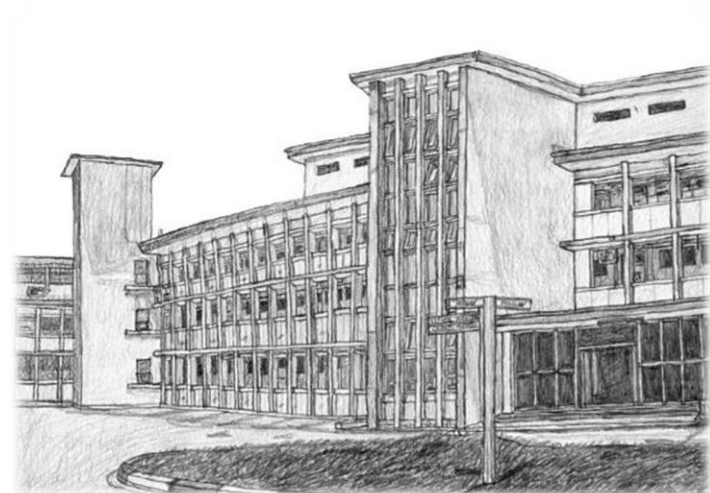
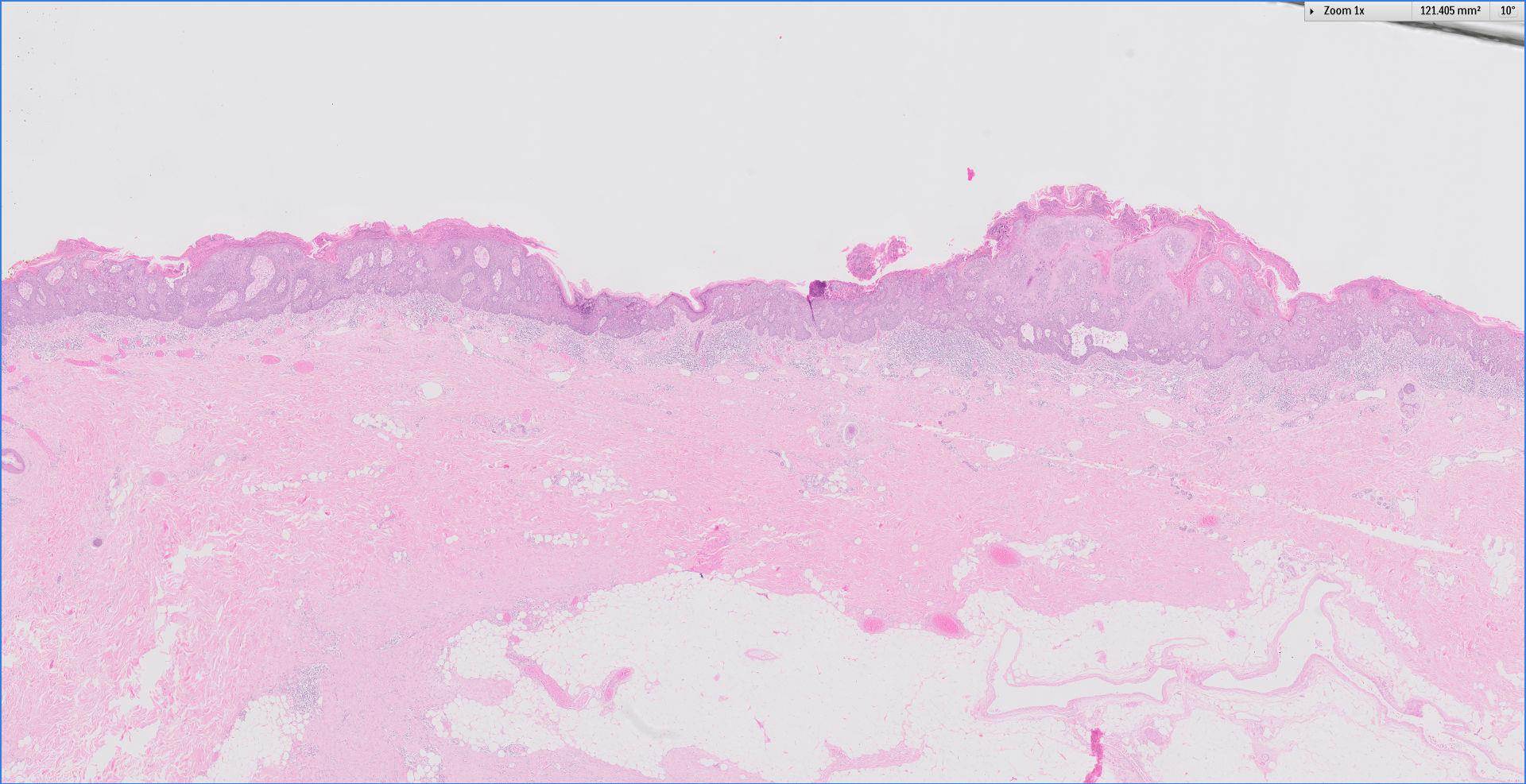
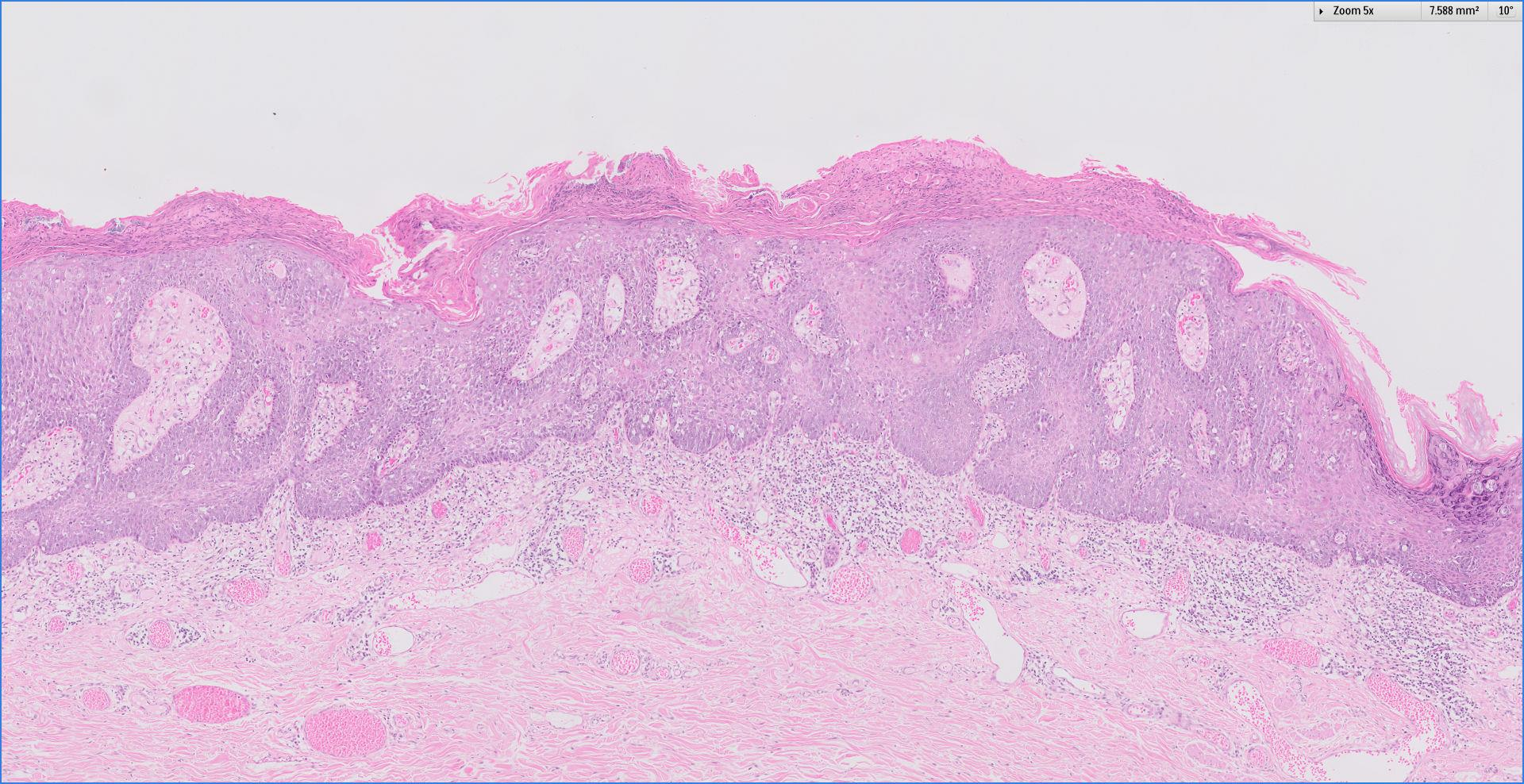


