Unusual Breast Cancers: Useful Clues to Expanding the Differential Diagnosis

Invasive ductal carcinoma and ductal carcinoma in situ account for about 85% of breast cancers. Unusual breast neoplasms may be broadly divided into invasive lobular carcinoma, well-differentiated subtypes of invasive ductal carcinoma, cancers of stromal origin, and metastatic neoplasms. Clues are often present in imaging characteristics, patient demographics, and/or clinical features that may suggest that the finding is not the usual type of breast cancer. Some rare malignancies also provide specific clues to their diagnosis. This review provides an overview of unusual and a few rare malignant breast neoplasms, highlighting particular or specific clinical or imaging findings that will enable residents to expand their differential diagnosis of breast lesions beyond invasive ductal carcinoma.

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Invasive ductal carcinoma (IDC) not otherwise specified and ductal carcinoma in situ (DCIS) account for 85% of breast cancers (1). IDC not otherwise specified typically manifests as a spiculated or irregular mass or as a new focal asymmetry, while DCIS typically manifests as a cluster of pleomorphic or fine linear-branching calcifications. The remaining 15% of breast cancers are other types of malignant neoplasm.

Unusual breast cancers may be broadly divided into invasive lobular carcinoma (ILC), well-differentiated subtypes of IDC, cancers of stromal origin, and metastatic neoplasms. Clues are often present in the imaging characteristics, patient demographics, or clinical features that may suggest that the finding is not a typical breast cancer. Some rare malignancies also provide similar clues to the diagnosis.

This review will provide an overview of unusual, as well as a few rare, malignant breast neoplasms, highlighting particular or specific clinical or imaging findings that will enable residents to expand their differential diagnoses of breast lesions beyond IDC.

**Invasive Lobular Carcinoma**

ILC accounts for 6%–9% of breast cancers (1,2). While IDC tends to enlarge en masse (like an expanding balloon), ILC spreads as sheets of a single-cell layer along Cooper ligaments and other structures in the breast (Fig 1), somewhat like a spiderweb. Because of this infiltrative growth pattern, ILC is more difficult to detect at clinical examination and mammography than is IDC (3,4). ILC is therefore usually larger at diagnosis than IDC (5) and is often multifocal (2). Lymph node metastasis is less common with ILC than IDC for equal-size lesions, however (5), so the stage at diagnosis for ILC is overall similar to that for IDC despite the larger size at diagnosis (6).

Imagine what a spiderweb in the breast might feel like at a clinical examination. The infiltrative nature of this cancer will result in decreased compliance of the tissue. While IDC typically manifests as a firm palpable lump at clinical examination, the most common clinical findings of ILC are palpable thickening and skin or nipple retraction (7). When large, a firm palpable mass may become evident at clinical examination, often with the clinical examination findings being of greater concern for breast carcinoma than are the imaging findings (2). The mammogram often underestimates tumor size relative to the physical examination findings (2). ILC also has a propensity for metastatic spread to the peritoneum, retroperitoneum, and gynecologic organs (8,9); therefore, consider the diagnosis of ILC in women presenting with ascites, hydrenephrosis, or pelvic masses.

Now imagine what a spiderweb in the breast might look like on a mammogram: a lot of straight lines, a little denser in the middle, but little or no central mass. The most frequent manifestation of ILC is indeed architectural distortion with or without a central mass (10) or a focal asymmetry (6) (Fig 1). Calcifications are a very uncommon feature of ILC (6,10). Unlike IDC, ILC is more frequently seen in only one view, most commonly in the craniocaudal view (6), which typically has better compression than the MLO view. Recall the similarity of ILC to a spiderweb; greater compression of the breast in the craniocaudal projection would make the straight lines become more obvious. Mammography often greatly underestimates the size of ILC as seen at histologic examination (5), which makes sense because only the areas most affected with the infiltrative sheets of tumor cells are likely to be evident at imaging.

When ILC is large, the affected breast may appear to be decreasing in size on the mammogram (Fig 2); this has been termed the “shrinking breast” (11). Such shrinkage is probably due to the sheets of tumor cells causing decreased compressibility of the breast so that the breast tissue does not spread out as well during mammographic compression, making the breast appear smaller on the mammogram. Note that the shrinking breast is a mammographic and not a clinical finding of ILC. The physical size of the breast at clinical inspection is not different, though the patient may note thickening or a palpable lump on the affected side.

