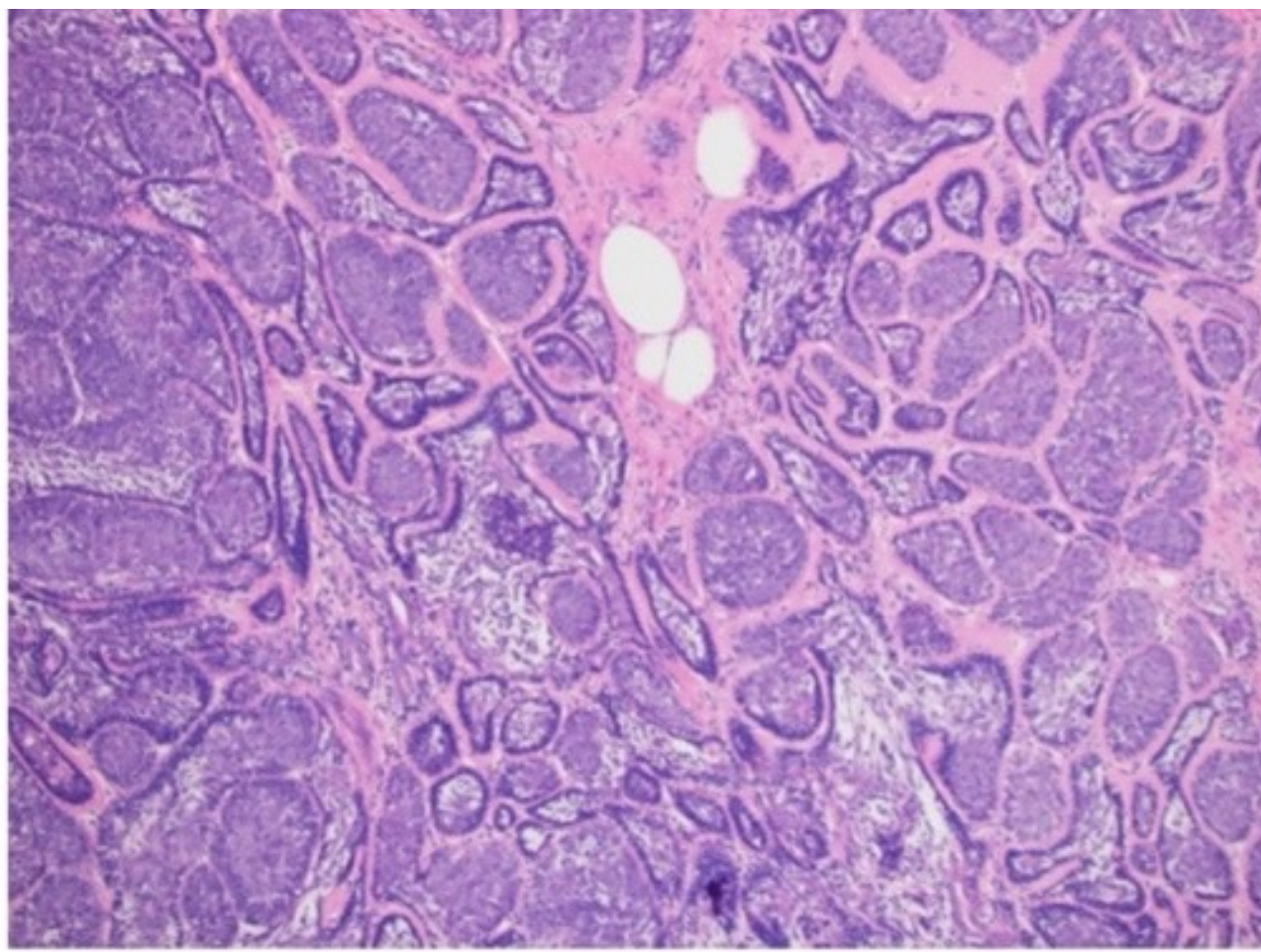
The core biopsies showed two areas revealed fibroadenoid changes and were concordant. A 1.4 cm, upper inner left breast mass was originally interpreted to be an invasive ductal carcinoma with basaloid features on core biopsy. The pathologic differential on the lesion on core biopsy included possible adenoid cystic carcinoma.

The patient’s surgical pathology was reviewed in-house, as well as inter-departmental consultation from Mayo Clinic. **The final surgical pathology was found to be cyndroma with no invasive ductal cancer seen.** For the 5 mm small mass, incidental atypical ductal hyperplasia (ADH) in a background of fibrocystic changes found. Two negative sentinel lymph node on biopsy.