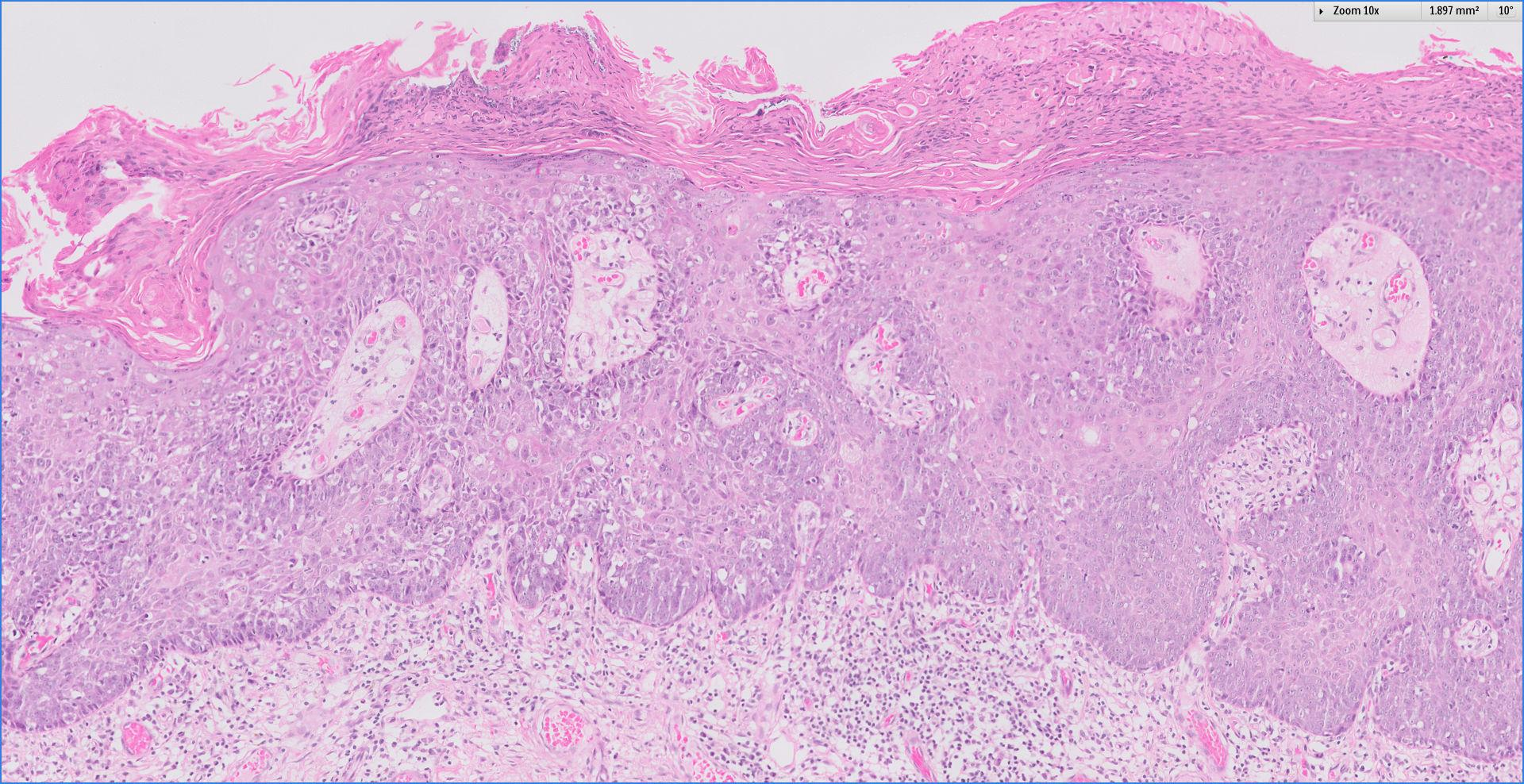
Case 2

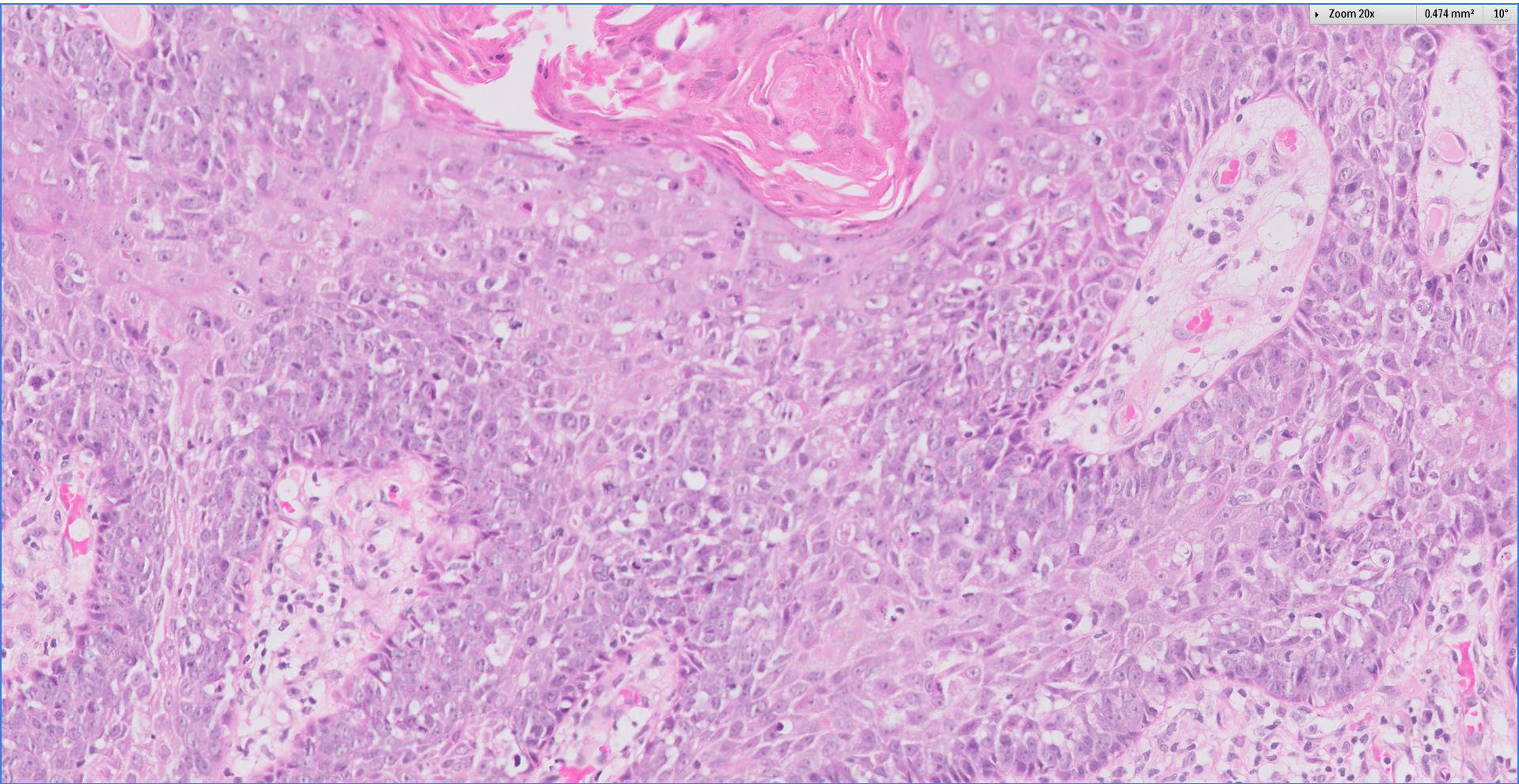
65 year old female.
Skin lesion, 2cm in size, over the left breast.
Wide local excision performed.

