Botswana Multidisciplinary Tumour Board

Two men with breast masses

16 April 2013

Two men with breast masses

Case 1: Mr. PM

Two men with breast masses

Patient History

- 83 year old male
- C/o pain and swelling of left breast – 3 wks
- K/c hypertension, stable on HCT and nifedipine
- No contributory family or social history

Two men with breast masses

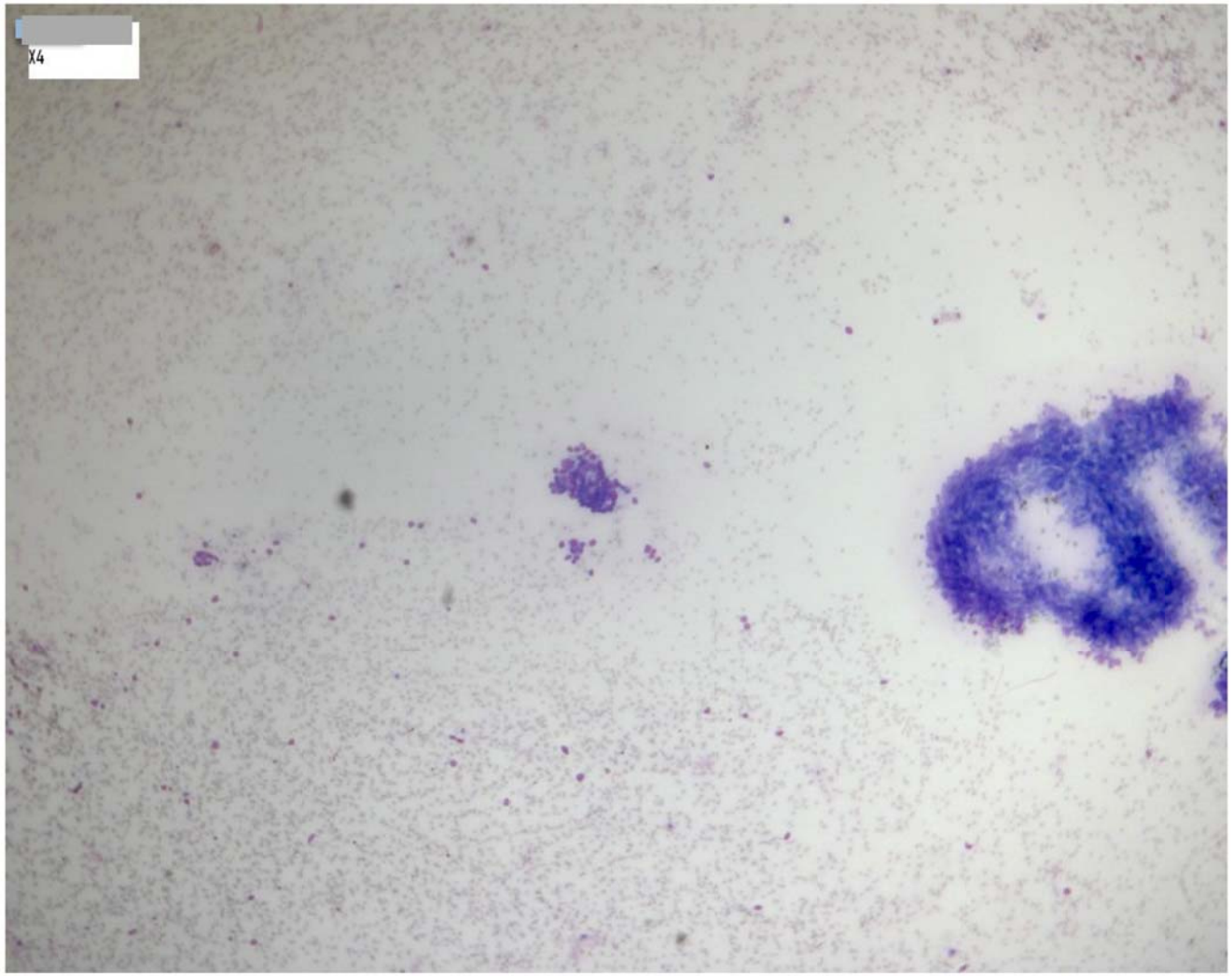
[redacted] 2012

- Mass in right subareolar region, well-defined margins, no palpable axillary nodes
- USG: Cystic mass with solid components and well-defined margins, 4.3x3x3.3 cm with axillary node 1.2x0.7 cm
- FNAC: Benign epithelial cells s/o gynecomastia

Two men with breast masses

2012

- Lumpectomy 7x4x4 cm with tumor of 4x3x5 cm
- Infiltrating duct carcinoma, numerous mitosis, skin and margins free
- Mod diff, Bloom Richardson score 7, grade 2
- USG: liver normal. Right kidney cyst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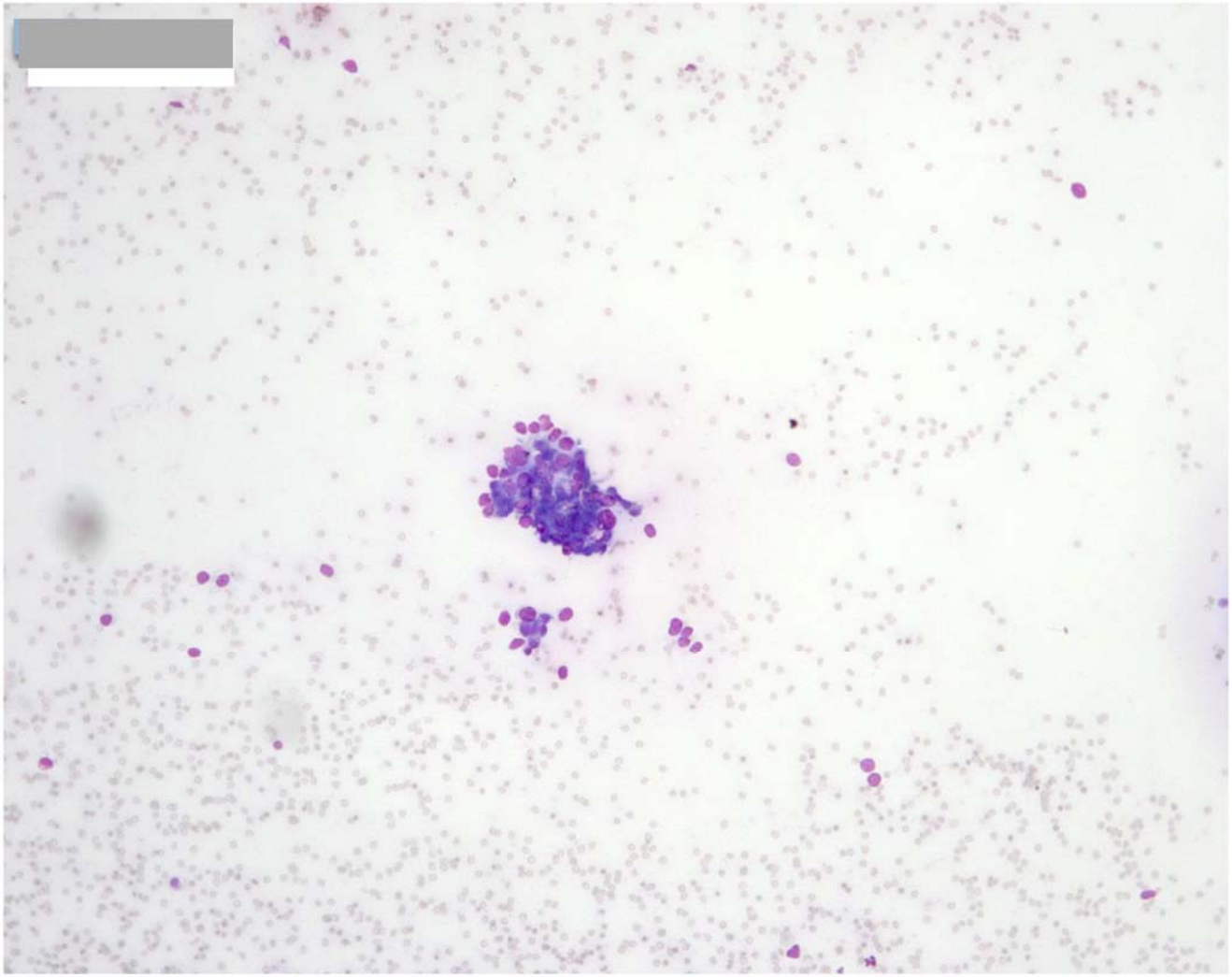

