



# FDG PET/CT for the detection of recurrence in asymptomatic breast cancer patients with increased serum CA 15-3 levels.

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## INTRODUCCION

PET-CT with <sup>18</sup>F-deoxyglucose has been reported to be useful in the initial staging, evaluation of therapy response and assessing recurrent disease in breast cancer patients. The standard use of this modality for the detection of recurrence in asymptomatic patients with increased serum CA 15-3 levels is still debated.

## Material and Methods

We studied retrospectively 36 women (32-77 years old) with increased CA 15-3 levels and without clinical evidence and conventional imaging findings of recurrent disease. All patients were studied with FDG PET/CT in the period 2012-2014. Patients with previously known stage IV disease were excluded.

## Result

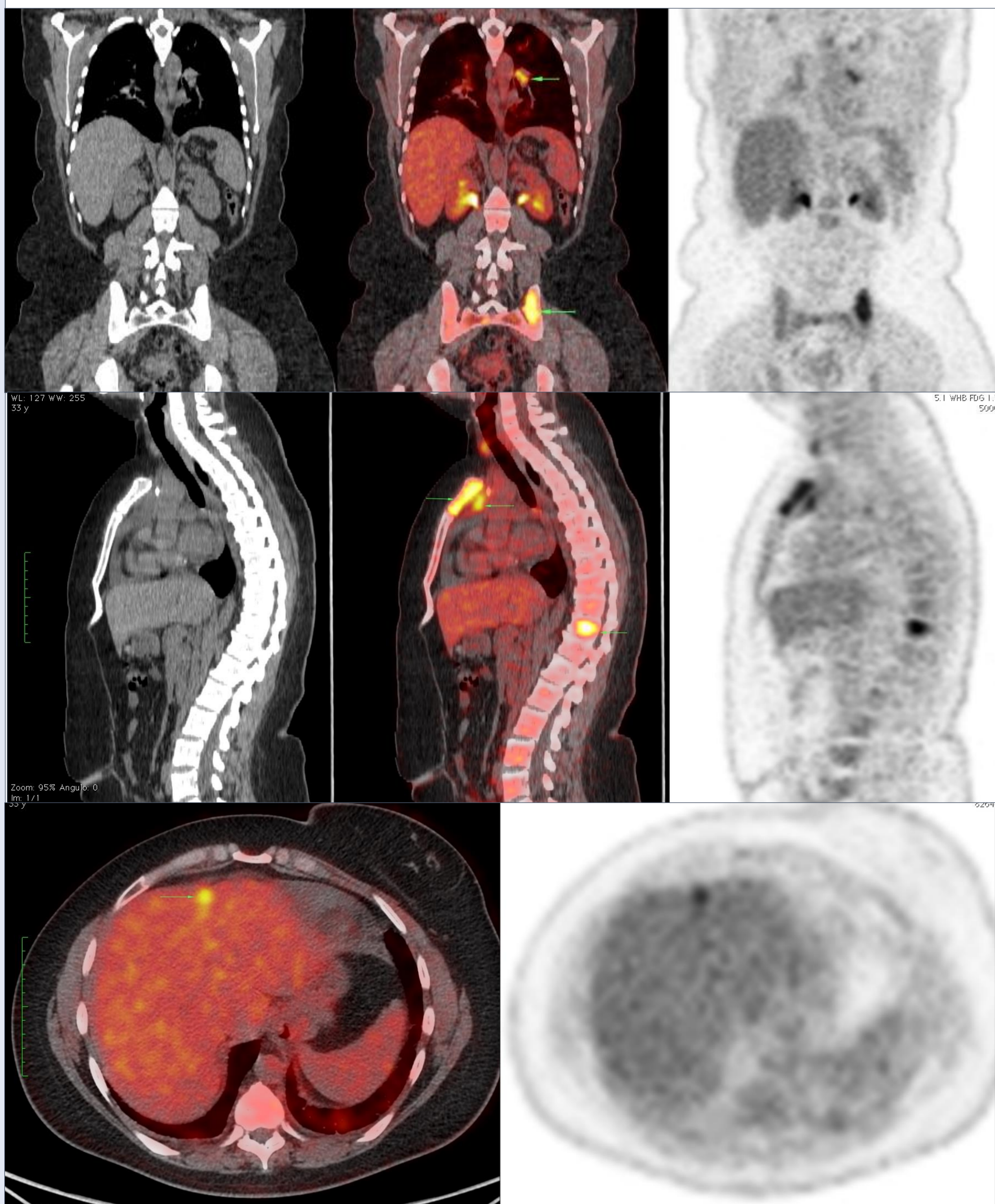
Nineteen of the patients presented localized disease and 17 loco-regional advanced breast cancer at the time of diagnosis. One of the patients had bilateral loco-regional advanced breast cancer. The mean CA 15-3 value at the time of the study was 61.1 ± 25.7 (SD).