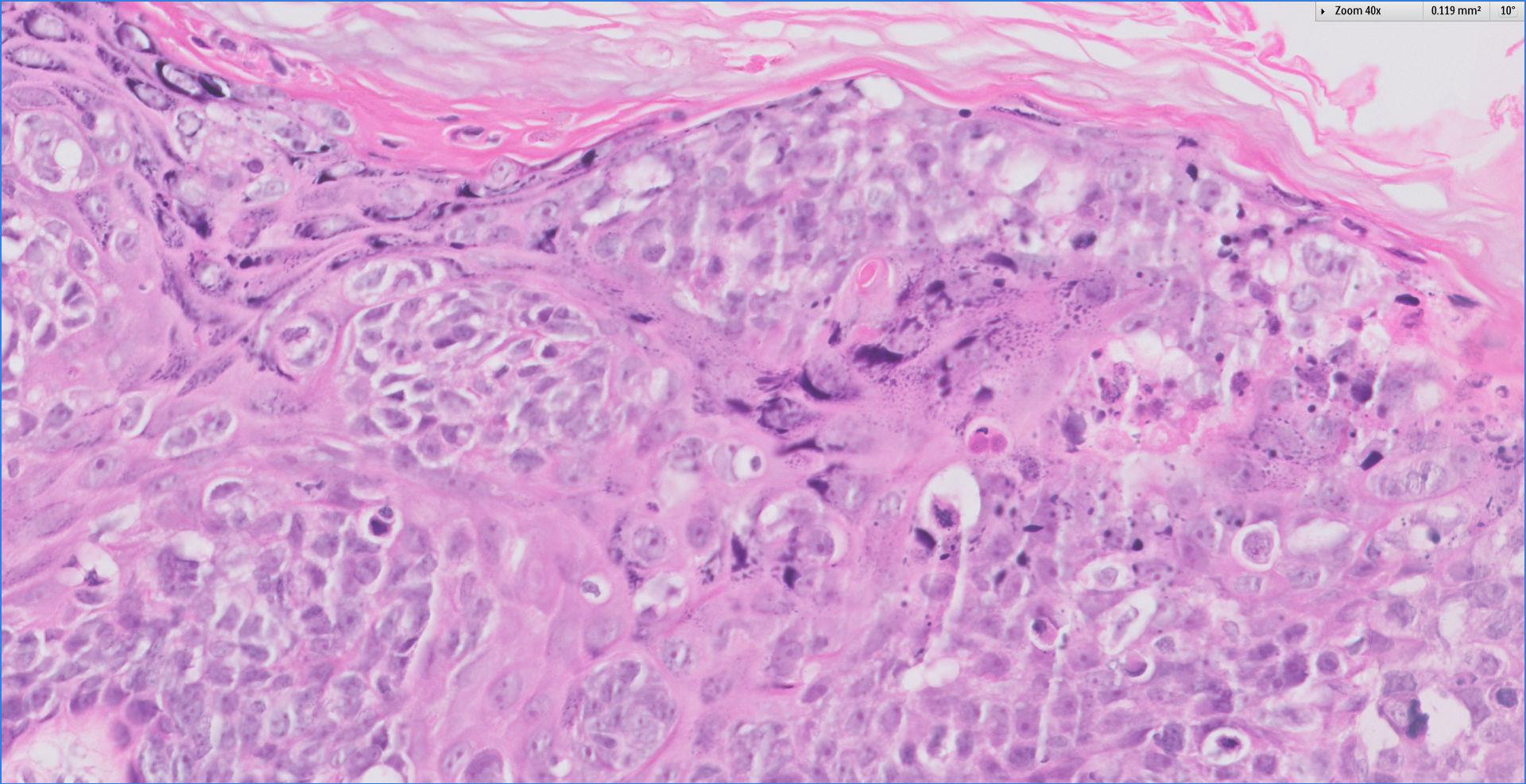




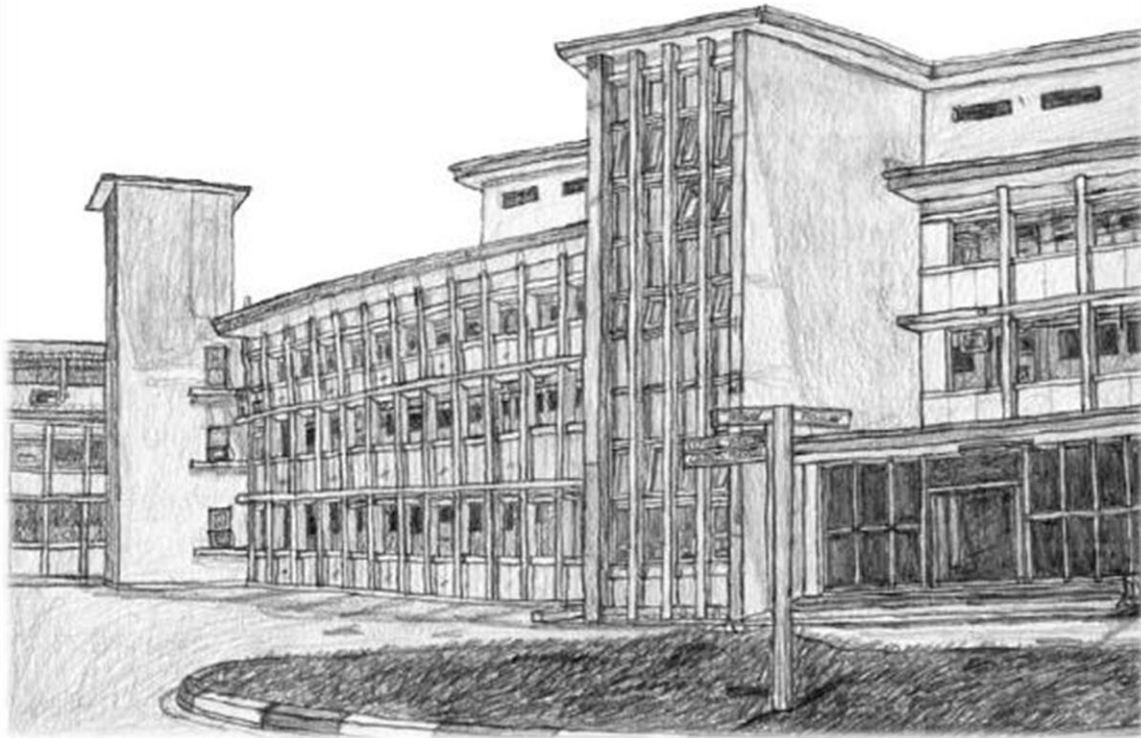








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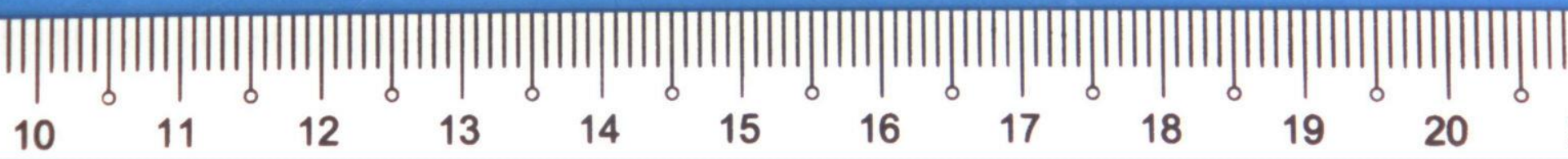
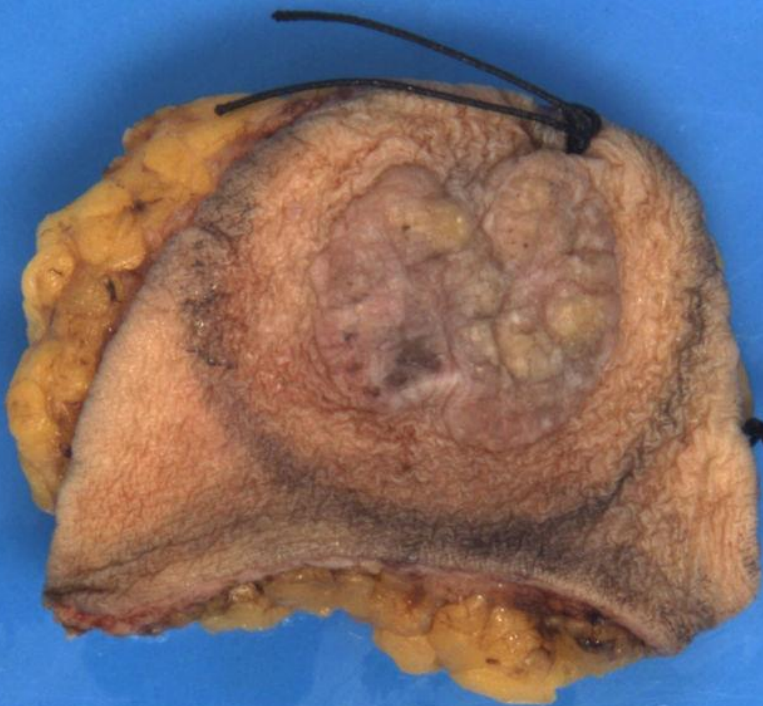




Fig. 4. Clinical picture of Case 2 showing an erythematous scaly skin rash at the 6 o'clock position of the left breast measuring 2×1.5 cm in size, located 5 cm from the nipple.