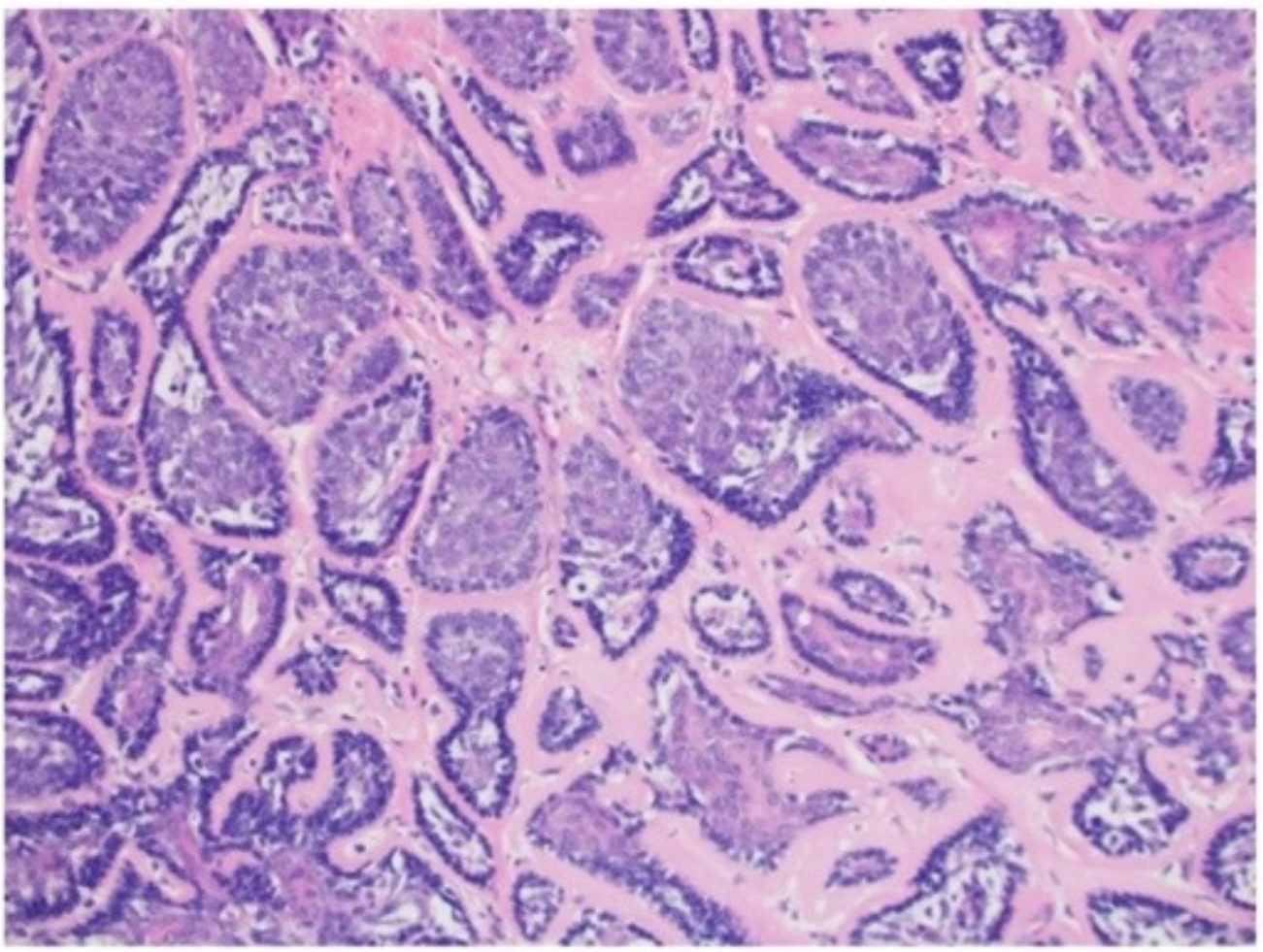
On gross examination, a 24 mm firm, solid, overall circumscribed mass was identified. Histological sections demonstrated a biphasic neoplasm composed of densely packed, cytologically bland basaloid tumor islands surrounded by compact, eosinophilic basement membrane-like material, arranged in a “jigsaw” pattern (Figure 3 - A-C). Further review identifying this lesion as cyndroma. Although relatively circumscribed, some peripheral infiltration into adjacent tissue was present (figure 3-A). Immunohistochemically, the neoplastic cells expressed GATA3 and p63, and showed patchy expression of smooth muscle myosin.



A



B



C

Figure 3. Histological features of cyndroma. A. Low magnification demonstrating a relatively circumscribed lesion with focal infiltration into adjacent tissue. B. Intermediate magnification depicting the distinctive “jigsaw” pattern of cytologically bland, basaloid tumor nests surrounded by eosinophilic basement membrane-like material. C. High magnification of biphasic nests displaying a dual population of smaller, darker blue cells with scant cytoplasm toward the periphery of the nests and larger, paler cells with slightly more abundant eosinophilic cytoplasm within the center.

Discussion

The recommended treatment of cyndromas involves resection to negative margins to minimize the chance of local recurrence. CO2 laser removal for smaller cyndromas has been described.

This case represents a cyndroma of the breast initially diagnosed as an invasive ductal cancer on core biopsy. Increased consideration of cyndroma as a possible breast pathology on core biopsy would help surgical planning and avoid over treatment. The recommended treatment for a cyndroma in the breast would be complete surgical excision.