

# Mammary-type ductal carcinoma of the anogenital mammary-like glands: a rare cutaneous tumor mimicking breast carcinoma

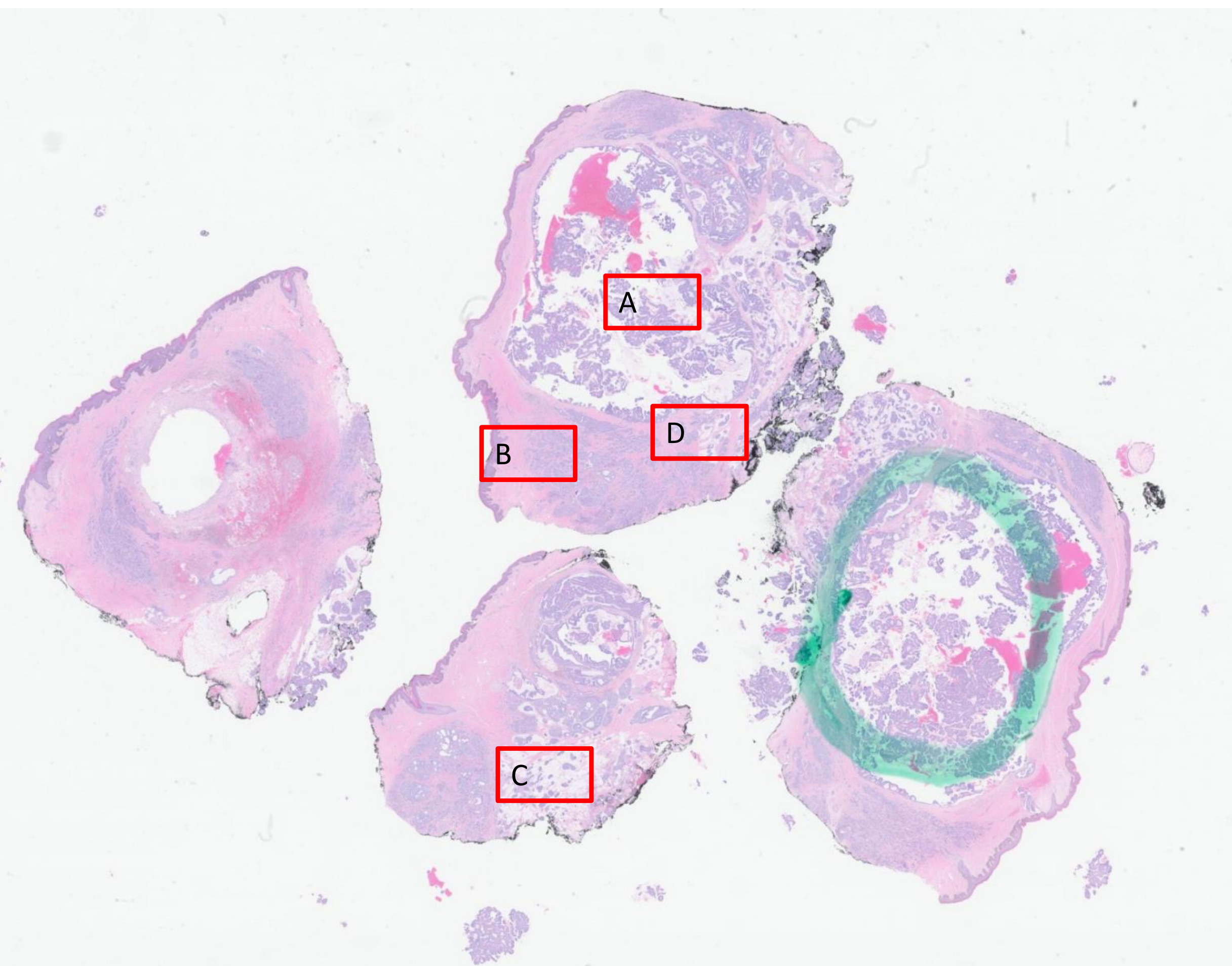