Additional information

- No palpable breast lumps or enlarged axillary lymph nodes.
- Radiological investigations, including mammogram, ultrasound and magnetic resonance imaging (MRI), did not reveal any breast parenchymal lesions.
- Ultrasound showed a well-circumscribed cutaneous lesion in the left breast, predominantly macular, with only a small nodular focus measuring 0.2 cm in maximum thickness.
- This was associated with slightly increased vascularity in the surrounding tissue.



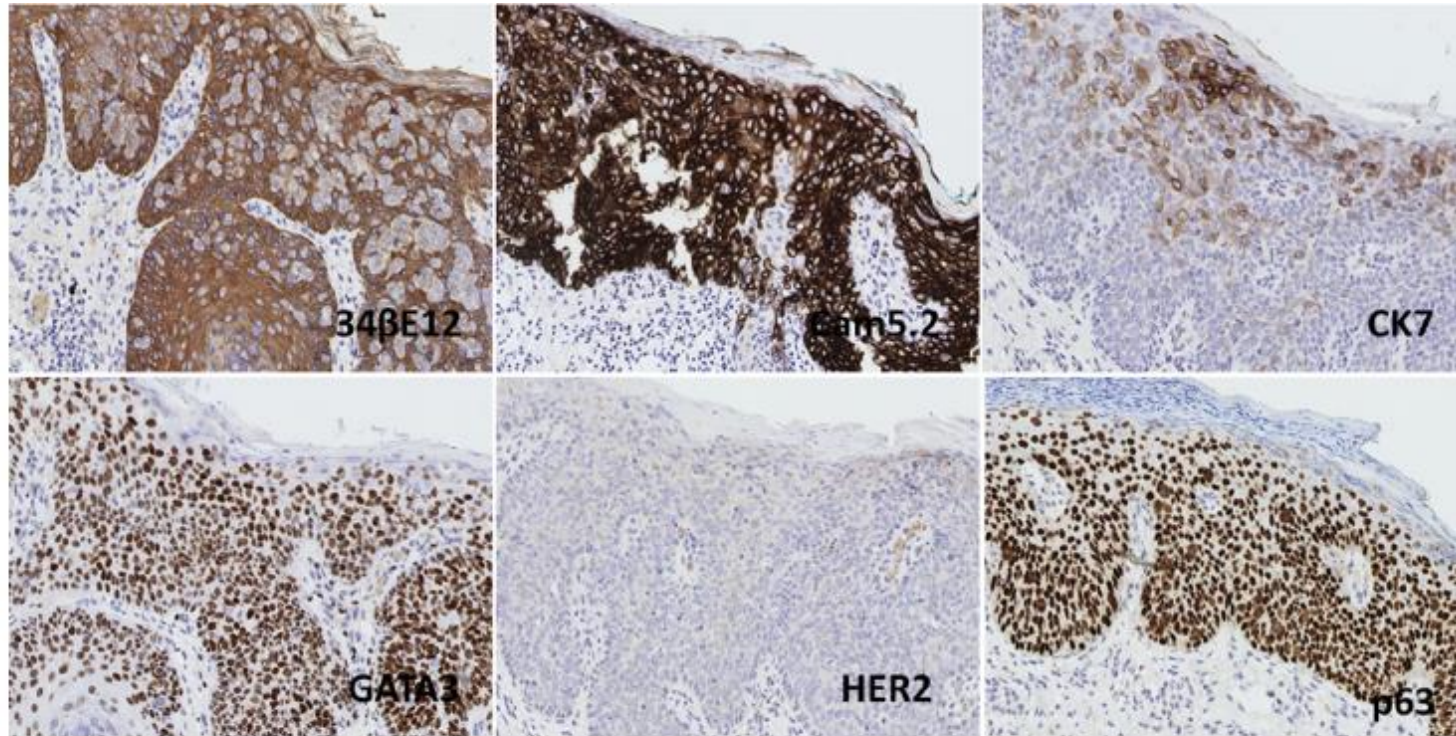
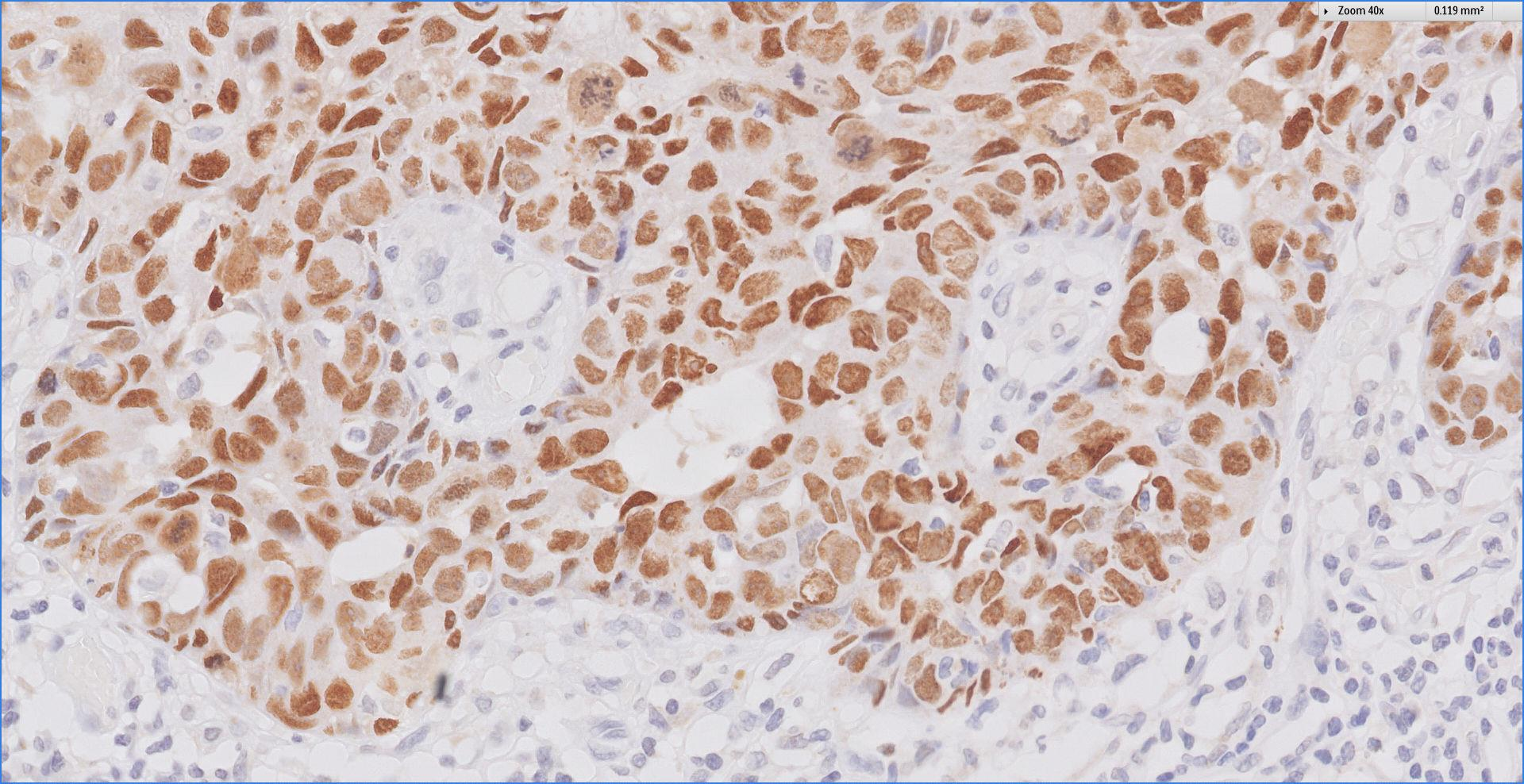
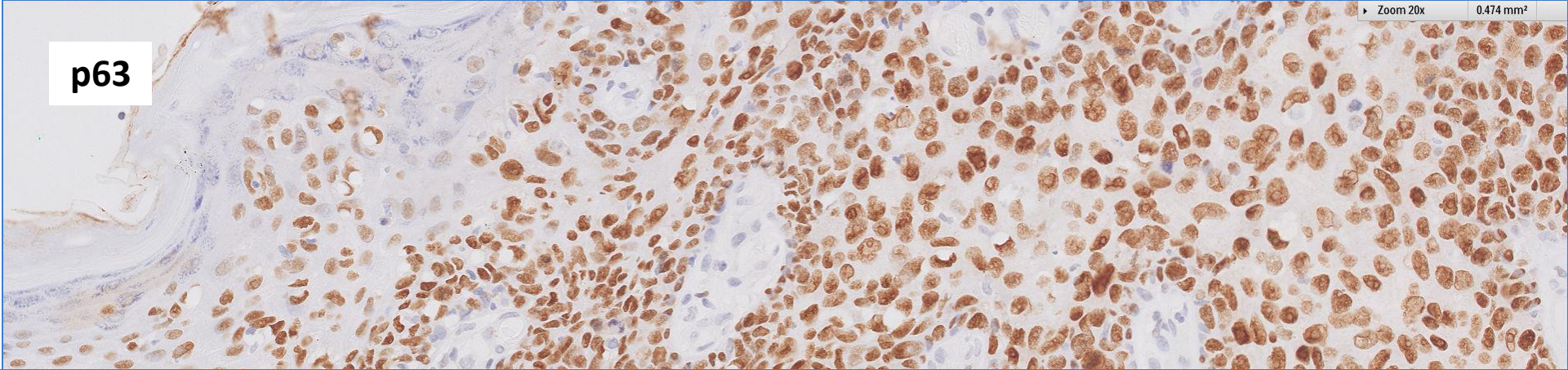