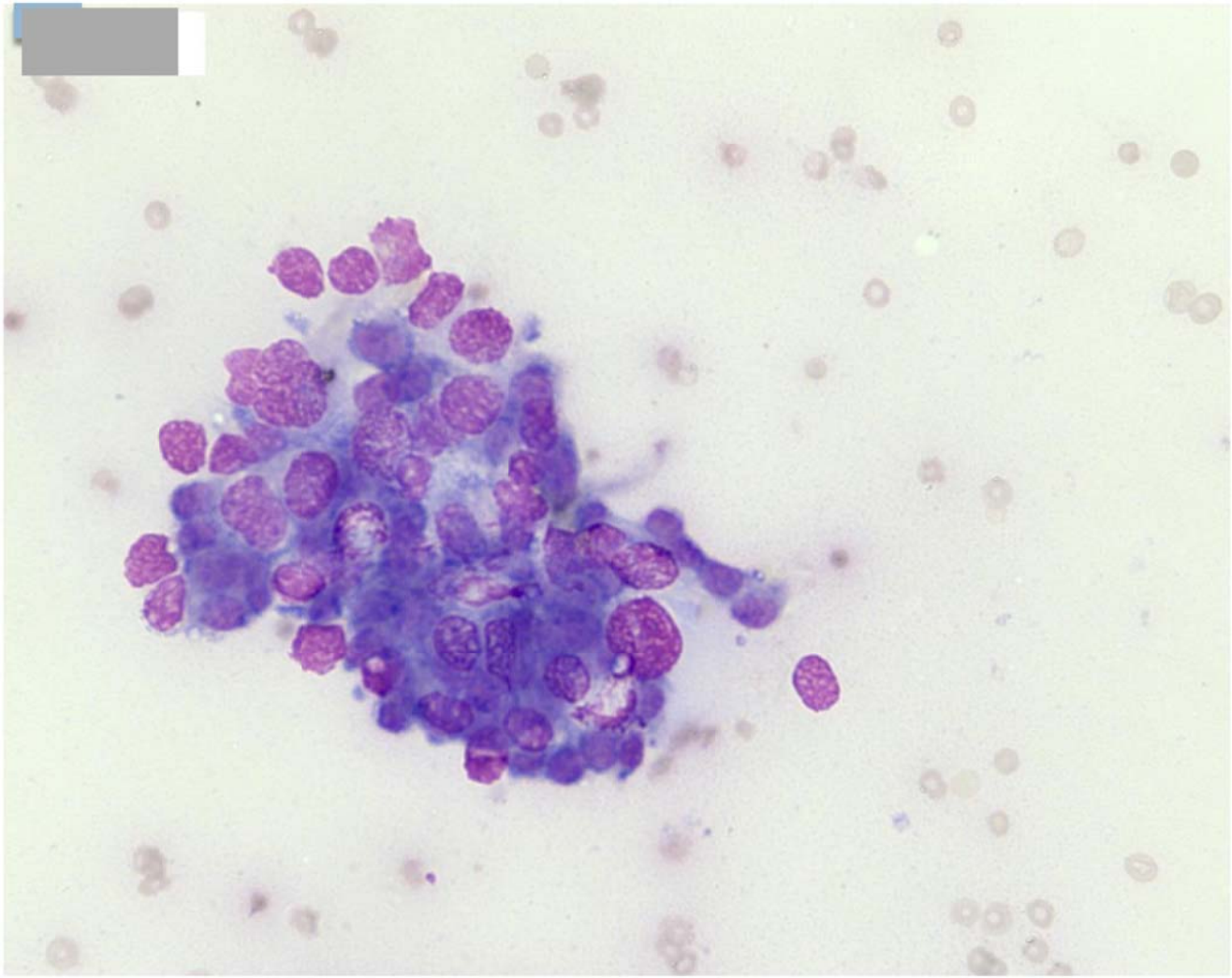

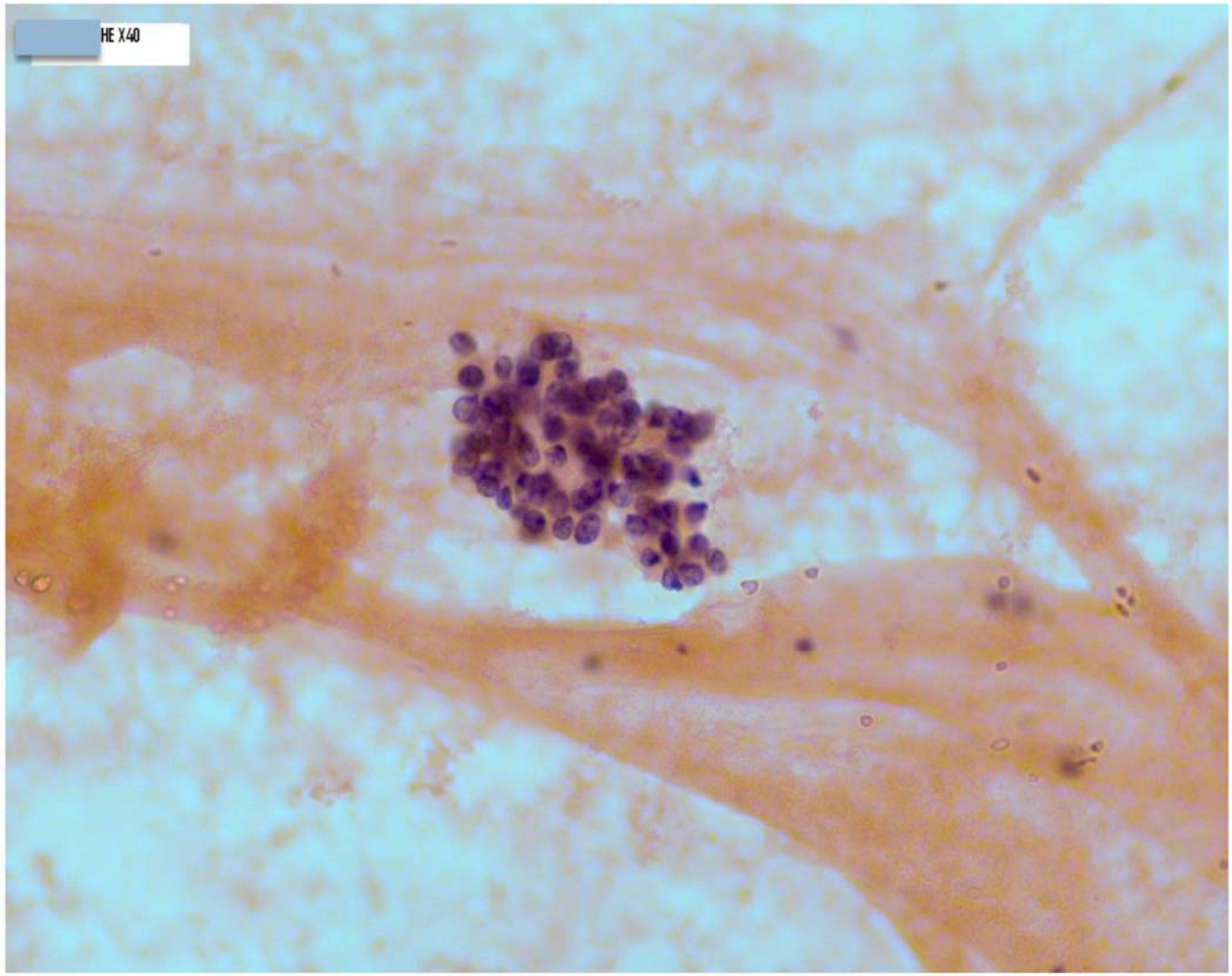
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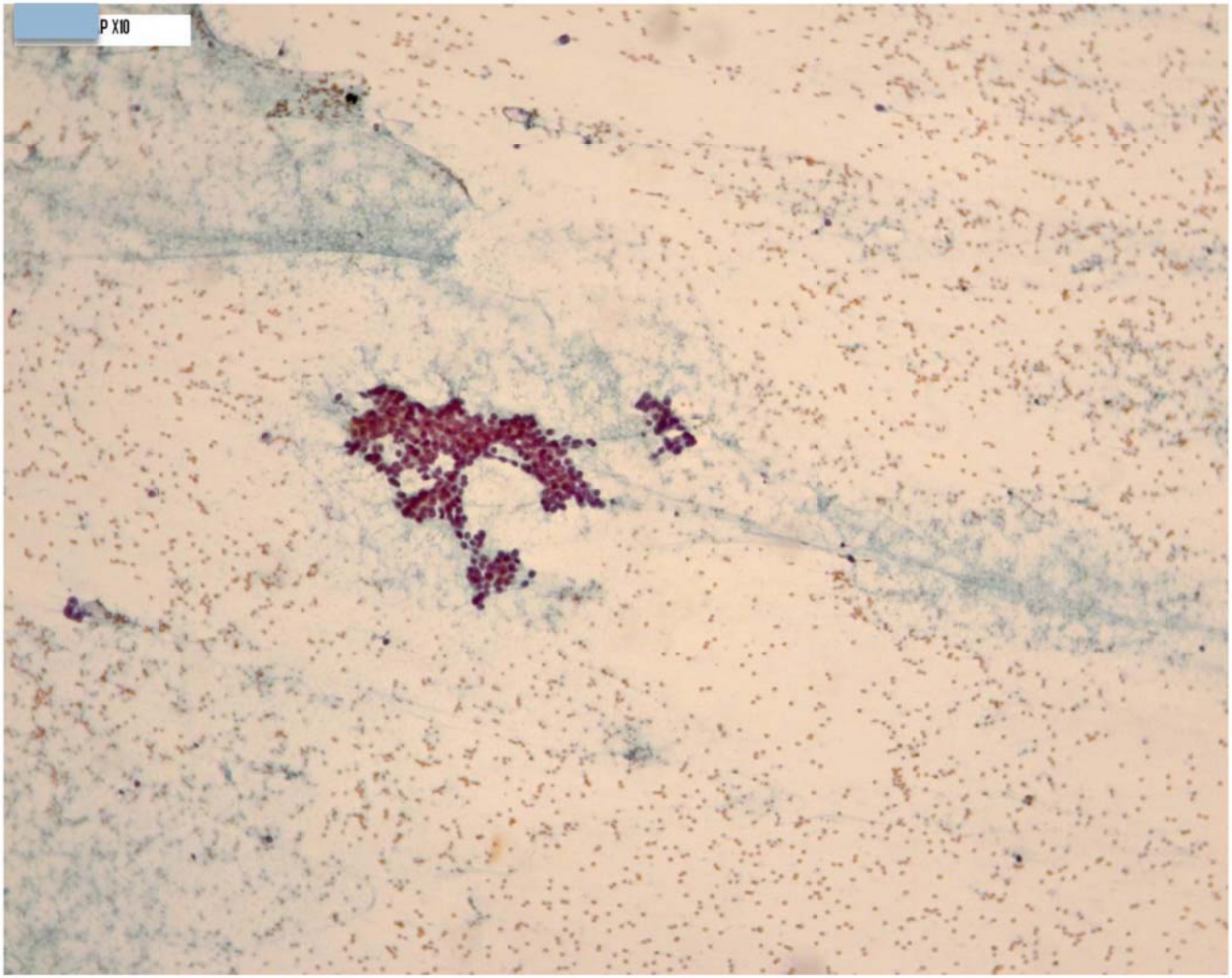
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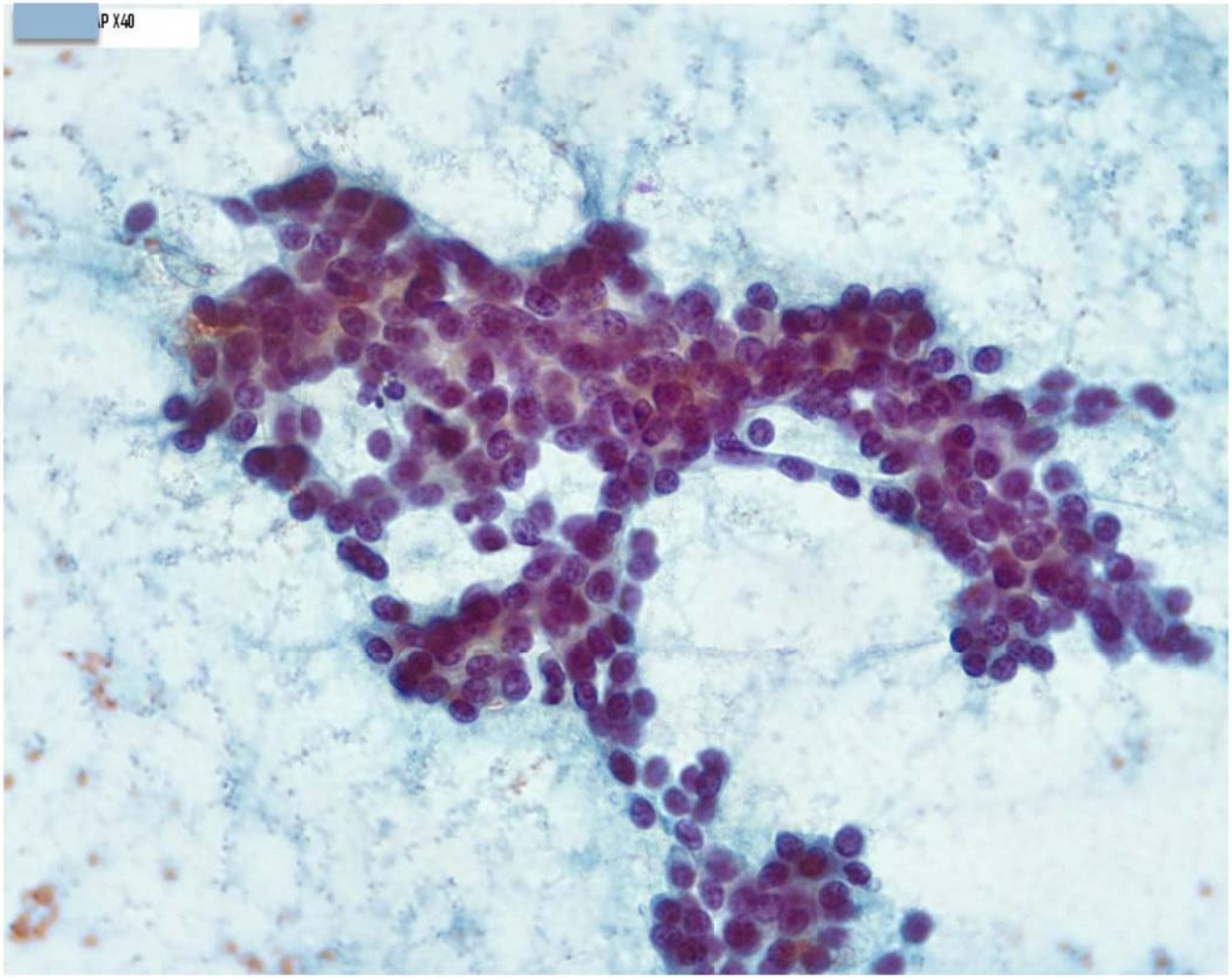
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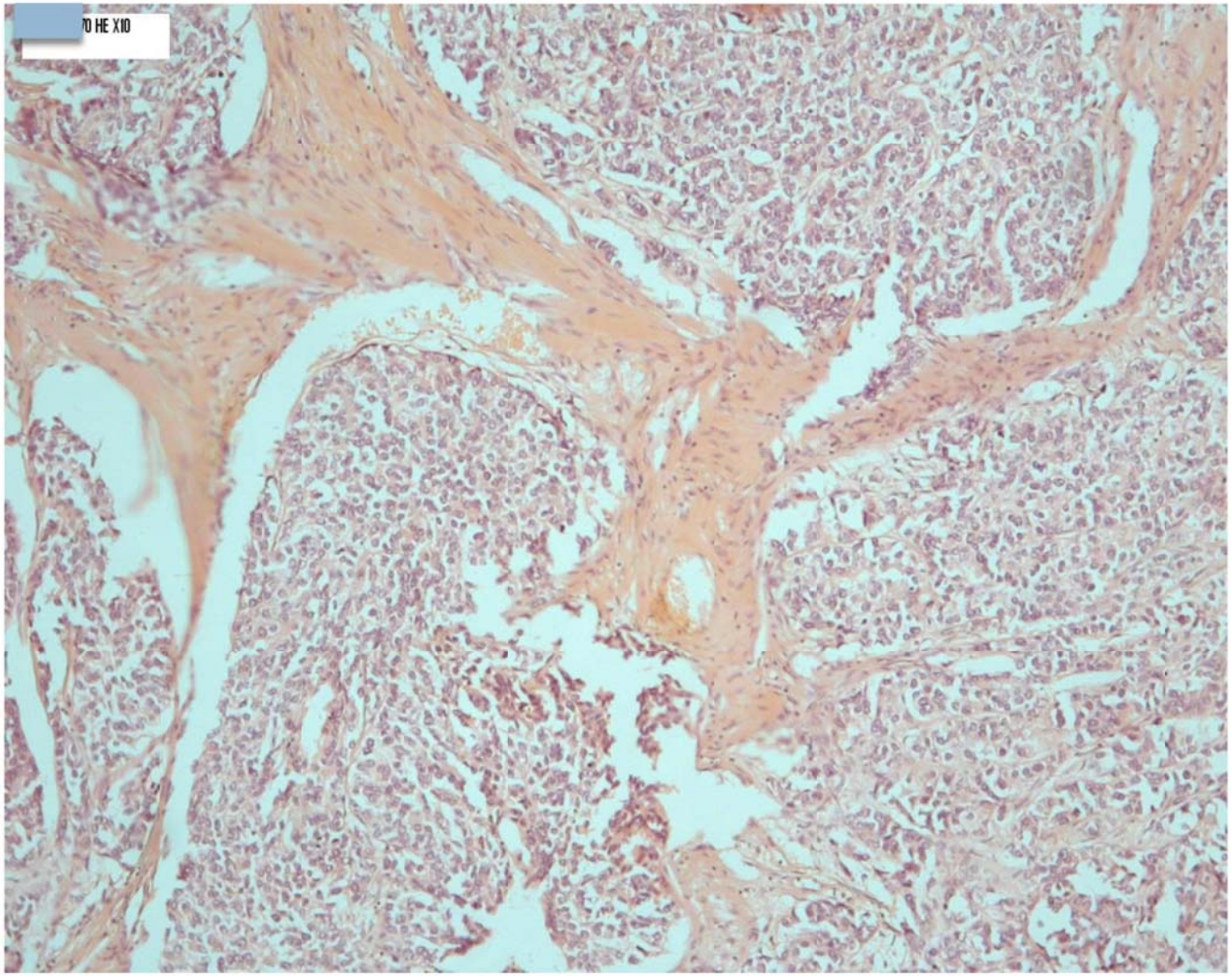
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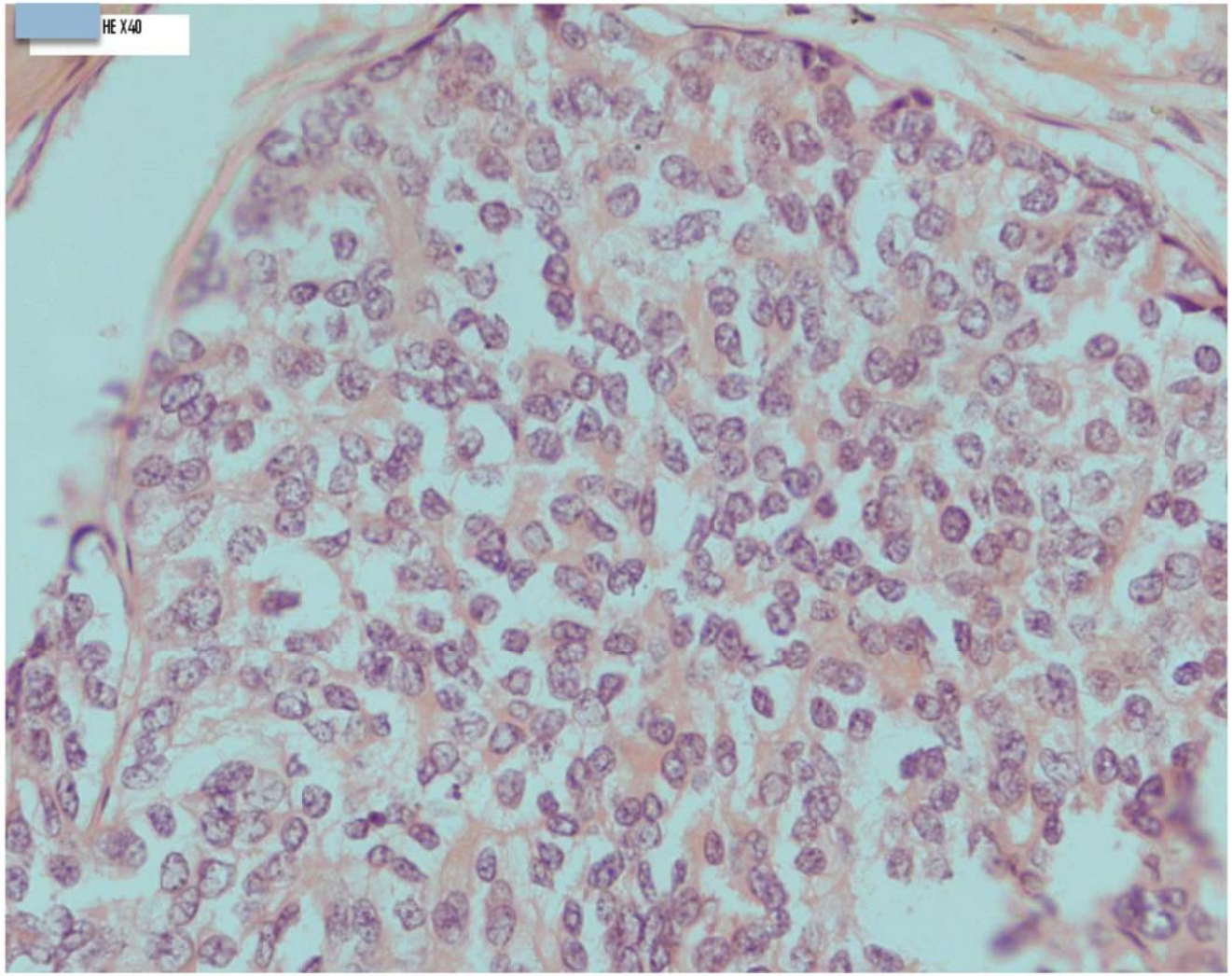
