



**A.C. Camargo  
Cancer Center**

# Synchronic invasive lobular breast carcinoma, invasive mammary carcinoma NST, and large cell neuroendocrine carcinoma of the lung.

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## INTRODUCTION

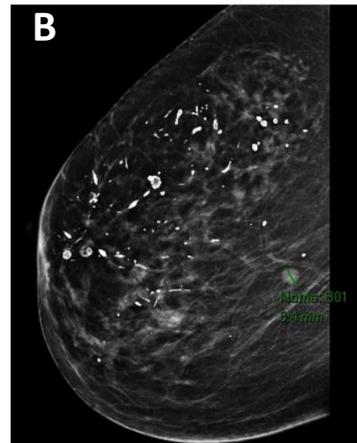
Synchronous bilateral breast cancer represents 10% of all breast cancers. The occurrence of bilaterality is more common with invasive lobular carcinomas (ILCs). The prognosis appears to be worse when compared unilateral tumors. We describe a rare and challenging clinical case of a patient with three synchronous tumors: bilateral breast carcinomas and a large cell neuroendocrine carcinoma of the lung.

## CASE REPORT

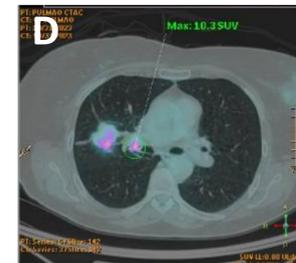
A sixty-eight-year-old smoker (18 packs-year), post-menopausal, white female was submitted to a screening breast ultrasound that disclosed a single 23 x 18 mm nodule in the upper quadrant of the right breast without involvement of the axillary lymph nodes.



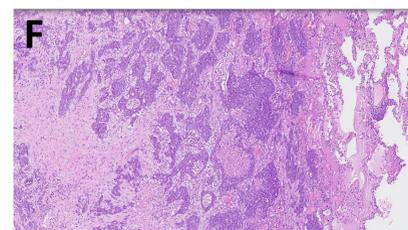
Right nodule on:  
A) USG and B) MMG



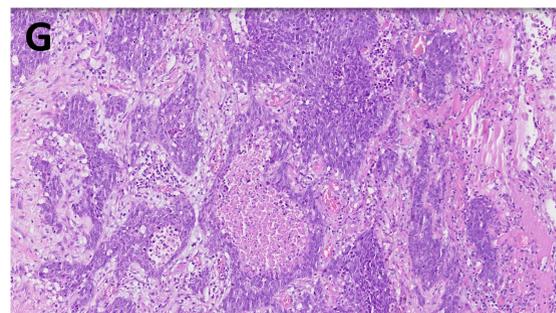
A thoracic CAT scan yielded an irregular pulmonary nodule located between the anterior and posterior segments of the right upper lobe, measuring 49 mm. An 18-FDG-PET-CT scan showed 18-FDG uptake in the mass in the upper lobe of the right lung (SUVmax-21.9), in an enlarged right hilar lymph node (SUVmax-10.3), and the left breast lesion (SUVmax-2.8). A CT-guided biopsy of the pulmonary lesion showed a large cell neuroendocrine carcinoma (LCNEC) of the lung. A brain MRI identified no CNS metastases



C) CT scan show irregular nodule  
D) and E) PET scan show a lymphnode hilar disease and left breast lesion

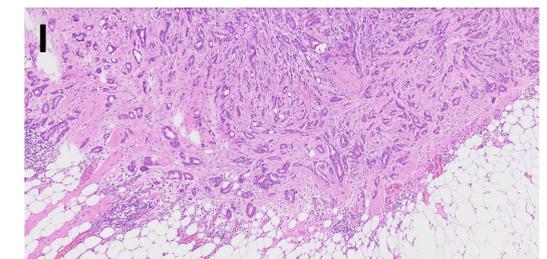
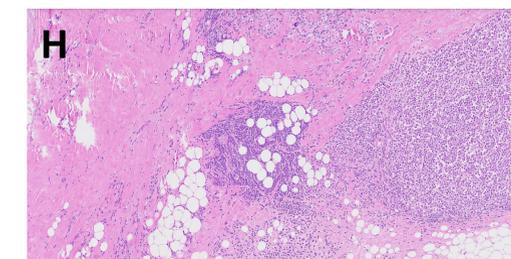


F) Show LCNEC in h&E stain 4x and (G) 10x



This case was discussed in a multidisciplinary tumor board, and due to aggressiveness and poor prognosis, it was decided to operate on the lung nodule and start neoadjuvant hormone therapy with exemestane 25mg/day. The patient was submitted to a right upper lobectomy with mediastinal lymphadenectomy. The anatomopathological report showed a pT2bpN1M0. We kept the patient on exemestane while we started adjuvant chemotherapy with carboplatin and etoposide for four cycles. After three months, images showed no lesions in the lungs and a partial response in the breasts. Patient was submitted a bilateral mastectomy with axillary lymphadenectomy. The lesion in the right breast was staged as ypT1cypN0(sn)M0 (RCBII) and the left lesion as ypT3ypN0M0 (RCB I).

The patient was referred to adjuvant radiotherapy, and abemaciclib was added to exemestane.



H) Show CLI left lesion and I) show NST right lesion after chemotherapy neoadjuvant treatment.

The patient was referred to adjuvant radiotherapy, and abemaciclib was added to exemestane.

This case underscores the complexity of managing synchronous malignancies and highlights the importance of a tailored, multimodal approach for optimal patient outcomes.

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A mammotomy confirmed invasive mammary carcinoma no special type (NST), grade I, estrogen receptor (ER) 98%, progesterone receptor (PR) 40%, HER2 0, and a Ki67 12%. We performed a breast magnetic resonance imaging (MRI), which showed, in addition to the previously reported lesion in the right breast, an irregular nodule with spiculated borders and a late wash-out phase located in the anterior third of the central region of the left breast, measuring 56 x 54 mm and a satellite nodule 5 mm from the index lesion, located in the anterior third of the infero-medial quadrant, measuring 14 x 11 mm. A biopsy was performed and showed a second primary invasive mammary carcinoma, grade II, ER 98%, PR 0%, HER2 0 and Ki67 25%.