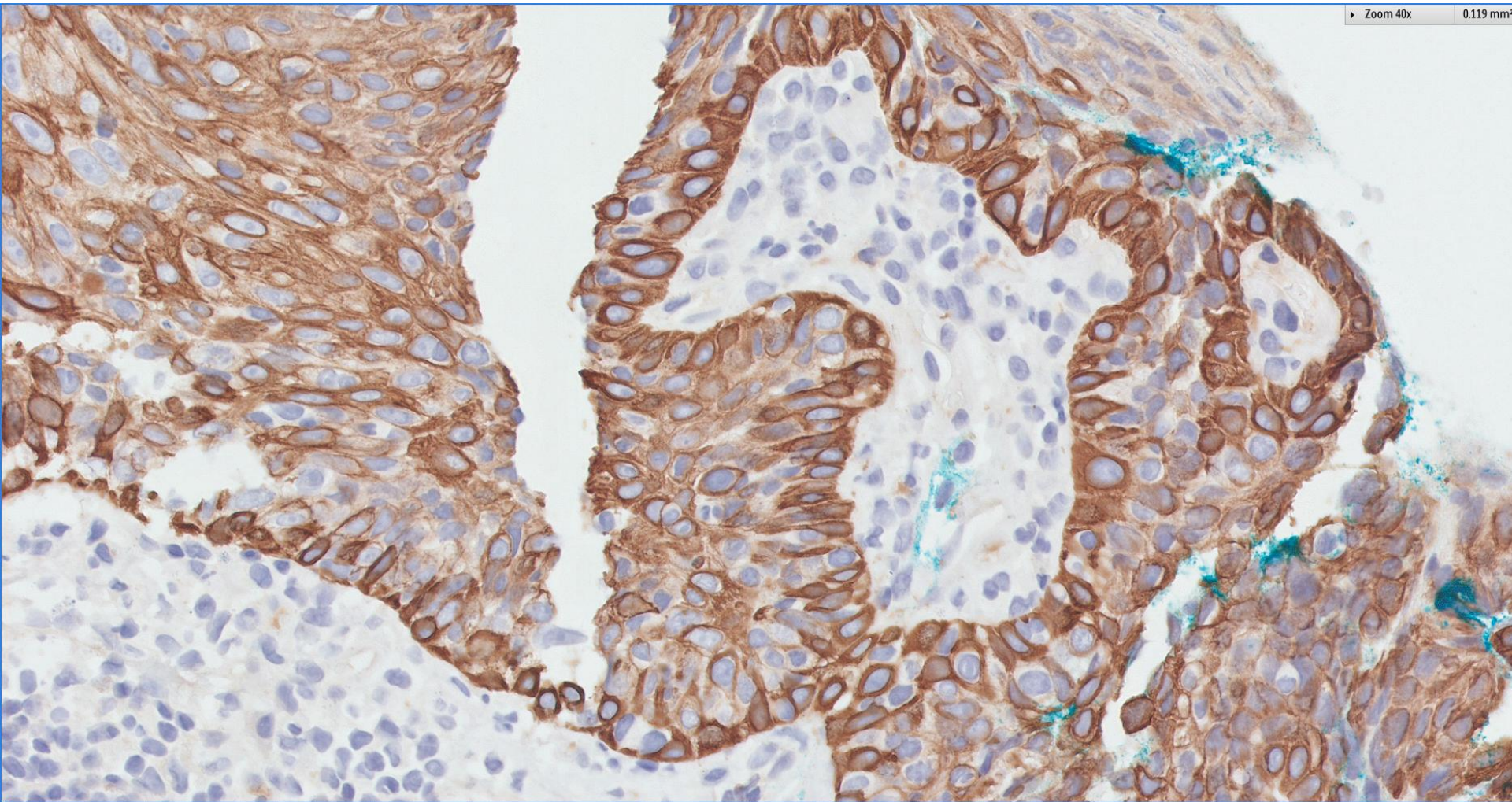
Fig. 6. Immunohistochemistry of the skin lesion from Case 2. The tumour cells are positive for p63, 34betaE12 and CAM5.2, with focal positivity for CK7 and GATA3. HER2 was negative.