At US, the numerous sheets of tumor cells will frequently cause architectural distortion and posterior acoustic shadowing (Fig 1) and, as at mammography, often without a discrete mass. It may occasionally be difficult to distinguish the mild posterior acoustic shadowing that may be seen with fibrocystic changes from that of ILC. In the case of a benign fibrocystic change, application of firm pressure with a transducer will often remove the mild shadowing. Sur-

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**Essentials**

- Invasive lobular carcinoma infiltrates the breast in thin sheets of cells similar to a spiderweb, typically resulting in thickening at clinical examination, architectural distortion without a central mass at mammography, and areas of shadowing on a US scan.
- The well-differentiated subtypes of invasive ductal carcinoma (IDC) (mucinous, medullary, tubular, and papillary carcinomas) have a better prognosis than IDC not otherwise specified, because the former are characterized by slow growth (except medullary carcinoma) and a relatively circumscribed appearance at mammography (except tubular carcinoma, which appears spiculated at mammography but is “tubular” or “cool”).
- Phylloides tumor mimics fibroadenoma in appearance but is typically large in size and occurs in middle-aged and older women.

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**Abbreviations:**
DCIS = ductal carcinoma in situ
IDC = invasive ductal carcinoma
ILC = invasive lobular carcinoma
MLO = mediolateral oblique

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Figure 1: (a) Left craniocaudal (left) and mediolateral oblique (MLO) (right) mammographic views in 48-year-old woman with a palpable lump at 12-o’clock position (triangular marker) show focal asymmetry (circled area) in the region of the palpable abnormality, with subtle architectural distortion (arrows) on MLO view. (b) Ultrasoundographic (US) scan shows a poorly defined area of architectural distortion and several hypoechoic areas (arrowheads) with posterior acoustic shadowing (straight arrows) without a discrete mass. Architectural distortion can be recognized as abrupt termination of normal Cooper ligaments (curved arrows). (c) Histologic section shows ILC with sheets of cells of single-layer thickness (arrows) infiltrating through fibrous stroma, which is stained pink. (Hematoxylin-eosin stain; original magnification, ×200.)

Figure 2: Mammograms in 77-year-old woman who stated that her right breast was becoming firmer. Craniocaudal views of both breasts from (a) previous and (b) current year show an apparent decrease in size of the right breast (arrows). Patient exhibited no physical change in breast size at clinical examination. At mastectomy, all quadrants were involved with ILC.
vey scanning by using compound imaging reduces shadowing, which may be the primary US finding of ILC.

Management of a lesion manifesting as architectural distortion without a central mass is controversial, since the differential diagnosis includes radial sclerosing lesion (radial scar). Surgical excision is often recommended rather than core biopsy since 7%–30% of radial sclerosing lesions may be associated with small foci of IDC or DCIS (12). However, 29% of lesions suspected of being radial sclerosing lesions at imaging are actually carcinomas at biopsy (13). Core biopsy prior to excision is therefore often helpful in surgical planning.

At my institution, we discuss with the patient the differential diagnosis of radial sclerosing lesion versus ILC at the time of diagnostic imaging. We advise patients that they will ultimately need surgical excision but that core biopsy may aid surgical planning. The patients are given appointments for needle biopsy and for breast surgery consultation several days after the biopsy. If core biopsy results show invasive carcinoma, appropriate management that includes sentinel node biopsy and wide surgical excision can be planned. If core biopsy results are benign or show a radial sclerosing lesion, surgical excision of a small volume of tissue for diagnostic purposes is performed. Patients are very receptive to this plan as long as they understand that two procedures (core biopsy and surgical excision) are being recommended at the outset. Surgical colleagues at our institution prefer to have core biopsy information prior to proceeding to the operating room.

Other investigators are evaluating if follow-up rather than excisional biopsy is acceptable when core biopsy results show a radial sclerosing lesion in selected patients. A study by Brenner et al (14) found no cancers at excision when radial sclerosing lesion was diagnosed at stereotactic core biopsy by using an 11-gauge vacuum-assisted biopsy device, and no atypia was present at histologic examination. Close-interval follow-up may be a reasonable alternative to excision when radial sclerosing lesions are diagnosed with this method. Fine-needle aspiration biopsy is not as sensitive for ILC as it is for IDC (15). Core biopsy is the preferred method when ILC is suspected, even when the lesion is palpable (15). It is likely more difficult to obtain adequate cellular material from ILC because of the infiltrative pattern of spread with single-layer sheets of cells. Imagine trying to shear off a piece of a spiderweb with a small needle. It would be far easier to remove small pieces at core biopsy.