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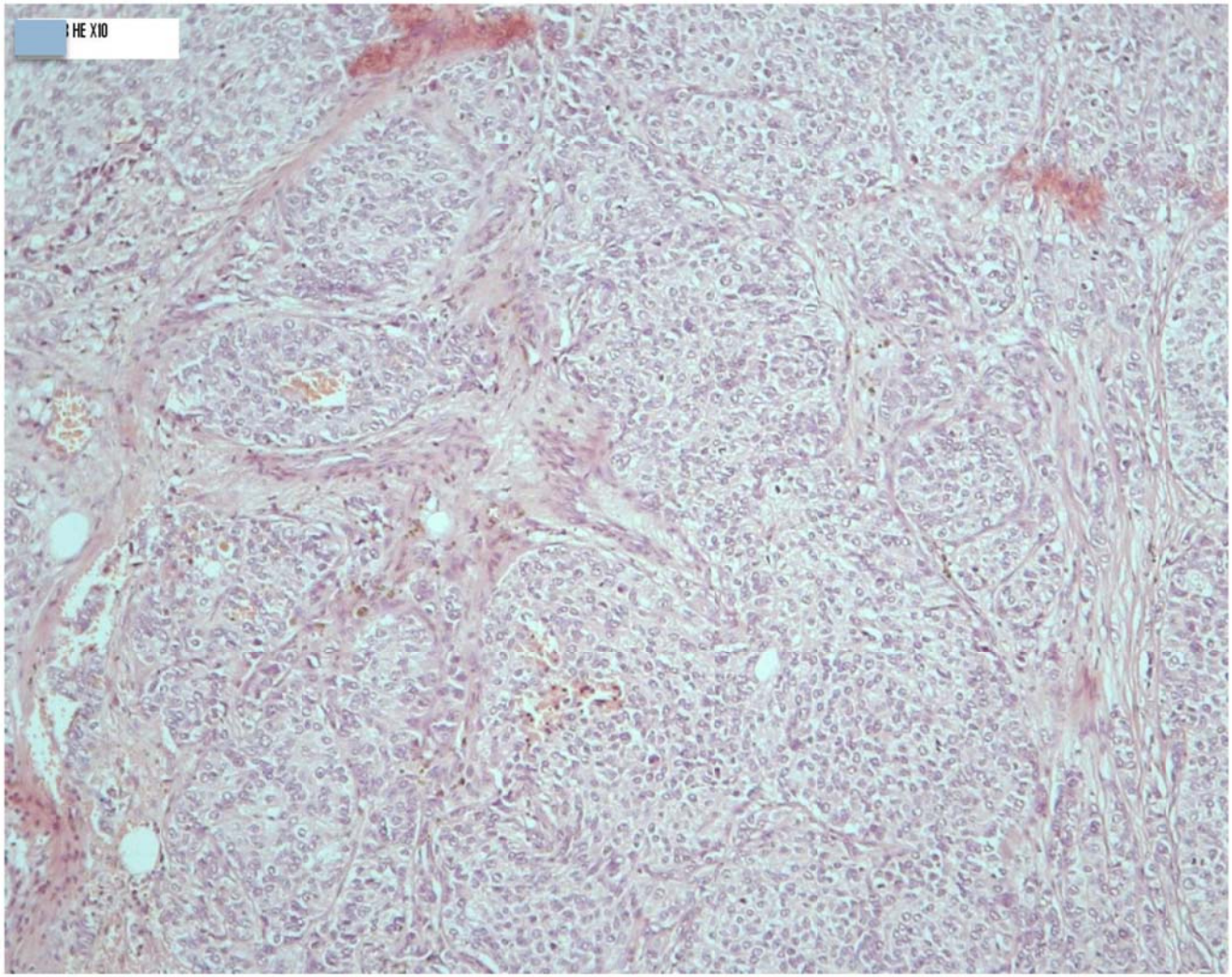
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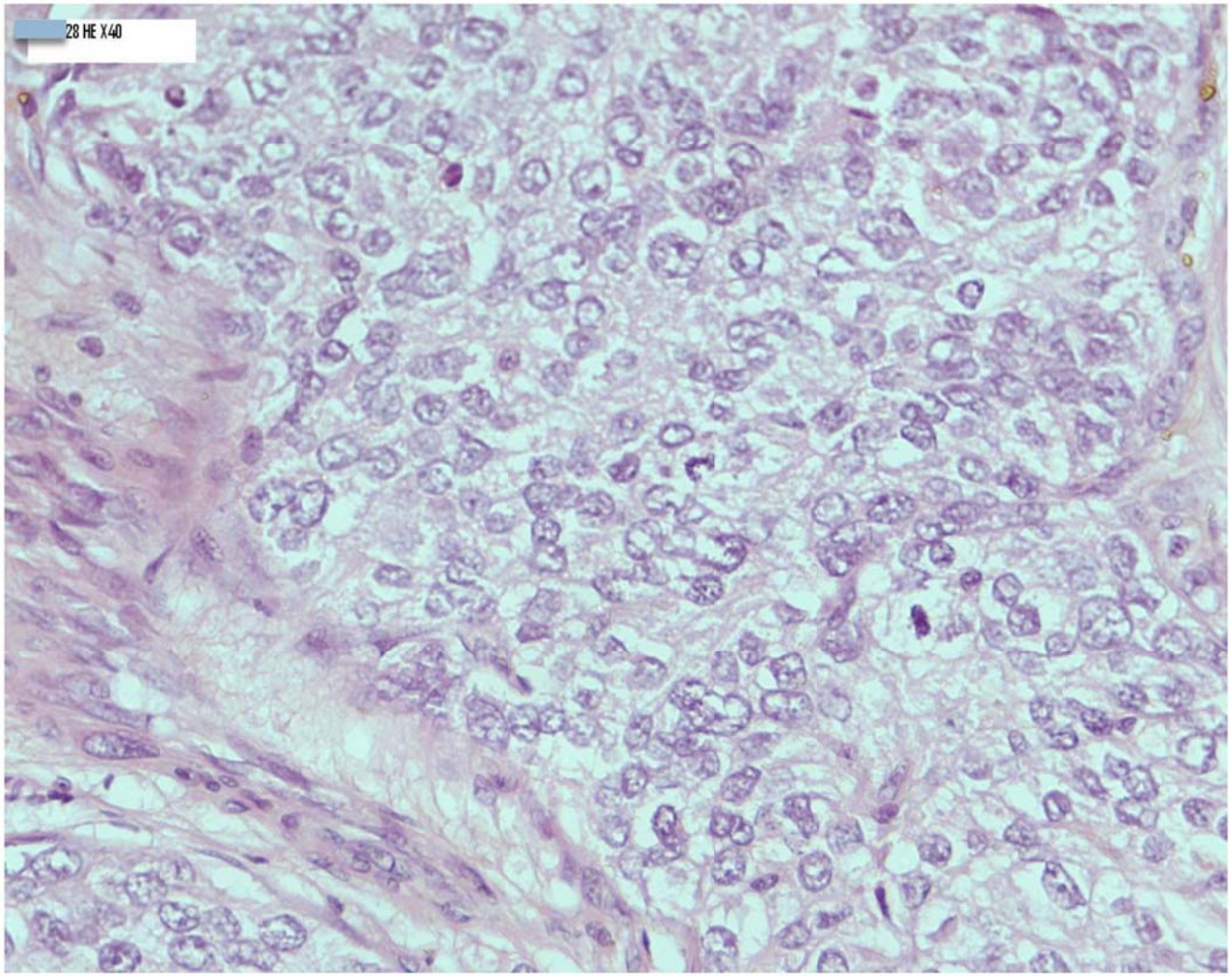
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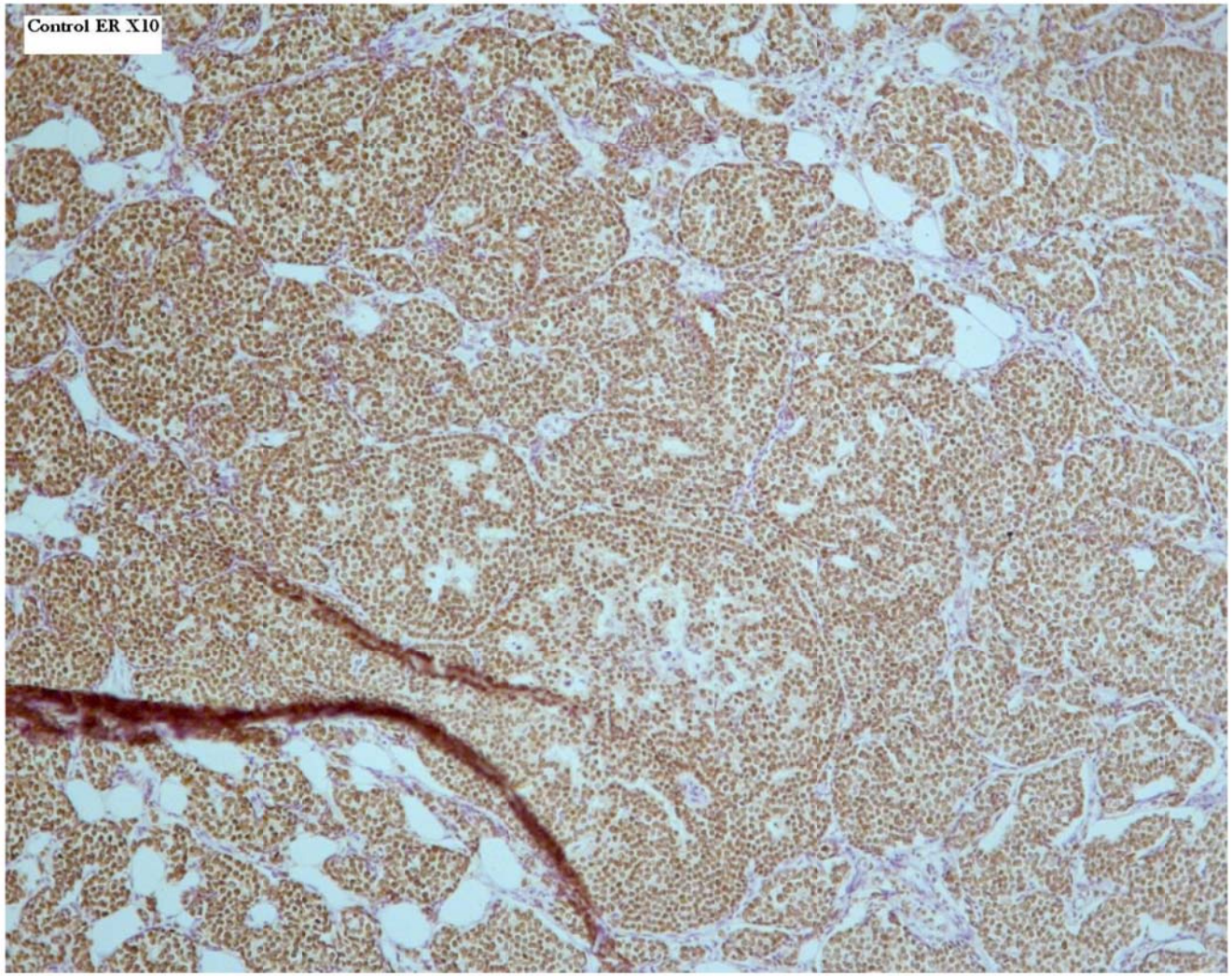
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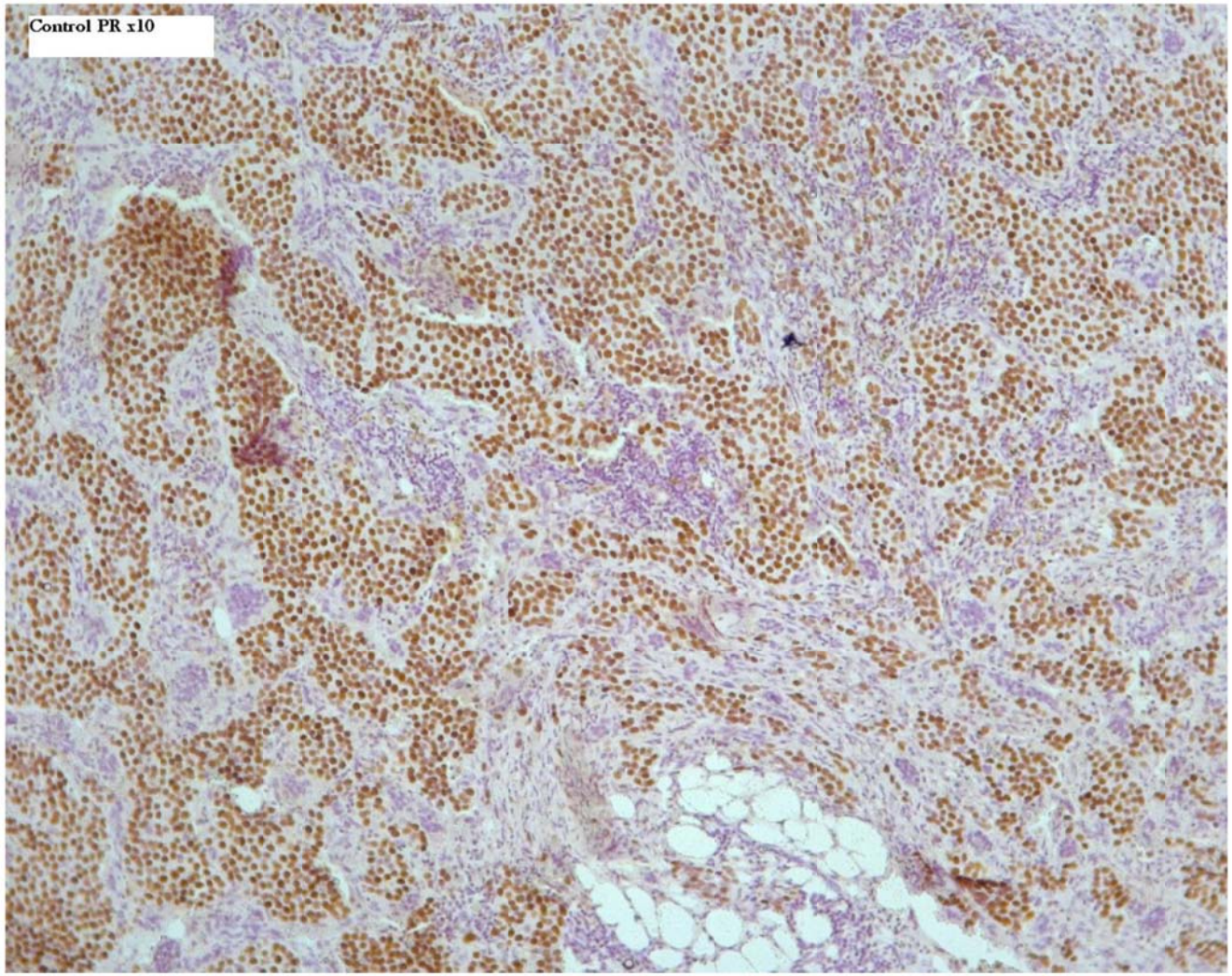
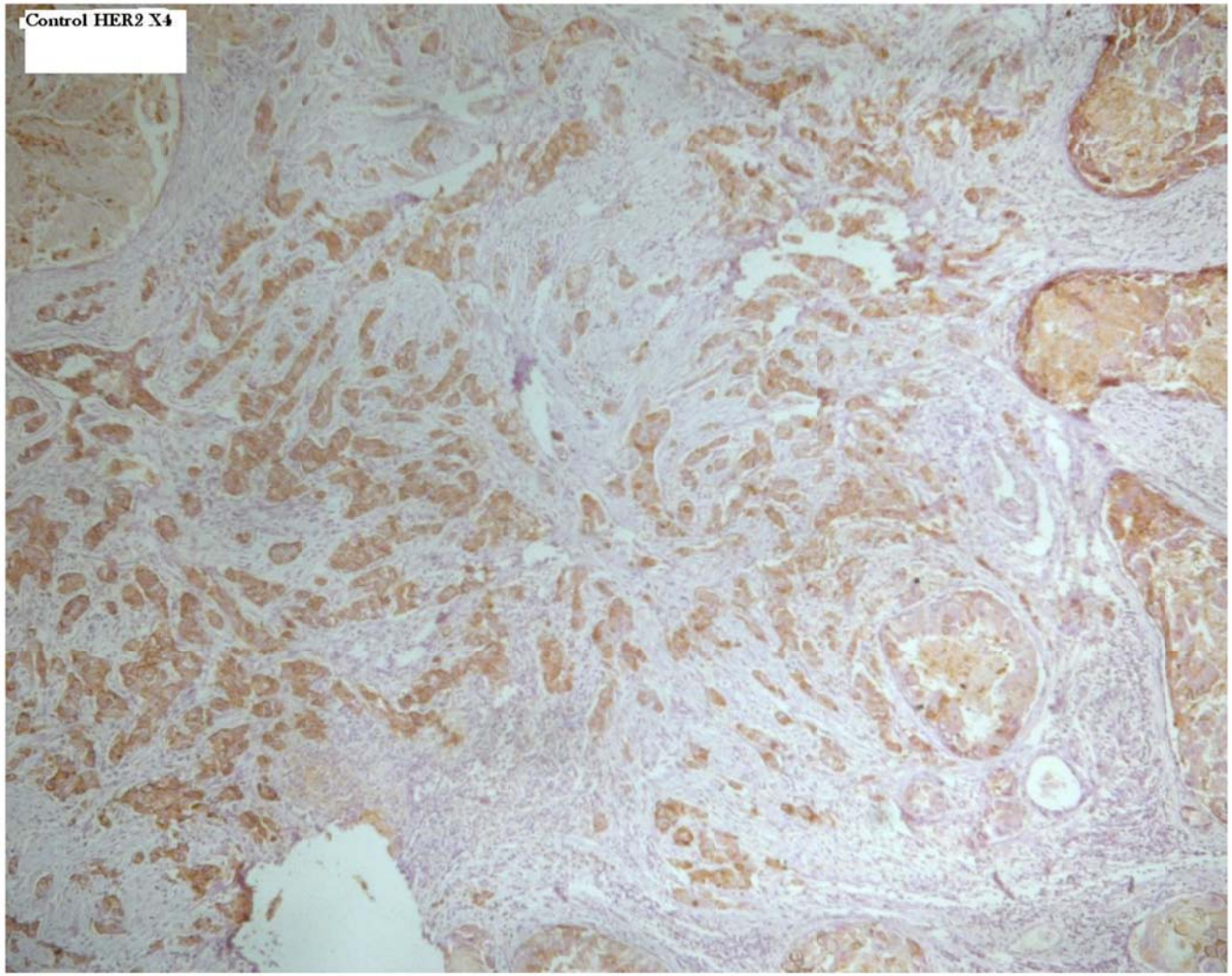