HER2, polyclonal CEA, GCDFFP-15, CK20, S100 and HMB45 immunohistochemical stains as well as mucicarmine were negative.

p63

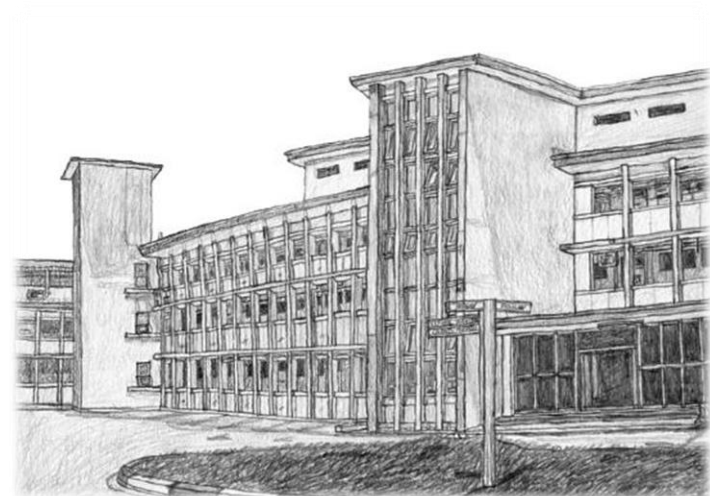


34βE12



Diagnosis

Bowen's disease.

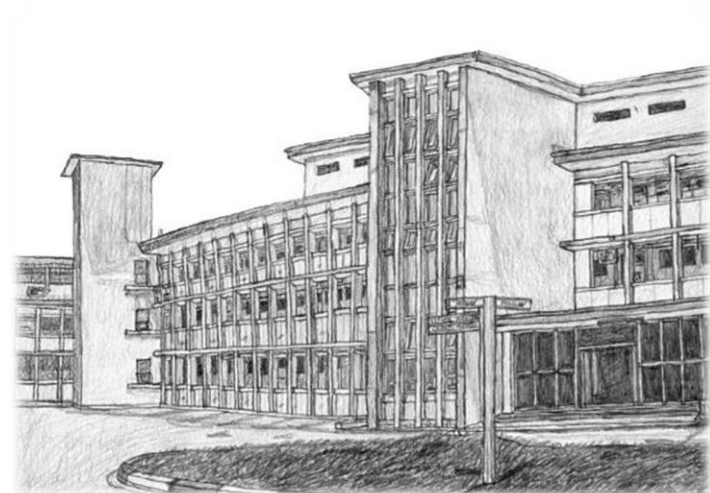


Differential diagnosis

- Paget disease
- Basal cell carcinoma
- Superficial spreading malignant melanoma
- Inflammatory conditions

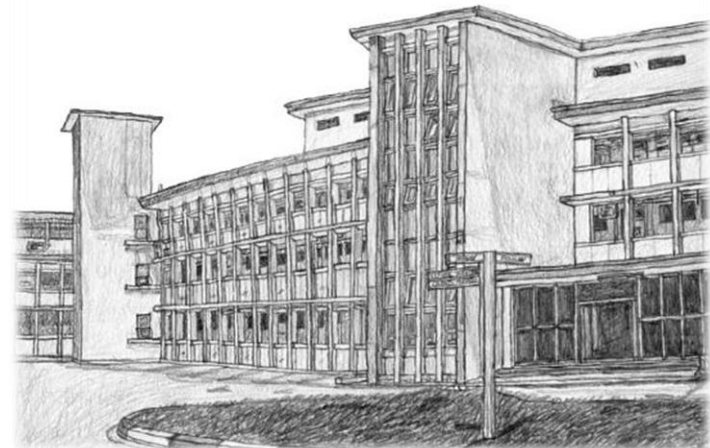


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Immunohistochemistry ~ CK7

- Both pagetoid Bowen's disease and Paget disease exhibit CK7 reactivity.
- CK7 expression is less frequent and more focal in pagetoid Bowen's disease.
- CK7 is more usual and diffuse in Paget disease.



Immunohistochemistry ~ HER2, p63, 34betaE12

- Positive HER2 reactivity is one of the key diagnostic features of Paget disease.
- 10–20% of Paget disease cases can be HER2 negative.
- Positivity for p63 and high molecular weight cytokeratin, such as 34betaE12 favour Bowen's disease.
- Above panel can help differentiate pagetoid Bowen's disease from Paget disease.