ILC is more frequently associated with positive margins at excision (16) and is more frequently treated with mastectomy (3). This is likely due to the large size of ILC at diagnosis and the underestimation of the disease extent at conventional imaging. If breast conservation is desired by the patient, US or magnetic resonance (MR) imaging may be used for assessing the extent of the disease (4,17). In 39% of women with ILC, MR imaging depicts more extensive disease than is suspected with conventional imaging (17). On MR images, ILC may manifest as an enhancing solitary mass with irregular margins, multiple enhancing lesions, or only enhancing septa (18).

In summary, ILC typically infiltrates with single-layer-thick sheets of cells like a spiderweb rather than en masse. ILC should be considered in the differential diagnosis of lesions that manifest primarily as architectural distortion with or without a central mass when vague hypoechoic areas with posterior acoustic shadowing are seen at US, when the breast appears to have decreased in size on a mammogram (shrinking breast), and when the clinical examination findings are more suspicious than the imaging findings.

**Subtypes of Ductal Carcinoma**

Most breast cancers are of ductal origin, with IDC not otherwise specified being the most common type. “Not otherwise specified” refers to the lack of differentiation of the cancer. Several subtypes of ductal carcinoma, however,
exhibit differentiation by producing tubules, mucin, et cetera. These subtypes of ductal carcinoma are named according to the morphologic differentiating feature. Because these cancers are well differentiated, they grow slowly (with the exception of medullary carcinoma) and are often relatively circumscribed at imaging (with the exception of tubular carcinoma). These well-differentiated tumors will nearly always be grade I of III (modified Scharff Bloom Richardson scale) and, therefore, have an excellent prognosis. If the tumor type is mixed with less than 90% of the differentiated subtype, prognosis is determined by the least differentiated portion of the tumor.

Tubular Carcinoma

Tubular carcinoma accounts for about 1% of breast cancers (1,19). It is often found incidentally at screening rather than manifesting with clinical findings (20). The appearance mimics typical IDC not otherwise specified, manifesting as one or more small spiculated masses (Fig 3) (21). The spicules are often longer than the central mass (21). On US scans, the appearance also mimics IDC not otherwise specified, manifesting as a hypoechoic solid mass with ill-defined margins and posterior acoustic shadowing (21).

The prognosis however is excellent. The cause-specific survival for women with tubular carcinoma is 97% at 10 years (22). Because of the excellent prognosis, some investigators have proposed treating tubular carcinoma with excision only (23). The term tubular (good) replaced “cool” (excellent, all right) for a time in the 1980s and this is an easy way to remember that tubular carcinoma has an excellent prognosis despite its appearance as a spiculated mass. Note that tubulolobular carcinoma is an ILC with features of tubular carcinoma but behaves as other ILCs with regard to prognosis.

Tubular carcinoma may occasionally be difficult to differentiate from radial sclerosing lesion (radial scar) at histologic examination. If this is of question, particularly at core biopsy, α-smooth muscle actin stain or maspin stain may be used to help identify myoepithelial cells in the basement membrane of normal tissue, but staining will be absent in tubular carcinoma (24). Tubular carcinoma should be considered in the differential diagnosis of one or more adjacent small spiculated masses, especially if the masses are nonpalpable and have long spicules.

Mucinous Carcinoma

Mucinous carcinoma accounts for about 2% of breast cancers (1). Mucin is a dominant feature at histologic examination (Fig 4). From your last experience with an upper respiratory infection, you will recall that mucin is a semisolid substance. If palpable, these cancers tend to manifest as soft masses. Because of the predominance of mucin, this carcinoma typically manifests as a low-density, relatively well-defined or microlobulated oval or lobular mass at mammography (Fig 4) (25). It belongs to the list of “circumscribed” cancers (Fig 5). On spot compression views (obtained with or without magnification), the margins of circumscribed cancers are usually ill defined rather than sharply defined (Fig 4). On US scans, mucinous carcinomas are often heterogeneous in echogenicity and may have mixed solid
and cystic components (25). Posterior acoustic enhancement is common; posterior acoustic shadowing is very uncommon (25). On MR images, mucinous carcinomas are one of the few cancers that have very high signal intensity on T2-weighted images (26), again likely due to the watery nature of mucin (Fig 6).