Control PR x10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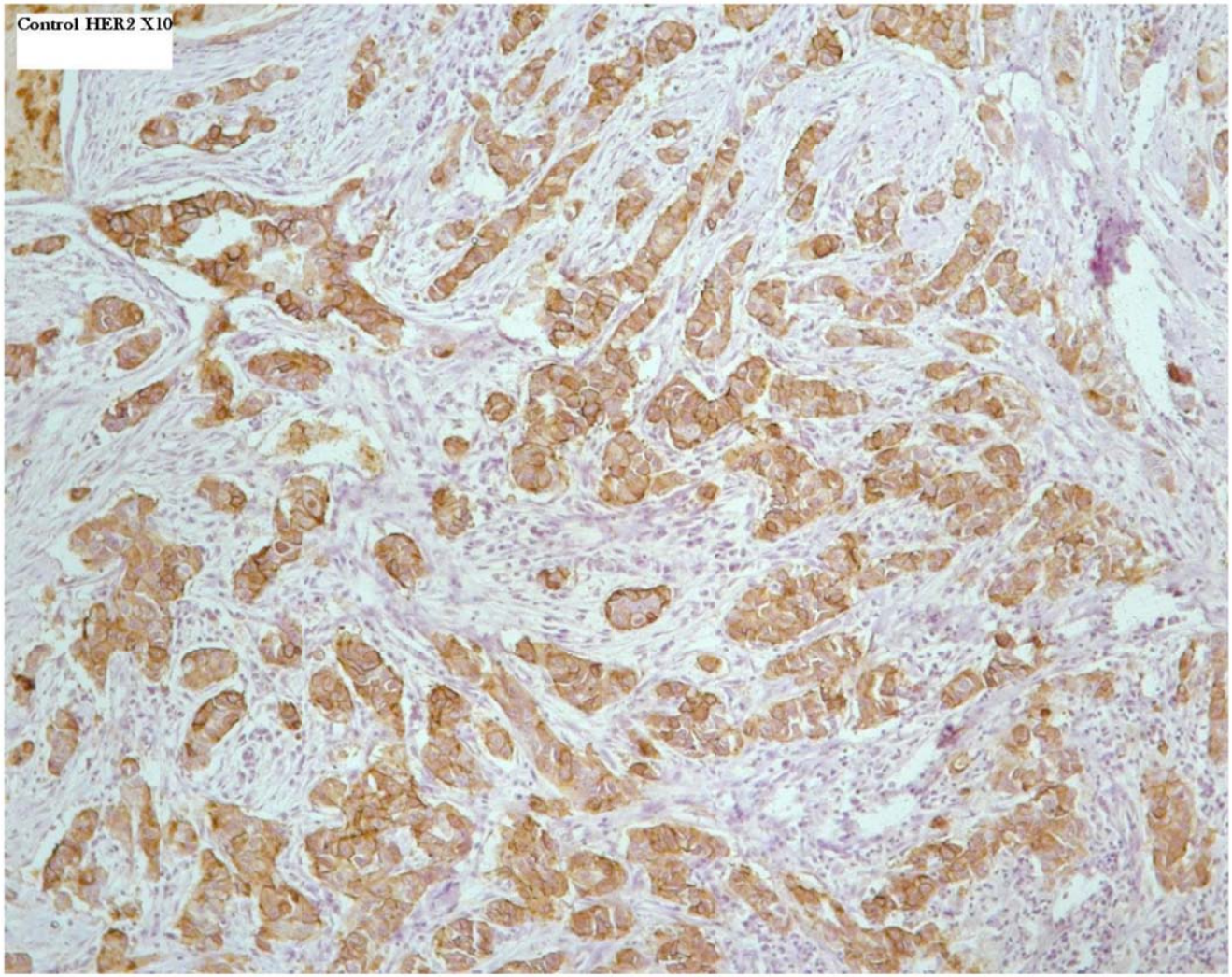
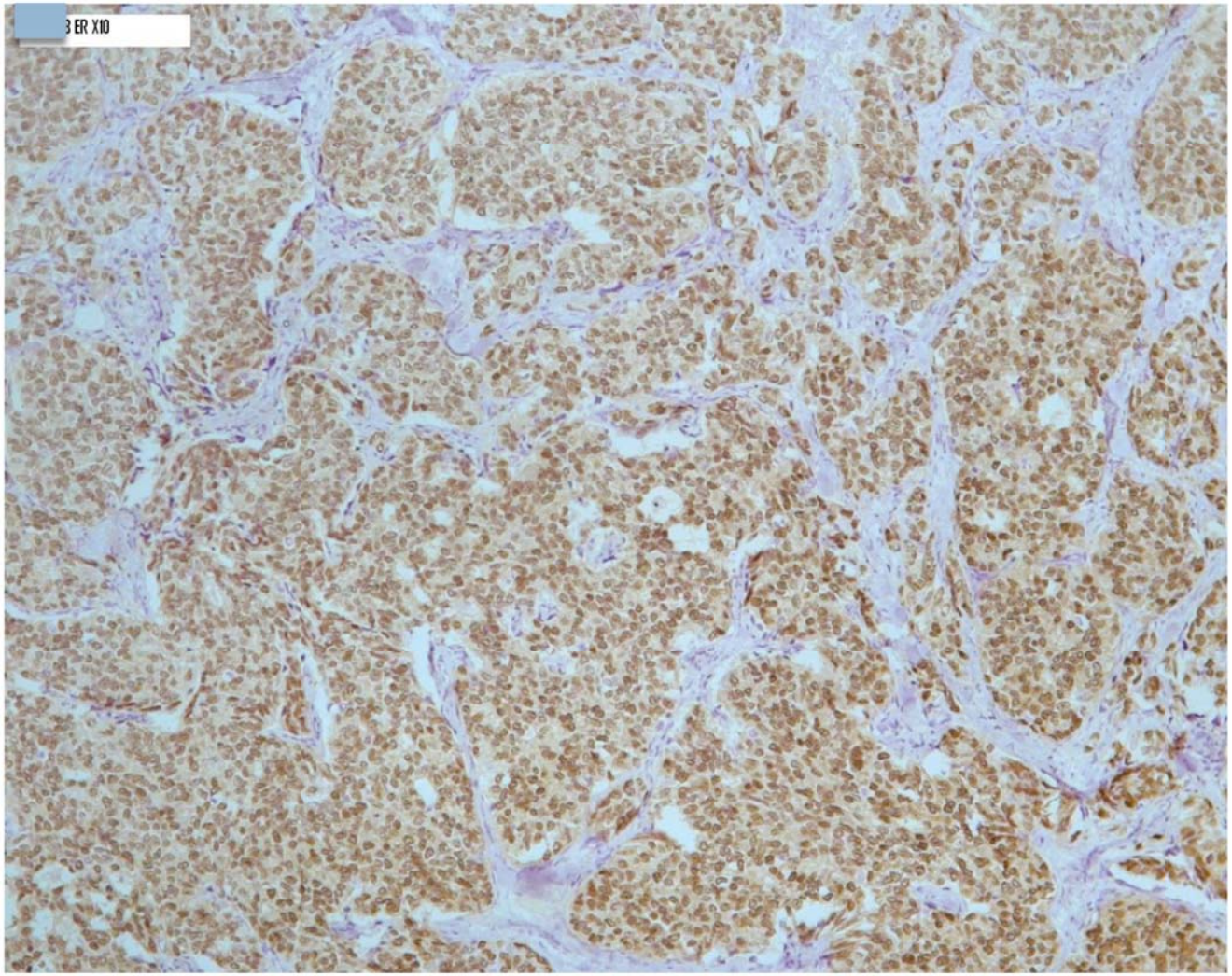