<sup>18</sup> F-FDG			
Number of patients with positive scans	Loco-regional lesions only	Distant metastases	% of detection
19	7	12	52.7%

\*The percentage of detection was no significantly different compared to patients with localized or loco-regionally advanced disease at the time of diagnoses.

### CASE 1

32 years old. Breast cancer treated with right mastectomy in 2009 and axillary lymph node resection (1 lymph node positive for metastases). Susecuent radiotherapy and chemotherapy. Increased CA 15.3 levels with unremarkable bone scintigraphy and conventional imaging.

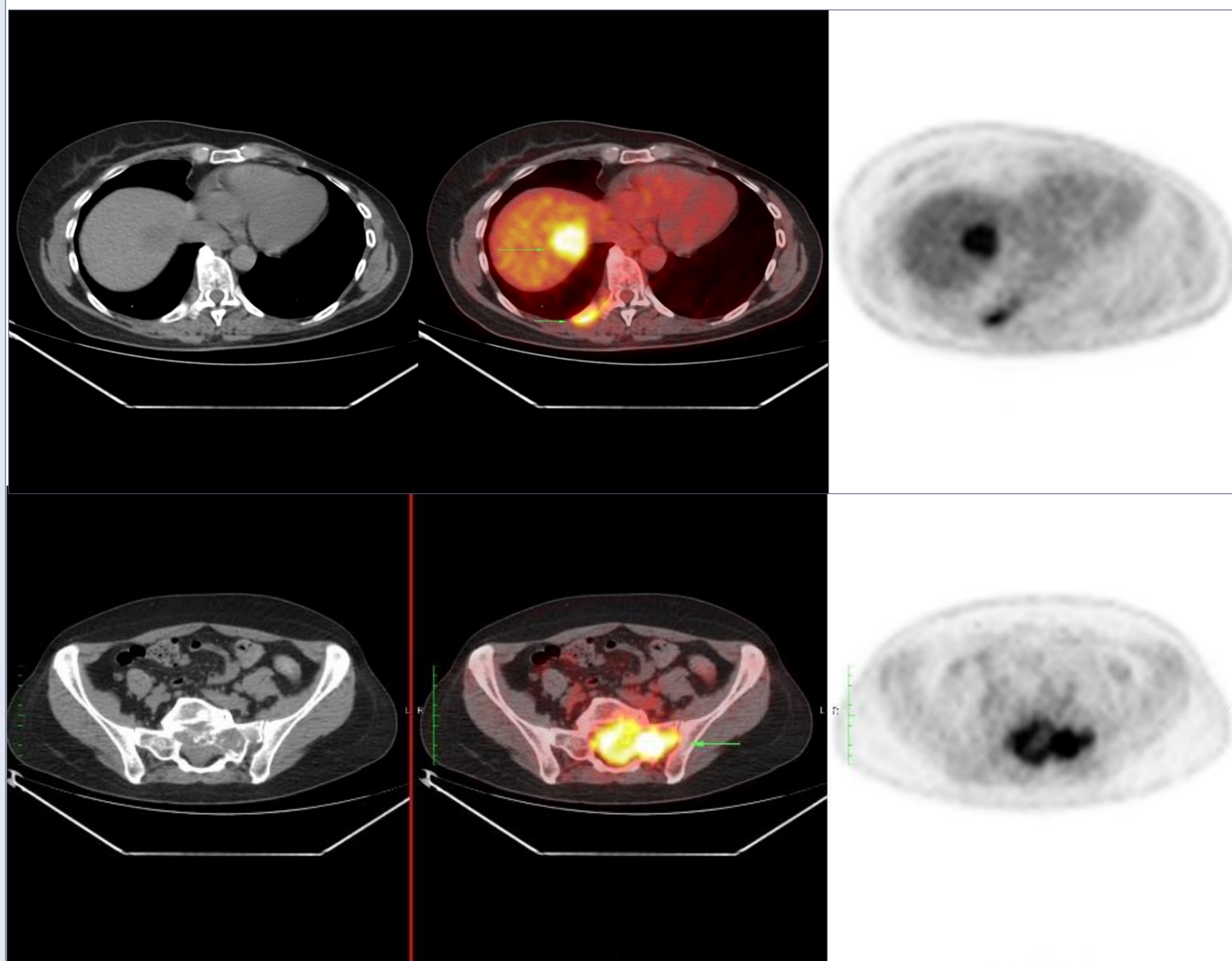


## Conclusion

FDG PET may be a useful tracer to detect recurrence in asymptomatic patients with increased serum CA 15-3 levels, providing additional information to conventional structural imaging to localize the site of recurrence.

### CASE 2

62 years old. Left mastectomy in 2009 and axillary lymph node resection ganglionar dissection. QT and RT until June 2012. In 2013 pathological CA15-3 (28, rising to 36), normal conventional imaging.



### CASE 3

38 years old. Left breast cancer diagnosed in 2013, tumor resection and negative sentinel node. Chemotherapy in 3/2014. Normal MRI and CT. Normal conventional imaging and rising CA 15.3 levels.