**Medullary Carcinoma**

Medullary carcinoma has a variable reported incidence due to overdiagnosis, with inclusion of atypical medullary lesions (27). Medullary carcinomas account for fewer than 2% of breast cancers (1,28) and occur more frequently in younger women (29). At pathologic examination, the World Health Organization criteria for diagnosis are “a well circumscribed carcinoma composed of poorly differentiated cells with scant stroma and prominent lymphoid infiltration” (29). The histologic appearance of medullary carcinoma mimics that of poorly differentiated IDC not otherwise specified at first glance. The prognosis, however, as for other subtypes of IDC, is good (29). Clinically, these tumors are characterized by rapid growth and therefore often manifest as palpable masses (28).

Medullary carcinoma typically manifests as a round mass with ill-defined or circumscribed margins at mammography (Fig 7) (27,30). On US scans, the mass is either homogeneously hypo-echoic or hypoechoic with mild heterogeneity (30).

**Papillary Carcinoma**

Papillary carcinoma accounts for about 1% of breast cancers (1) and often manifests as an intraductal or intracycstic mass (31). Women with papillary carcinoma often present with nipple discharge or a palpable central mass (31). The mammographic appearance is typically a round, relatively circumscribed, equal- or high-density mass (Fig 8) (32). On US scans, papillary carcinoma often manifests as a cyst with an intracystic mass or a more complex cystic mass (31).

Intracystic carcinomas account for fewer than 1% of breast cancers and are usually papillary carcinomas. Aspiration of these lesions often yields bloody fluid. Traditionally, these lesions have been surgically excised due to the concern that the mass will resolve with aspiration, hampering the ability to accurately excise the lesion. In our practice, these lesions typically undergo US-guided core-needle biopsy with placement of a marking clip. Localization of the clip can then be performed if histologic results show carcinoma, even if the mass is largely resolved.

The clinical and imaging findings of papillary carcinoma can be recalled by remembering that benign intraductal papillomas likewise frequently manifest with nipple discharge, are most common in the central breast, and are the most common benign intraductal mass.

**Malignant Neoplasms of Stromal Origin**

Breast tumors may originate from the supporting tissue of the breast, including fibromuscular tissue, blood vessels, and lymph system. These tumors have varied appearances but clinical history and imaging features often raise suspicion of these rare tumors.

**Phyllodes Tumor**

Phyllodes tumor accounts for fewer than 1% of breast cancers (33) and typically manifests as a rapidly enlarging palpable mass in middle-aged to older women (33). In general, women who present with a large palpable breast mass and who state that the mass was not present several months ago usually have some degree of psychologic denial of their disease. However, phyllodes tumor exhibits such extremely rapid growth that the large palpable mass actually may develop over a sequence of months.

The mammographic appearance is often telling—a very large, relatively circumscribed, round or oval mass in a middle-aged or older woman (Fig 9). The mass may become extremely large (34). At close inspection, the margins are often ill defined rather than sharply circumscribed. When detected at a screening examination, the appearance

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**Figure 6**

*Images in 53-year-old woman with new focal asymmetry in the right breast. (a) T2-weighted fat-suppressed MR image (repetition time msec/echo time msec, 4320/123) of both breasts shows 1.8-cm lobular very high-signal-intensity mass (arrow) with relatively circumscribed margins in the right breast at the 6-o’clock position. (b) T1-weighted fat-suppressed contrast material–enhanced MR image (30/5) of both breasts shows a mass with mild rim enhancement (arrow). Core-needle biopsy revealed IDC with predominantly mucinous features. Since less than 90% of the tumor had mucinous features, this lesion was not considered a “pure” mucinous carcinoma.*
may mimic a fibroadenoma (Fig 10) (35). The US appearance is also similar to that of fibroadenoma, though phylloides tumor more frequently contains cystic spaces than does a benign fibroadenoma (33). The margins of a benign fibroadenoma are sharply defined on US scans, whereas the margins of a phylloides tumor are typically ill defined.