Control HER2 X10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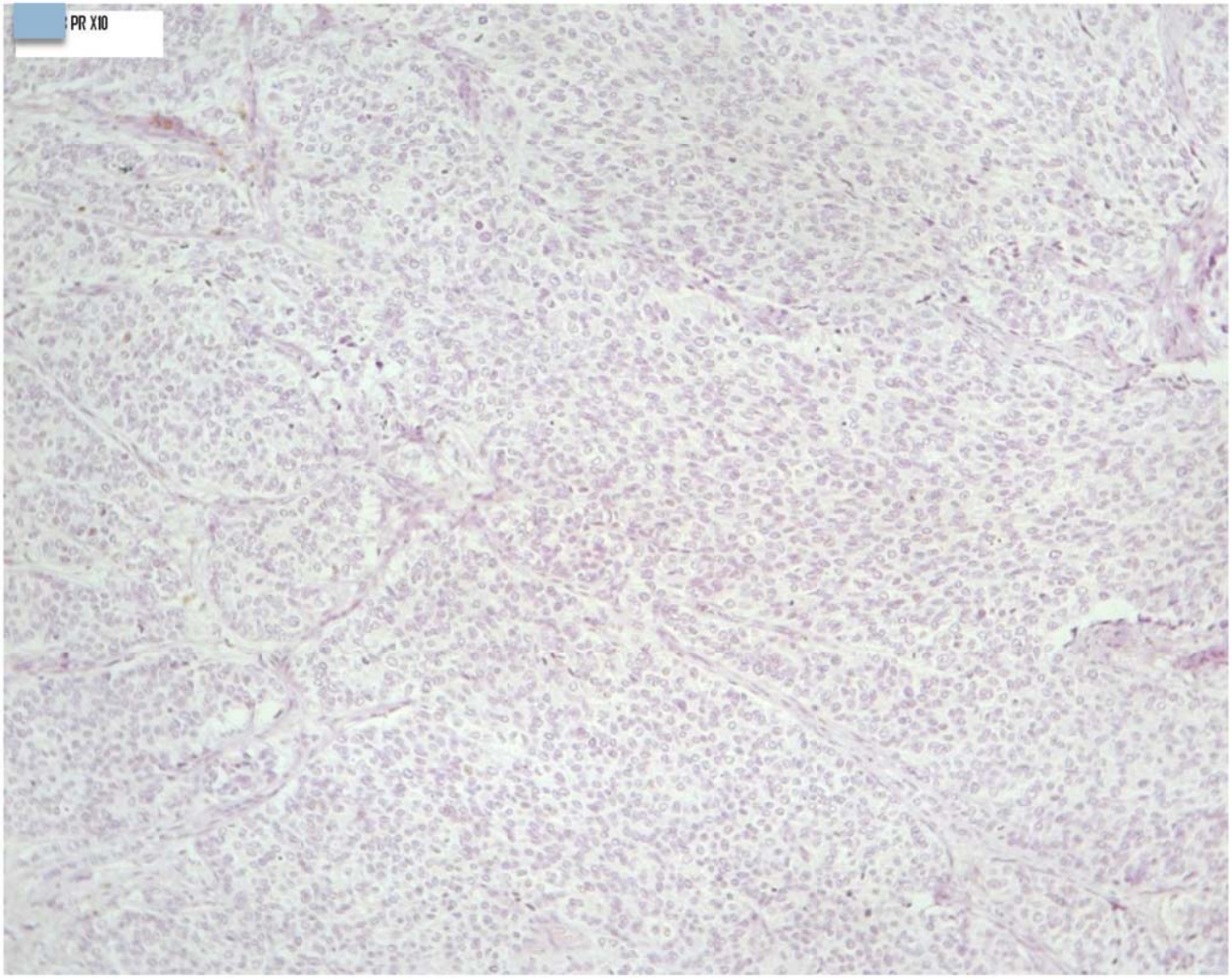
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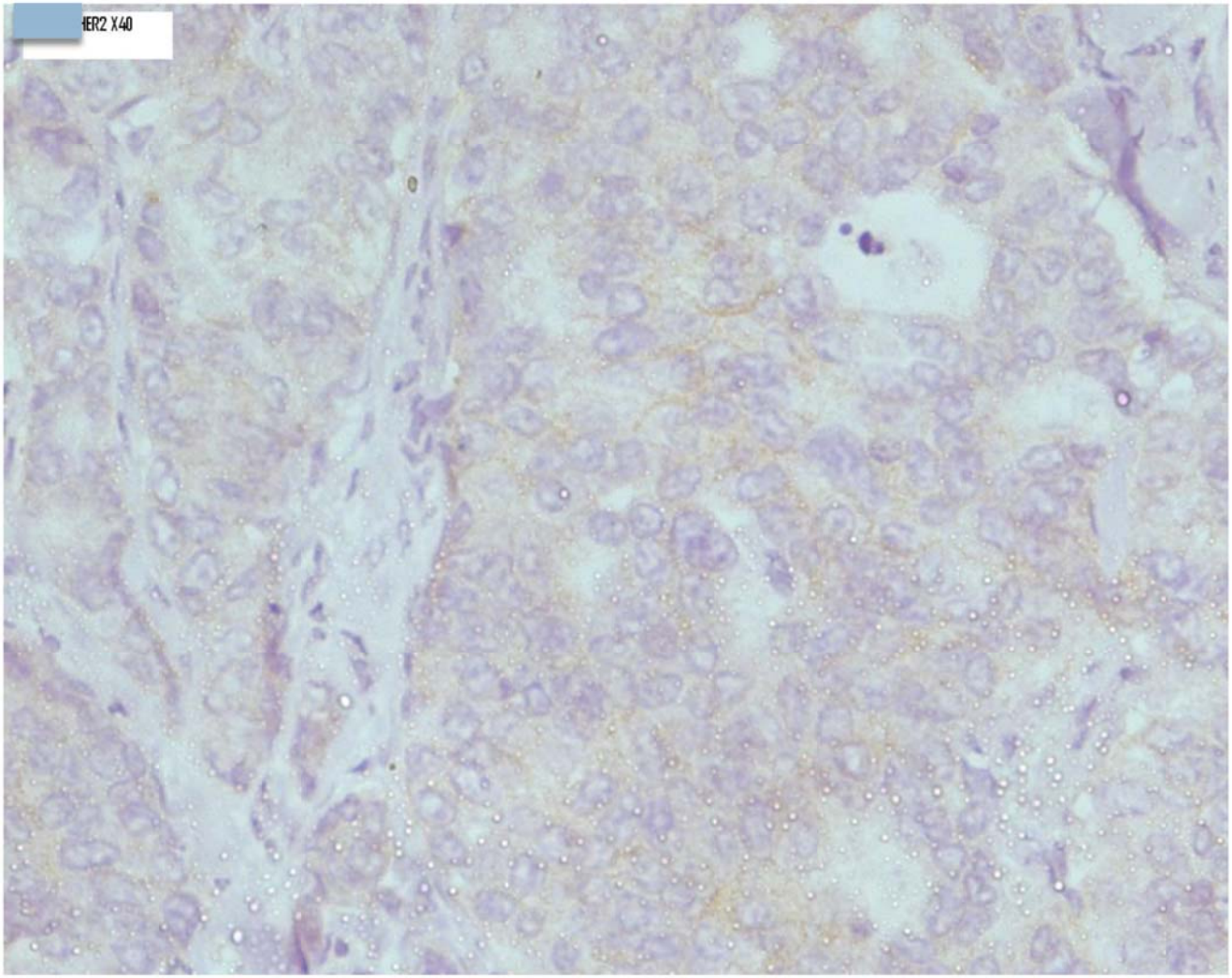