Immunohistochemistry ~ Cam5.2

- Usually positive in Paget disease and negative in pagetoid Bowen's disease.
- In this case, the initial immunohistochemistry panel revealed CK7 and Cam5.2 positivity, which in conjunction with the pagetoid morphology and lack of intercellular bridges, led to a diagnosis of Paget disease on the initial punch biopsy.
- It was only in the excision, when tumour cells were found to be HER2 negative, p63 and 34betaE12 positive that the diagnosis of pagetoid Bowen's disease was made.
- Cam5.2 positivity in our case was unusual and demonstrated that both CK7 and Cam5.2 positivity can be diagnostic pitfalls when distinguishing pagetoid Bowen's disease from Paget disease.
- A wider panel of immunohistochemical stains coupled with knowledge of the clinical context are imperative in arriving at the correct diagnosis.

Bowen's disease

- Major risk factors for Bowen's disease include ~
 - Ultraviolet radiation
 - Human papillomavirus infection
 - Immunosuppression
- Immunosuppressed state of a patient undergoing neoadjuvant or adjuvant chemotherapy/radiation for breast cancer may theoretically lead to the development of Bowen's disease of the breast, though its rarity in comparison with the large numbers of patients subjected to such therapy makes this an unlikely predisposing consideration.



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Intraepidermal malignancy in breast skin: A tale of two tumours

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Yah Yuen Tan^d, Puay Hoon Tan^{a,e}

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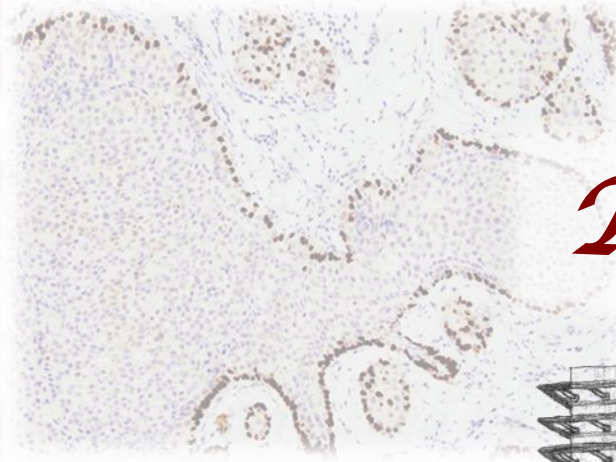
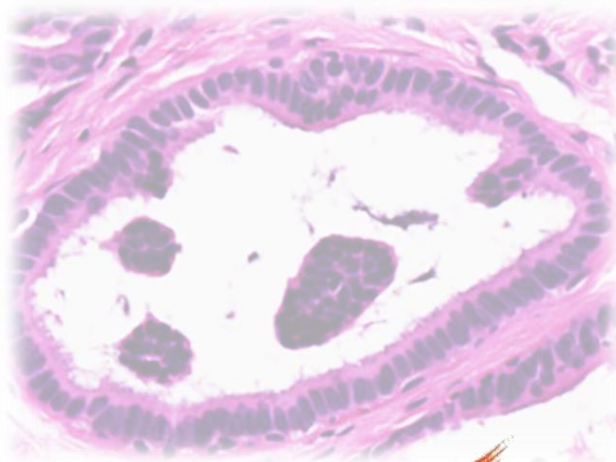
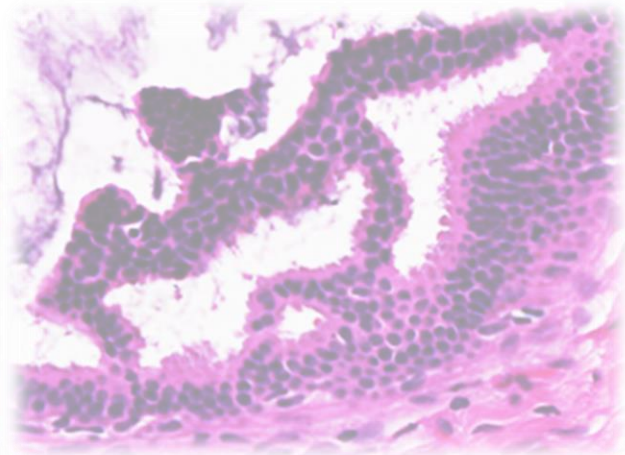
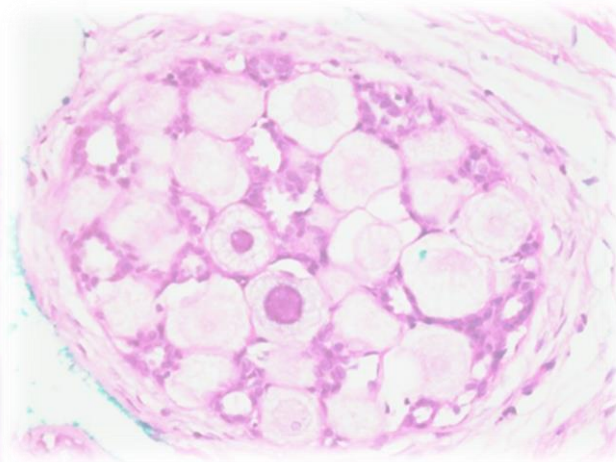
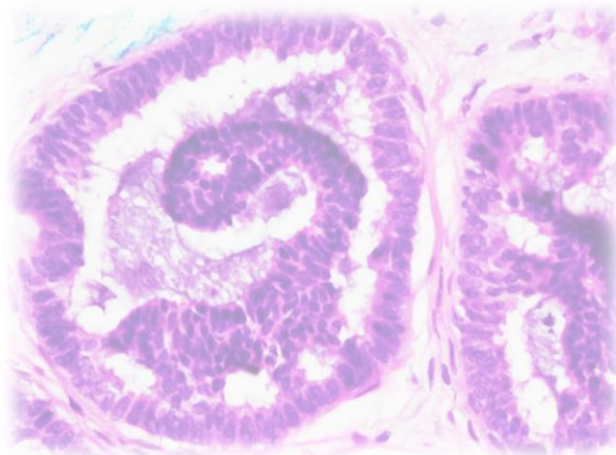
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Thank you!