Age is typically not an important factor in the differential diagnosis of a spiculated mass. The primary concern with the finding of a spiculated mass is IDC, whether the patient is 22 or 82 years old. However, age is definitely an important factor in the differential diagnosis of a very large, relatively circumscribed mass. In middle-aged and older women, phyllodes tumor is most likely. In adolescent and young women, giant fibroadenoma is more likely, though the appearance is identical to that of a phyllodes tumor. Small phyllodes tumors may be difficult to differentiate from benign fibroadenomas at mammography and US. Patient age is again useful as new or enlarging fibroadenomas are very uncommon in postmenopausal women, though they are occasionally seen in women using menopausal hormone therapy. Therefore, any new or enlarging oval, relatively circumscribed mass that is hypoechoic at US and resembles a fibroadenoma should be viewed with suspicion in a postmenopausal woman not using menopausal hormone therapy.

Phyllodes tumors may be classified as (a) benign, low grade, or high grade or as (b) low grade or high grade, with the latter classification currently gaining favor since all must be surgically excised.
(36). A phyllodes tumor can be difficult to distinguish from a proliferative fibroadenoma at core-needle biopsy, and excision may be necessary to make the diagnosis (37–39). Wide excision is indicated even for low-grade tumors, since a phyllodes tumor can be locally aggressive (40). The risk of metastatic disease is very uncommon with low-grade phyllodes tumors. The older name for these tumors was cystosarcoma phylloides, which hints at the behavior. Like sarcomas, these lesions metastatize hematogenously, most commonly to the lungs (41). A chest x-ray therefore provides initial staging. Sentinel node biopsy and axillary dissection are not indicated, since these tumors do not spread through the lymphatic system (41). Radiation therapy and chemotherapy are not useful (41).

High-grade phyllodes tumors may contain sarcomatous elements such as chondrosarcoma, osteosarcoma, and leiomyosarcoma (42). The margins of these lesions may become less defined. Metastatic lesions may likewise exhibit sarcomatous elements, even when the primary lesion did not (42). Prognosis is poor for lesions containing sarcomatous elements as they tend to follow the behavior of sarcomas.

**Angiosarcoma**

Angiosarcoma as a primary breast tumor is rare, accounting for fewer than 1% of breast tumors. Angiosarcoma is more likely to occur in an area treated with radiation, whether occurring in the breast, lung, kidney, or other soft-tissue organ. It typically manifests as an ill-defined highly vascular mass (43). Angiosarcoma may occasionally be difficult to differentiate from pseudoangiomyomatous stroma hyperplasia, an uncommon lesion in the breast (44), though an immunohistochemical stain for endothelial cells will be negative in pseudoangiomyomatous stroma hyperplasia. The incidence of angiosarcoma increases beginning 5 years after radiation therapy for treatment of breast cancer (Fig 11) (45). The mass is typically not located in the lumpectomy bed, which would be more concerning for recurrent breast cancer. Metastasis occurs hematogenously, most commonly to the lungs. Prognosis is poor.

**Osteosarcoma**

Osteosarcoma as a primary breast tumor is also rare and is likewise more common after radiation therapy to the breast (45). It typically manifests as a palpable, enlarging, calcified mass (Fig 12) (46,47). Osteosarcoma should be considered whenever an odd large calcification is seen in any soft-tissue organ, especially if the area has previously undergone radiation therapy. Metastasis also occurs hematogenously, most commonly to the lungs where the metastatic lesions may also be calcified. Prognosis is poor.

**Adenoid Cystic Carcinoma**

Adenoid cystic carcinoma is a rare malignant neoplasm that arises in secretory glands. It most commonly occurs in the salivary glands but may occur in the breast. Like most slow-growing breast cancers, it is typically round with ill-
defined margins (Fig 13) (48). Prognosis is generally good. Lymph node sampling may be omitted due to the low occurrence of metastases.

**Metastatic Lesions**

Metastatic disease should be considered when there is axillary adenopathy or multiple masses are present other than benign fibrocystic changes. The most common metastatic lesions in the breast, in order of frequency, are due to lymphoma; melanoma; rhabdomyosarcoma; lung, ovarian, renal cell, or cervical carcinoma; and leukemia (49).

**Non-Hodgkin Lymphoma**

Non-Hodgkin Lymphoma is most frequently of concern when bilateral axillary adenopathy is seen mammographically but with an otherwise normal mammogram are referred for medical evaluation of the numerous potential causes. These women may be occasionally referred back to us for US-guided biopsy of a lymph node to exclude lymphoma, if no other cause is apparent. Core biopsy rather than fine-needle aspiration biopsy is performed, as lymph node architecture is needed to make a definitive diagnosis of lymphoma. Primary lymphoma of the breast is rare and beyond the scope of this review.