ER2 X40

Two men with breast masses

[redacted] 2012

- Repeat lumpectomy 7x3x2 cm with mass 1.5x1.5 cm: poorly diff IDC, surgical margins free
- USG abdomen normal
- Referred to PMH oncology

Two men with breast masses

[redacted] 2013

- completed 6 cycles of AC
- Started on adjuvant RT
- Awaiting receptor status

Two men with breast masses

Case 2: Mr. KM

Two men with breast masses

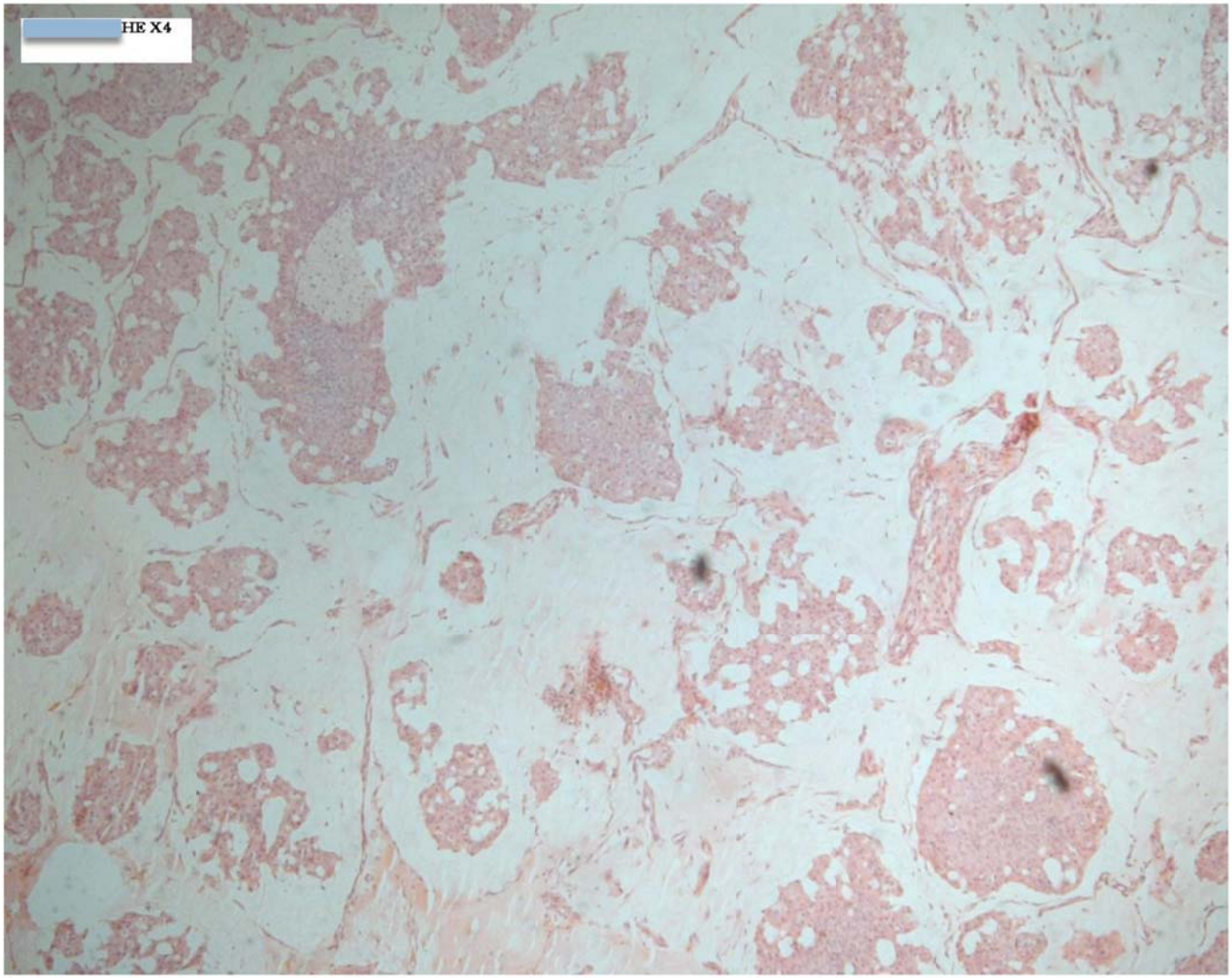
Patient History

- 68 year old male, nonsmoker and nonalcoholic
- C/o painless swelling of right breast – since 2010 and presented in [redacted] 2012 with multiple ulcerations on right breast.
- K/c hypertension, stable on treatment
- No contributory family or social history
- HIV negative

Two men with breast masses

[redacted], 2012

- Biopsy from mass: Infiltrating duct carcinoma, mucinous colloid carcinoma, Nottingham score 4
- Underwent right mastectomy [redacted], 2012
- HPE: Ulcerated skin with tumor of 13 x 16 x 11 cm, infiltrating duct carcinoma, grade 2. Deep margin positive.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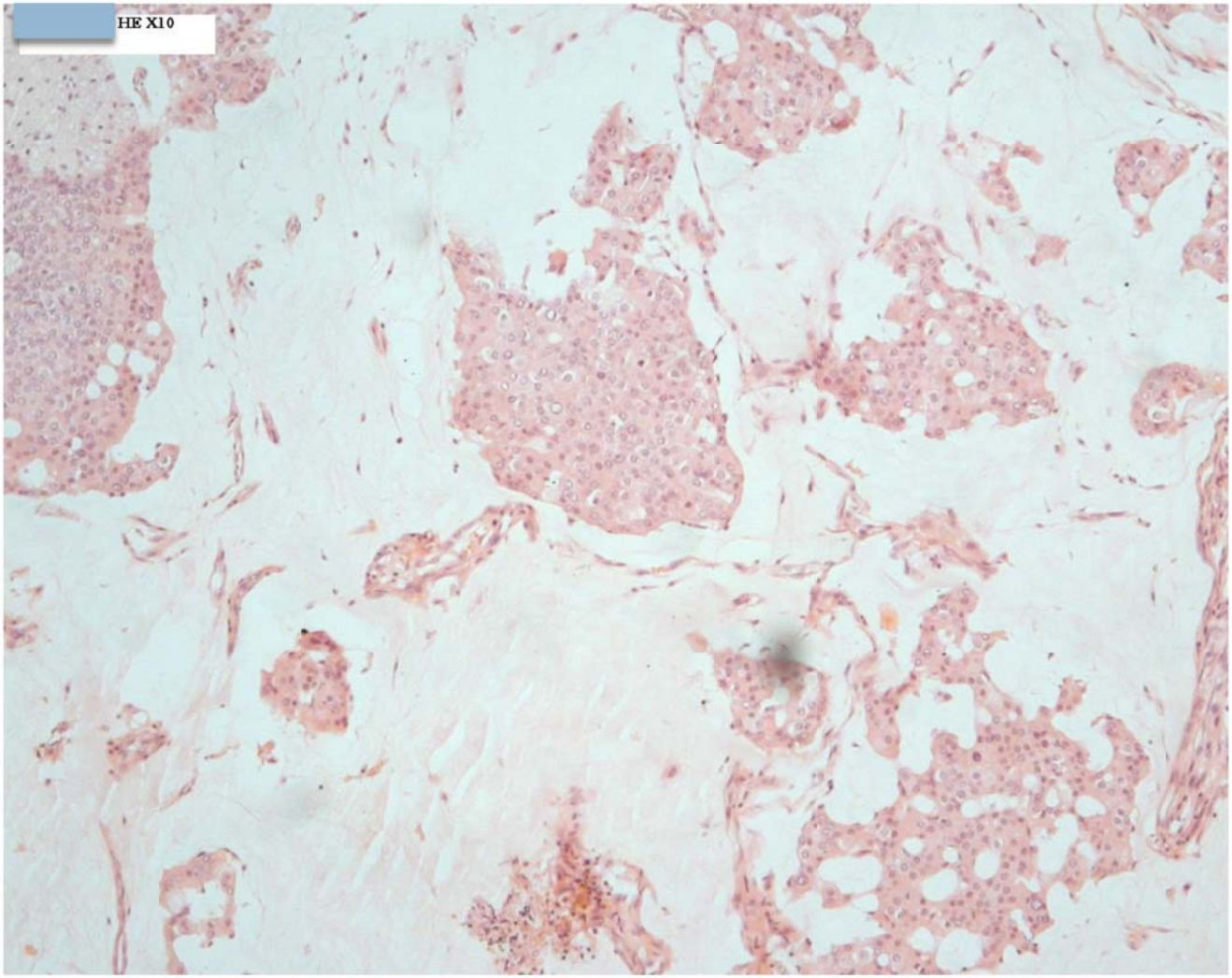
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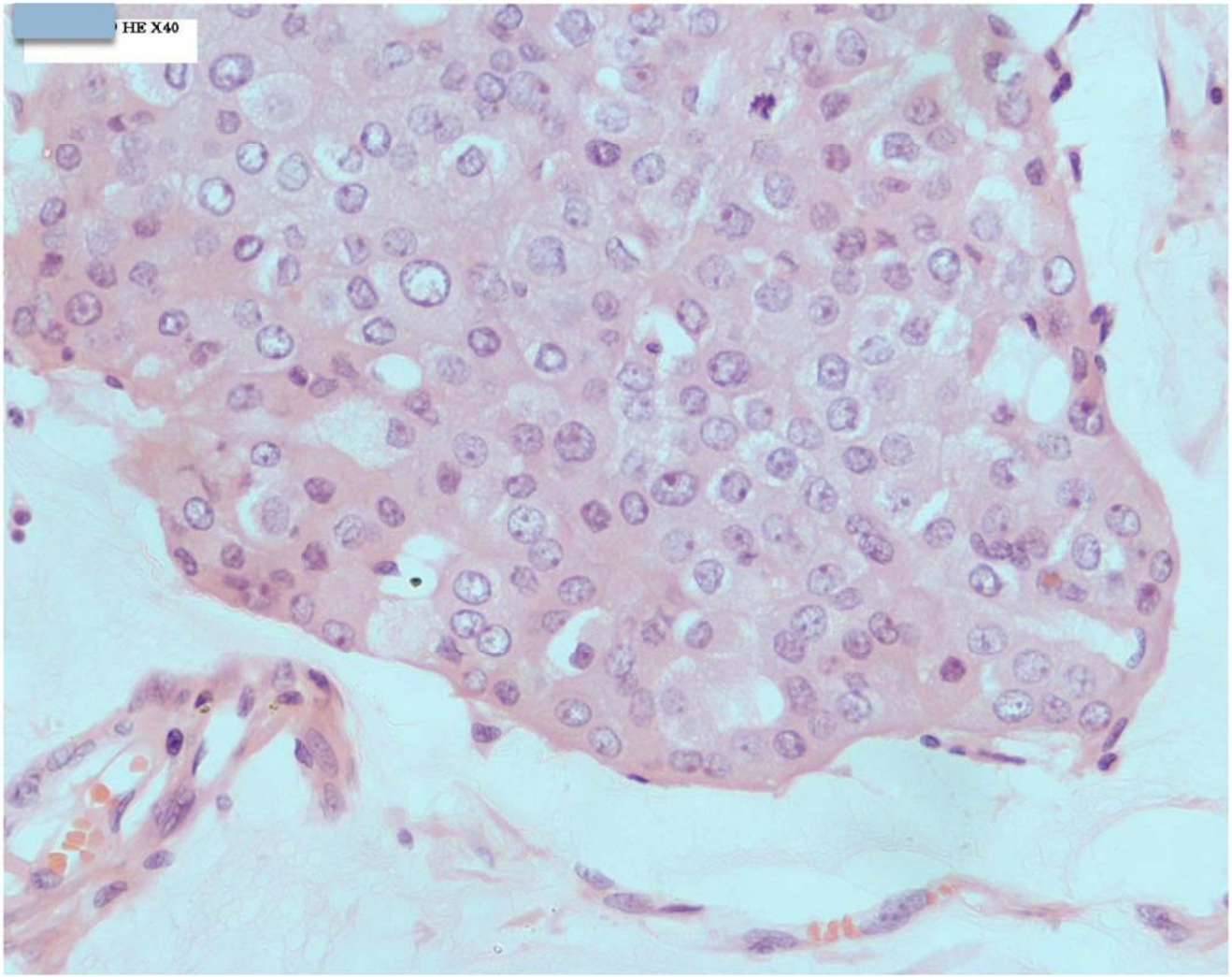
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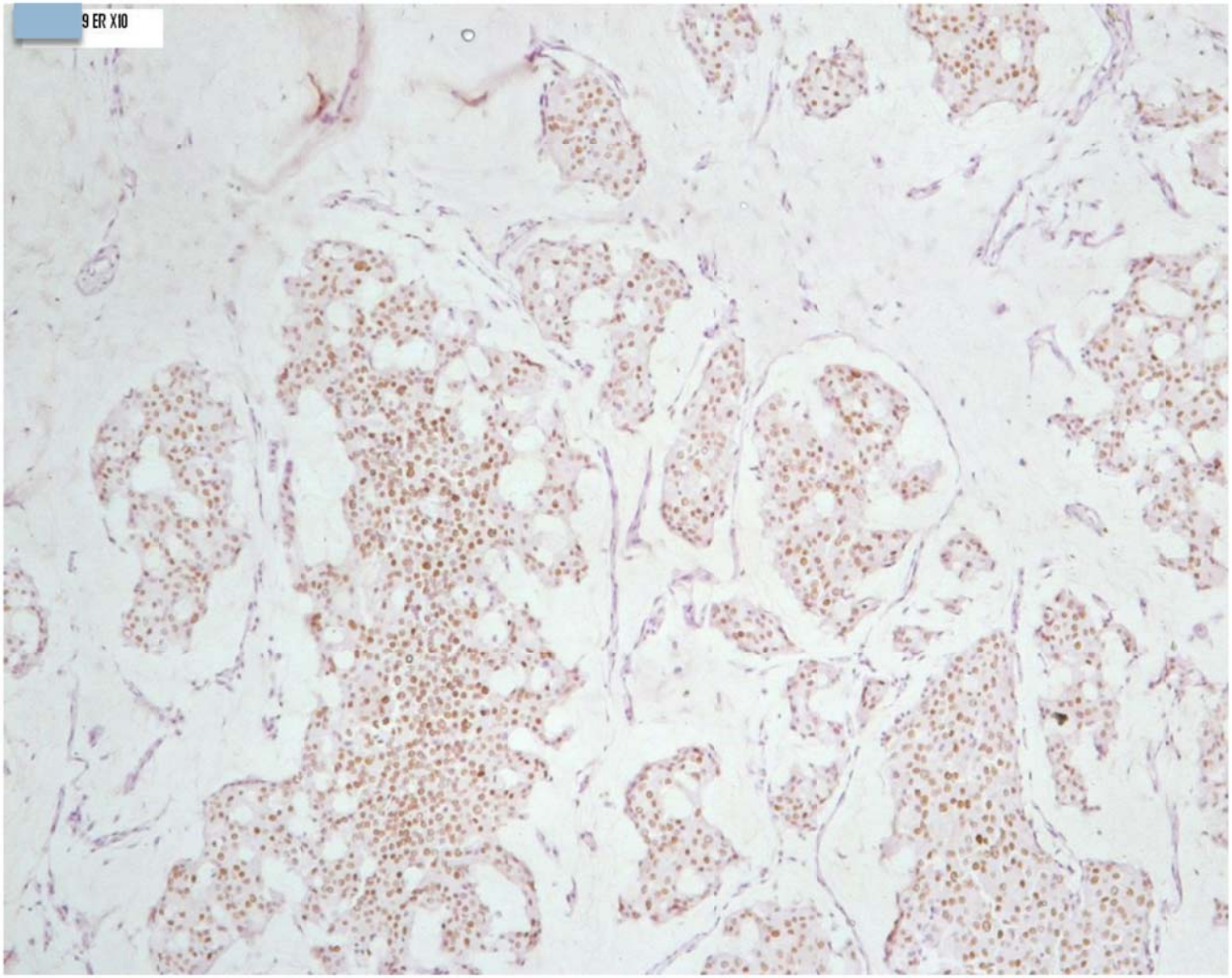
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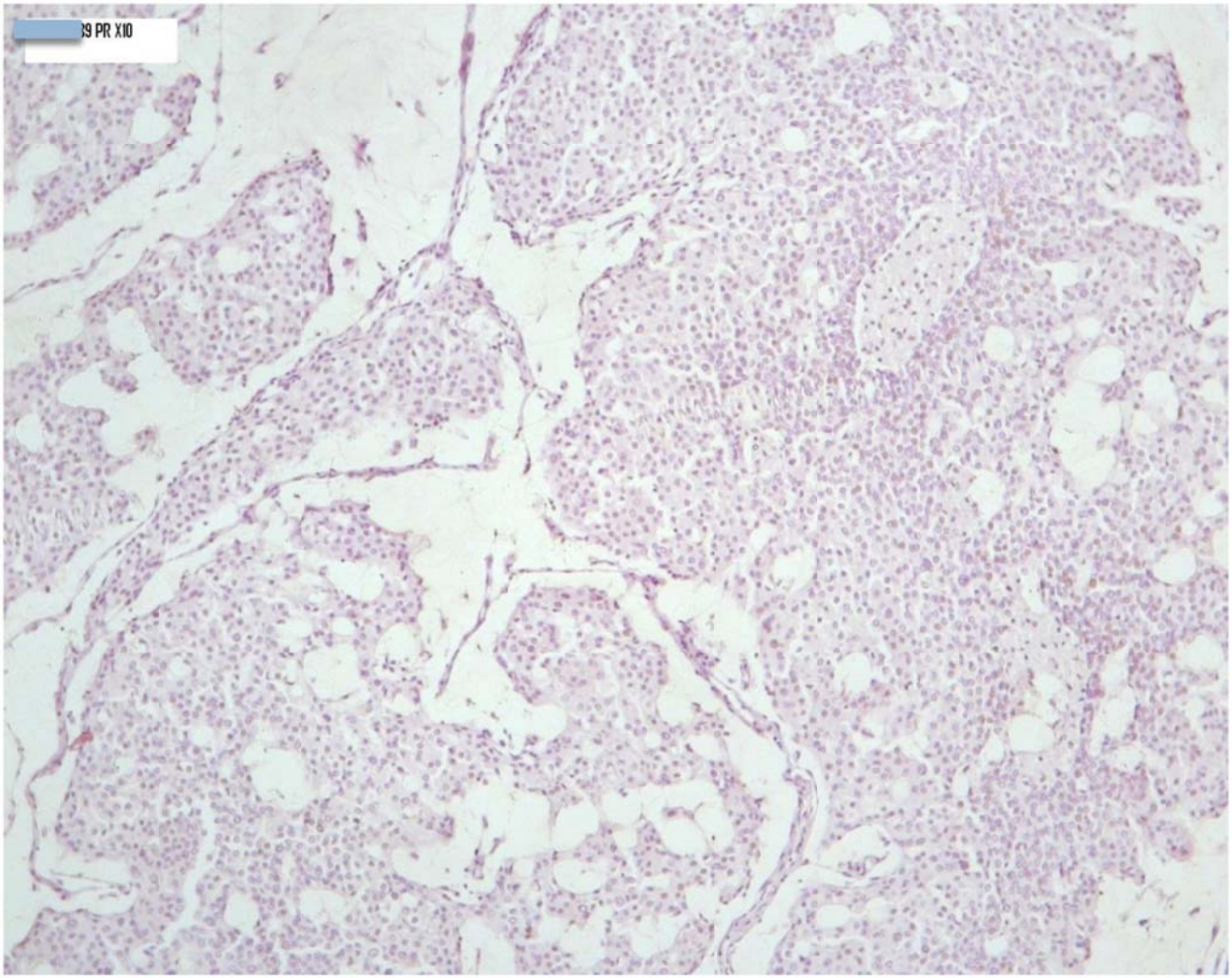
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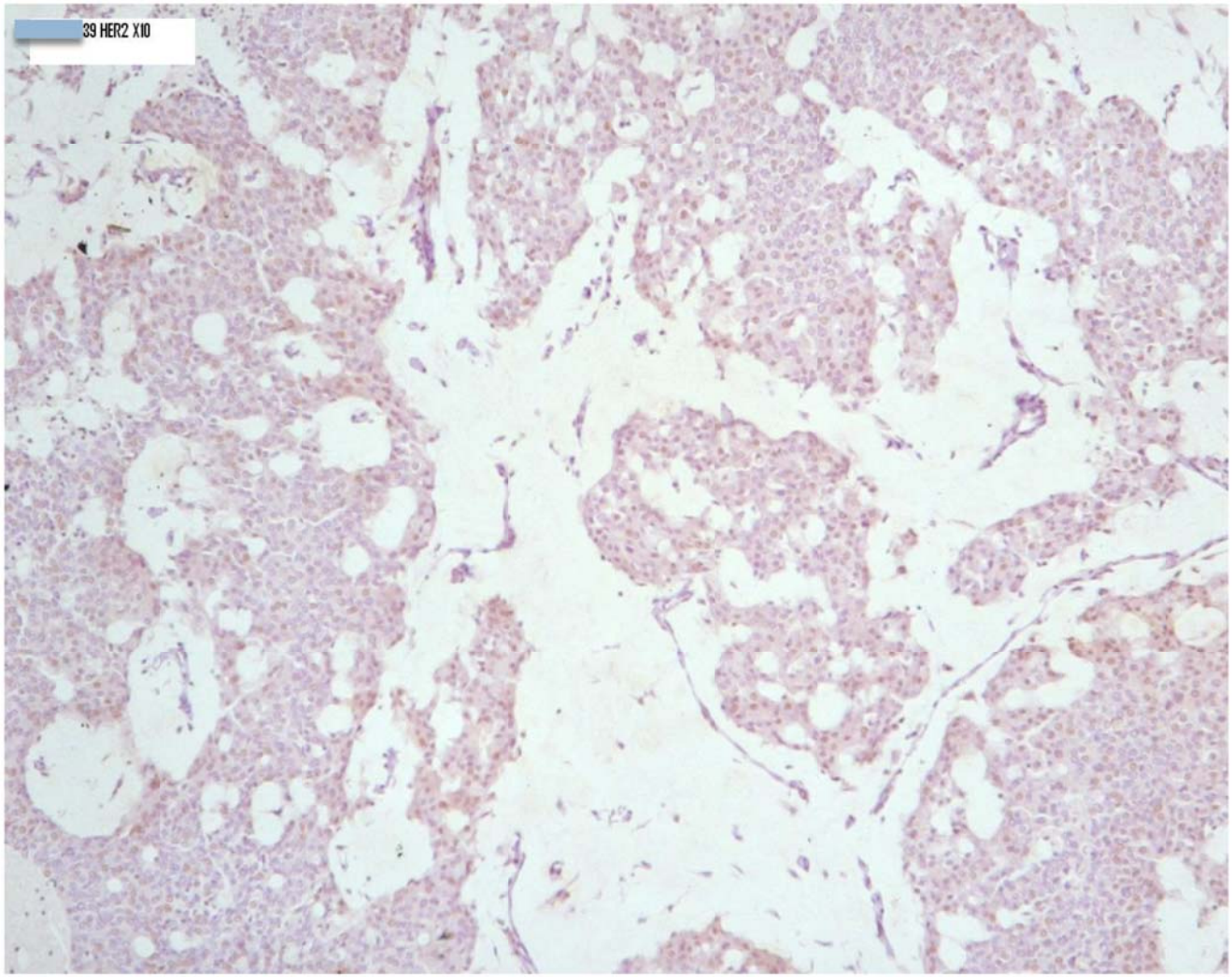
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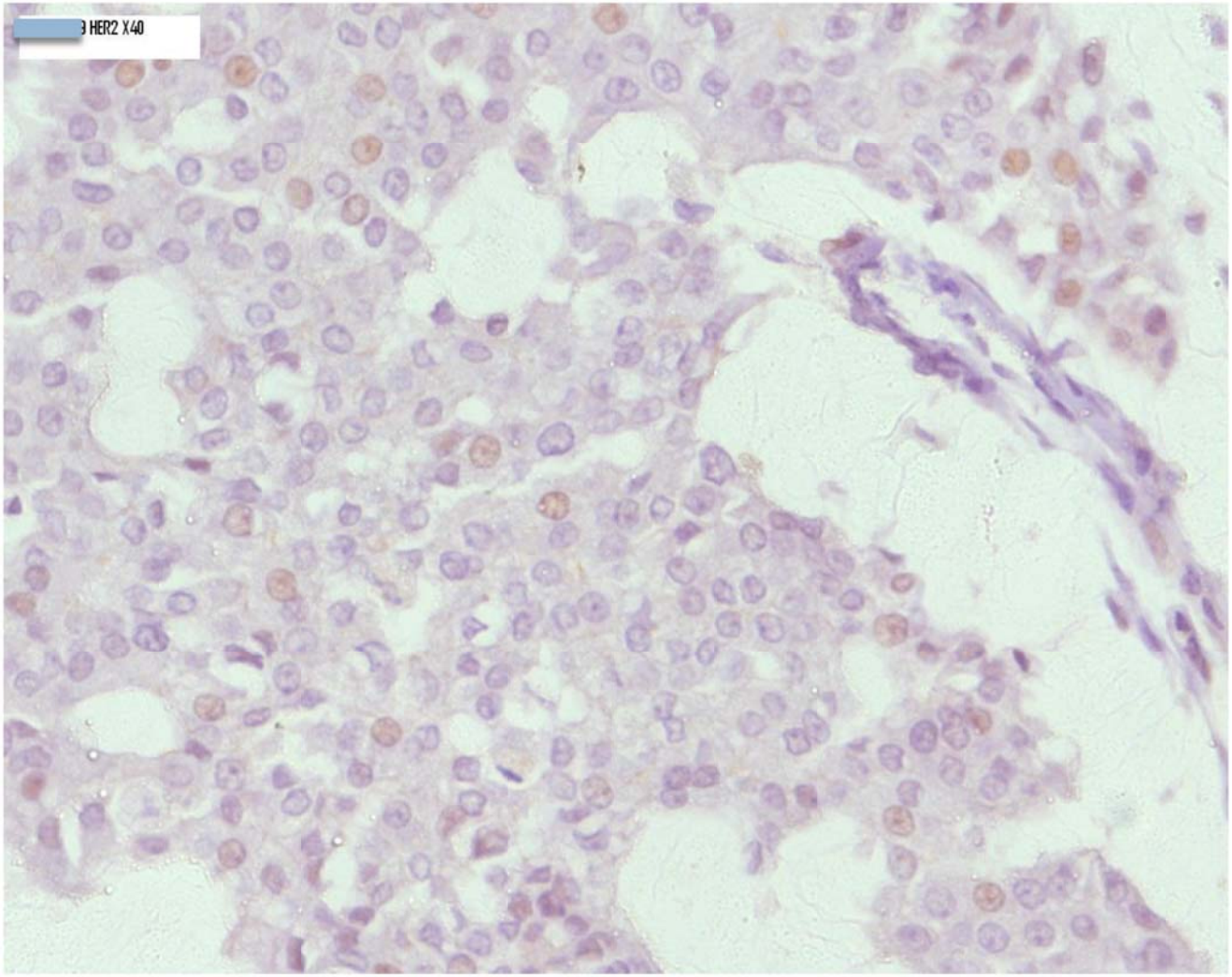
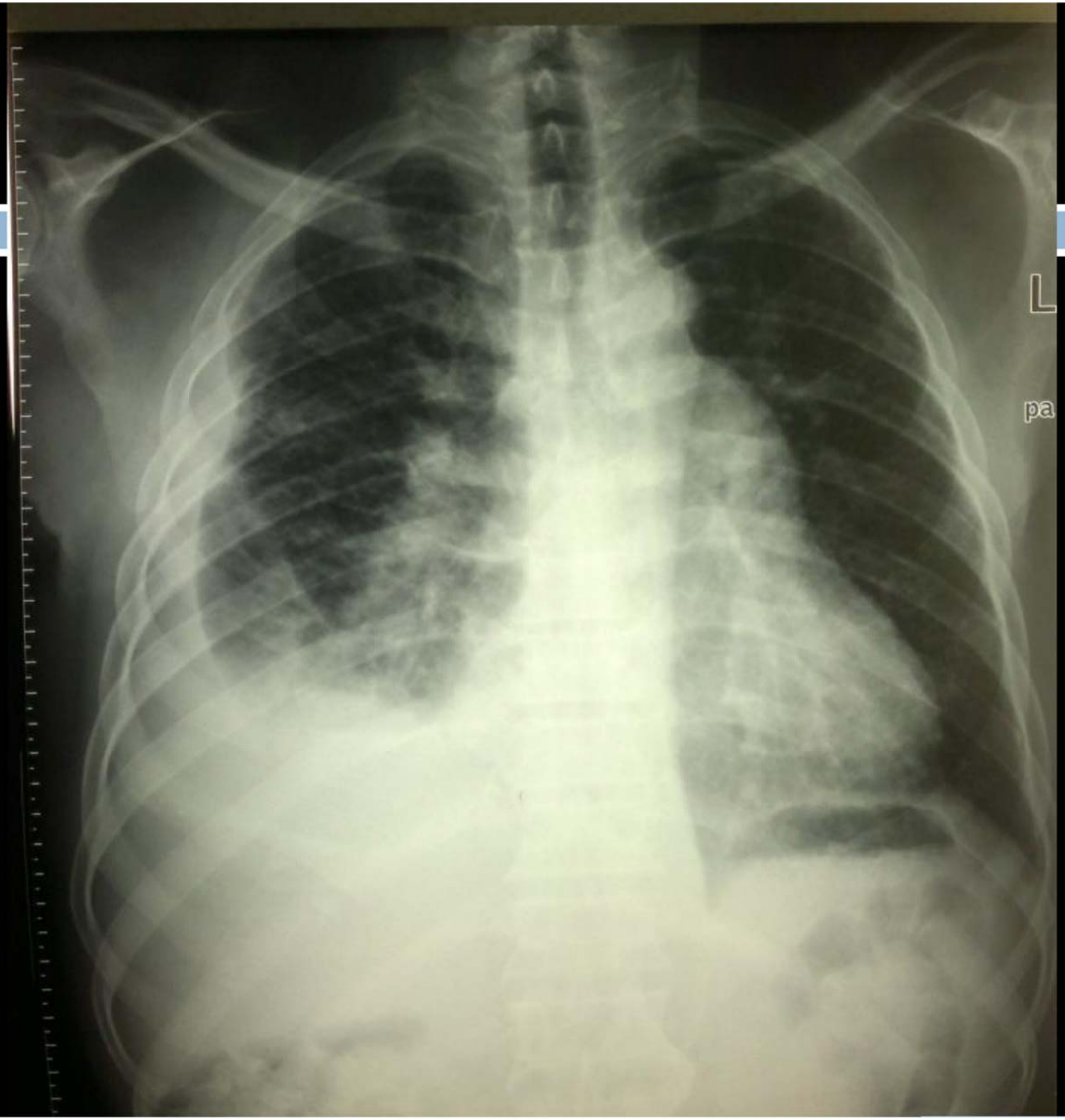