**Metastatic Melanoma**

Metastatic melanoma may manifest as multiple round or oval circumscribed masses similar to metastatic carcinomas. However, metastatic melanoma should also be considered when there is unilateral adenopathy or enlargement of an intramammary lymph node. Primary breast carcinoma that may be mammographically occult should be suspected first and foremost in the setting of unilateral axillary adenopathy. However, melanoma metastatic to the axillary or intramammary lymph nodes may be seen occasionally, particularly when the primary lesion was on the back or upper abdomen.

**Metastatic Carcinoma**

Metastatic carcinomas in the breast typically manifest as multiple round or oval circumscribed masses (Fig 14) (50). The margins may appear circumscribed, though often ill defined on spot compression views (obtained with or without magnification) or US scans. At clinical examination, discrete masses are typically palpable, although the breasts may become firmer without discrete palpable lumps. Fine-needle aspiration biopsy is often adequate to confirm the
diagnosis of metastatic disease if the patient has a known primary carcinoma.

**Rhabdomyosarcoma and Leukemia**

Rhabdomyosarcoma and leukemia in the breast are rare and typically represent advanced metastatic disease, though they may be the first sign of recurrent disease (51). The appearance on a mammogram is nonspecific, manifesting as a focal or global asymmetry (Fig 15) (50,52). Rhabdomyosarcoma and leukemic infiltrates appear as ill-defined areas of shadowing at US, similar to ILC though ILC typically lacks echogenic margins (Fig 15) (50,52). Primary leukemia of the breast is extremely rare.

**Summary**

The less common types of breast cancer can be broadly categorized as ILC, well-differentiated subtypes of IDC, tumors of stromal origin, and metastatic neoplasms.

**Figure 13**: MLO view of left breast from screening mammogram in 66-year-old woman shows an 8-mm, oval, circumscribed, low-density mass (arrow) in the inferior portion of the breast. Core-needle biopsy revealed adenoid cystic carcinoma. Wide surgical excision was performed without axillary dissection.

**Figure 14**: Bilateral MLO mammographic views of the breasts in 67-year-old woman with history of lung cancer thought to be in remission. She palpated a lump in left breast and also noted her breasts were becoming firmer. Views show numerous circumscribed masses with a dominant mass in left breast at the 2-o’clock position corresponding to the palpable abnormality (arrow). Fine-needle aspiration biopsy revealed metastatic lung carcinoma.

**Figure 15**: Images in 53-year-old woman with history of treatment for leukemia and a large firm mass in the right breast. (a) Bilateral mammogram shows global asymmetry, with right breast diffusely denser than the left (curved arrows). Ill-defined focal asymmetries are present in both breasts (white arrows). Note enlarged right axillary lymph node (black arrow). (b) US scan shows multiple ill-defined hypoechoic areas with hyperechoic margins (arrows). Core biopsy revealed leukemic infiltrates.
faces, resulting in ascites, hydronephrosis, and pelvic masses.

The well-differentiated subtypes of IDC have a better prognosis than does IDC not otherwise specified. They are characterized by slow growth (except medullary carcinoma) and a relatively circumscribed appearance at mammography (except for tubular carcinoma, which appears spiculated at mammography but is “tubular” or “cool”). Mucinous carcinoma has low density on a mammogram and high signal intensity on T2-weighted MR images due to high mucin content. Medullary carcinoma mimics poorly differentiated carcinoma at histologic examination but also has a good prognosis.

A very large, relatively circumscribed breast mass is usually a phylloides tumor if the patient is middle aged or older or a giant fibroadenoma if the patient is young. Smaller phyllodes tumors mimic fibroadenomas but occur in middle-aged and older women.

Angiosarcomas and osteosarcomas occur more frequently after radiation therapy and should be considered with the appearance of a highly vascular mass and large unusual-appearing calcification, respectively.

Metastatic lesions to the breast may manifest as adenopathy, such as non-Hodgkin lymphoma, or multiple relatively circumscribed masses. Infiltrative metastasis, such as rhabdomyosarcoma and leukemia, may mimic ILC.