HER2 X40

Two men with breast masses

Workup

- USG abdomen: Normal liver.
- CT scan chest: [redacted]/2012 numerous nodular opacities mainly in both upper lobes. No cavitation. Bilateral pleural effusions, right > left with atelectasis. Mild cardiomegaly. Pulmonary artery dilatation with diameter of 4.5 cm suggestive of pulmonary hypertension. Spondylosis of dorsal spine.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Two men with breast masses

- Staged T4bNxM1
- Completed 6 cycles of CMF from [redacted]/2012 to [redacted]/2012
- Received palliative RT to chest wall and drainage areas for TD 30 Gy in 10 fractions.
- Hormone receptors awaited.

Two men with breast masses

- C/o palpitations off and on
- ECHO: moderate concenteric LVH with EF 50%. RV dilatation, mild TR, PASP 55; started on Tab enalapril 2.5 mg BD.

Breast Cancer in Men

- In US 2140 new cases per year, represents

<0.5 % of all cancer deaths in men annually

- In central Africa male breast cancer accounts for up to 6% of cancers in men
- Median age at diagnosis is 65-67
- Incidence is increasing

Risk Factors

- **Genetics** (Ashkenazi Jews, higher risk with BRCA2 which confers a 6 % lifetime risk, also PTEN, TP53)
- Conditions associated with an **abnormal estrogen-androgen ratio** such as obesity, Klinefelter's syndrome, exogenous testosterone or estrogen use, orchitis/epidymitis, cirrhosis
- **Lifestyle:** lack of exercise
- **Exposures** such as prior chest wall irradiation
- **Gynecomastia** most often drug related

Histologic and Molecular Features

- 90% are invasive ductal cancers
- DCIS occurs at advanced age and tends to be low grade
- 90% of male breast cancers are ER+ and 80% are PR +
- HER2 expression appears similar to that seen in female breast cancer, less frequent
- Androgen receptor expression is detected in 34 – 95% of men – the contribution to tumorigenesis is still unclear

Clinical Presentation

- Typically presents as a painless, firm subareolar mass
- Other findings include ulceration of the nipple, fixation to skin or underlying muscle, palpable nodes
- Nipple involvement occurs in 40-50% of cases

Diagnosis

- Diagnostic imaging with mammogram - abnormal 90% of the time and allows differentiation from gynecomastia
- Any suspicious mass requires biopsy confirmation
- Core needle biopsy is the method of choice
- FNA can help establish diagnosis although high rate of false negatives

Staging

- Classified according to a TNM staging system developed and maintained by the American Joint Committee on Cancer and the Union for International Cancer Control

Treatment

Localized Disease

- The traditional surgical approach is mastectomy due to small breast size and location of the primary tumor
- Breast conserving therapy is an option for men if they have sufficient breast tissue allowing adequate surgical margins and are able and willing to receive adjuvant radiation
- A study done looking at SEER data identified 1541 cases and 20% had conservation
- Data shows men treated with lumpectomy are less likely to receive postoperative XRT

Management of the Axilla

- Axillary staging is an important component of staging.
- Sentinel node biopsy is appropriate for males presenting with clinically negative axillary nodes
- Axillary dissection should be done if nodes are clinically positive or found positive after SNB

Adjuvant RT

- PMRT guidelines extrapolated from experience with women
- Strongly consider for T3/4, N+ disease, or close/positive margins
- PMRT volume usually includes chest wall and regional lymphatics
- Recommended following lumpectomy to breast/chest wall +/- lymphatics depending on nodal status

Adjuvant Endocrine Therapy

- Recommended for the majority of men with breast cancer
- Endocrine Therapy with tamoxifen for at least five years
- Duration of therapy should be decided after 5 years based on individual tolerance and assessment of risk of relapse
- Adherence to therapy is low and associated with increased risk of relapse (risk factors are lack of social support, age < 60 and adverse effects)
- Aromatase inhibitors – limited data and possibly inferior outcome

Adjuvant Chemotherapy

- Recommendations are based on results observed in clinical trials done in women
- Retrospective comparisons support a survival benefit from adjuvant chemotherapy in men
- Consider adjuvant chemotherapy for men with HER2+ cancers that are >1cm, triple negative cancers and node + or high risk cancers

Regimens for Adjuvant Chemotherapy

- The same chemotherapy regimens as are used in the treatment of women with early stage breast cancer are appropriate choices for men

<u>For HER2- disease</u>

- Doxorubicin-Cyclophosphamide (AC) X 4
- Docetaxel – Cyclophosphamide (TC) X 4
- Fluorouracil – Epirubicin – Cyclophosphamide (FEC) x 6
- Doxorubicin – Cyclophosphamide – Paclitaxel (AC x 4 -> T x 4)
- Docetaxel – Cyclophosphamide – Doxorubicin (TAC x 6)
- C
- Cyclophosphamide – Methotrexate – Fluorouracil (CMF x 6)

<u>For HER2 + disease</u>

- ACTH + trastuzumab

Treatment

Locally Advanced Disease

- T3 or T4 tumors treated similarly to women
- Consider preoperative chemotherapy
- Postmastectomy radiation recommended
- Endocrine therapy

Treatment

Metastatic Disease

- Treatment goal is to extend life and maintain or improve quality of life and functionality
- Individual preferences play a large role in choosing treatments
- Many patients can be managed for long periods on endocrine therapy
- Chemotherapy reserved for treatment of rapidly progressive disease or symptomatic visceral disease – or for treatment of endocrine refractory disease or triple negative breast cancer

Considerations for older patients

- No specific data for older men but considerable progress made in the past decade in understanding how treatment recommendations vary for older women
- Geriatric assessment and estimation of organ reserve is crucial prior to extensive surgery or systemic therapy
- Limit cytotoxic therapy and monitor carefully for adverse events

Prognosis

- As in women, tumor size, # involved nodes, biology are the most important prognostic factors
- Considered biologically more aggressive than in women but when matched for stage outcomes appear to be similar
- 2 studies involving >300 cases of male breast cancer report 10 year disease specific survival rates of 77-84 % for node -, 44 and 50 % for 1-3 + nodes and 14 – 24 % for 4 + nodes

Follow-up

- Increased risk of contralateral breast cancer
- Annual mammograms not typically performed unless BRCA2 carriers
- In BRCA2 carriers, a prophylactic contralateral mastectomy should be considered

Conclusions and Summary

- Treatment for male breast cancer in general modelled after treatment for female breast cancer
- Male breast cancer generally ER positive
- Genetic testing encouraged in families with male breast cancer