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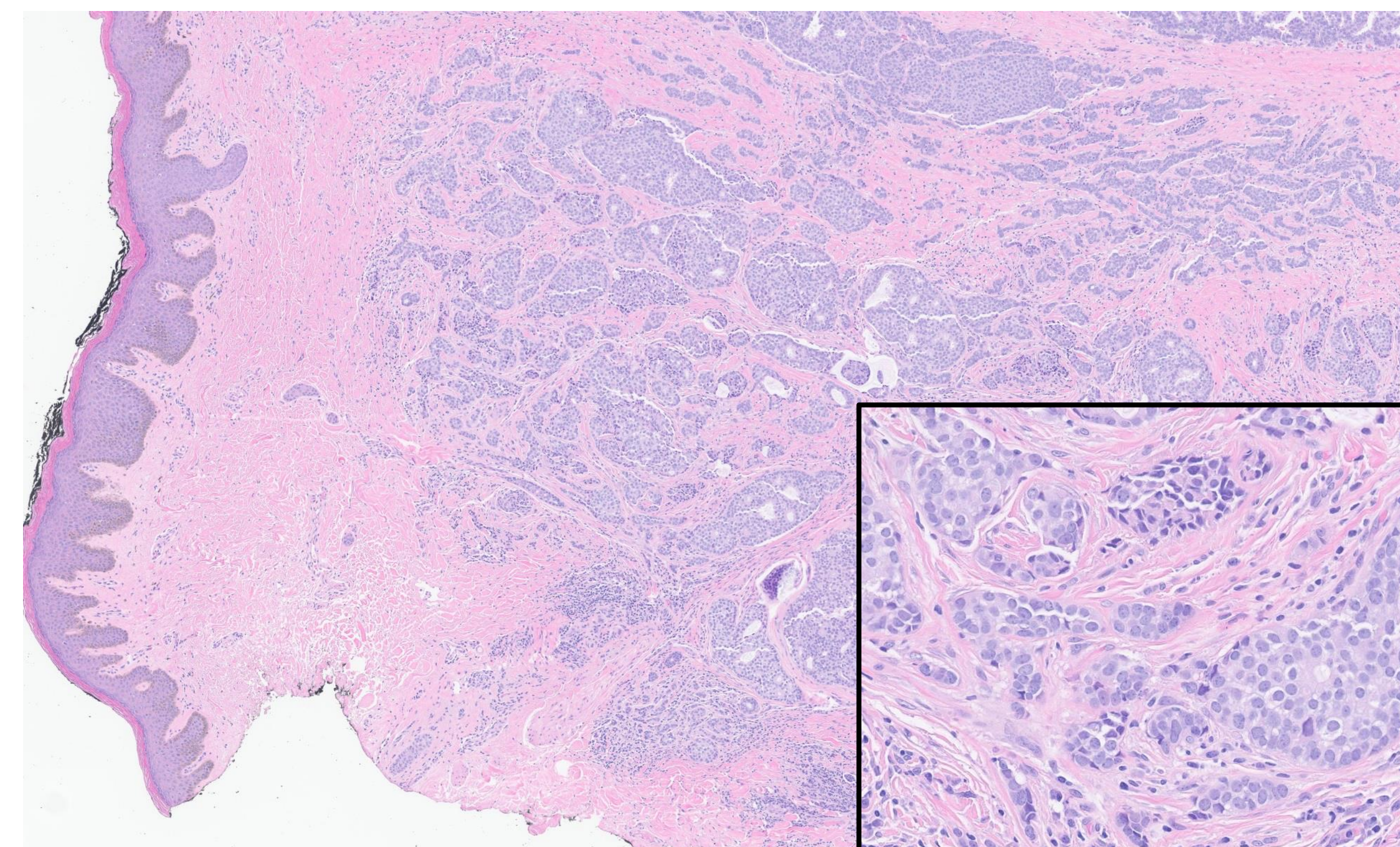


## What is your diagnosis?

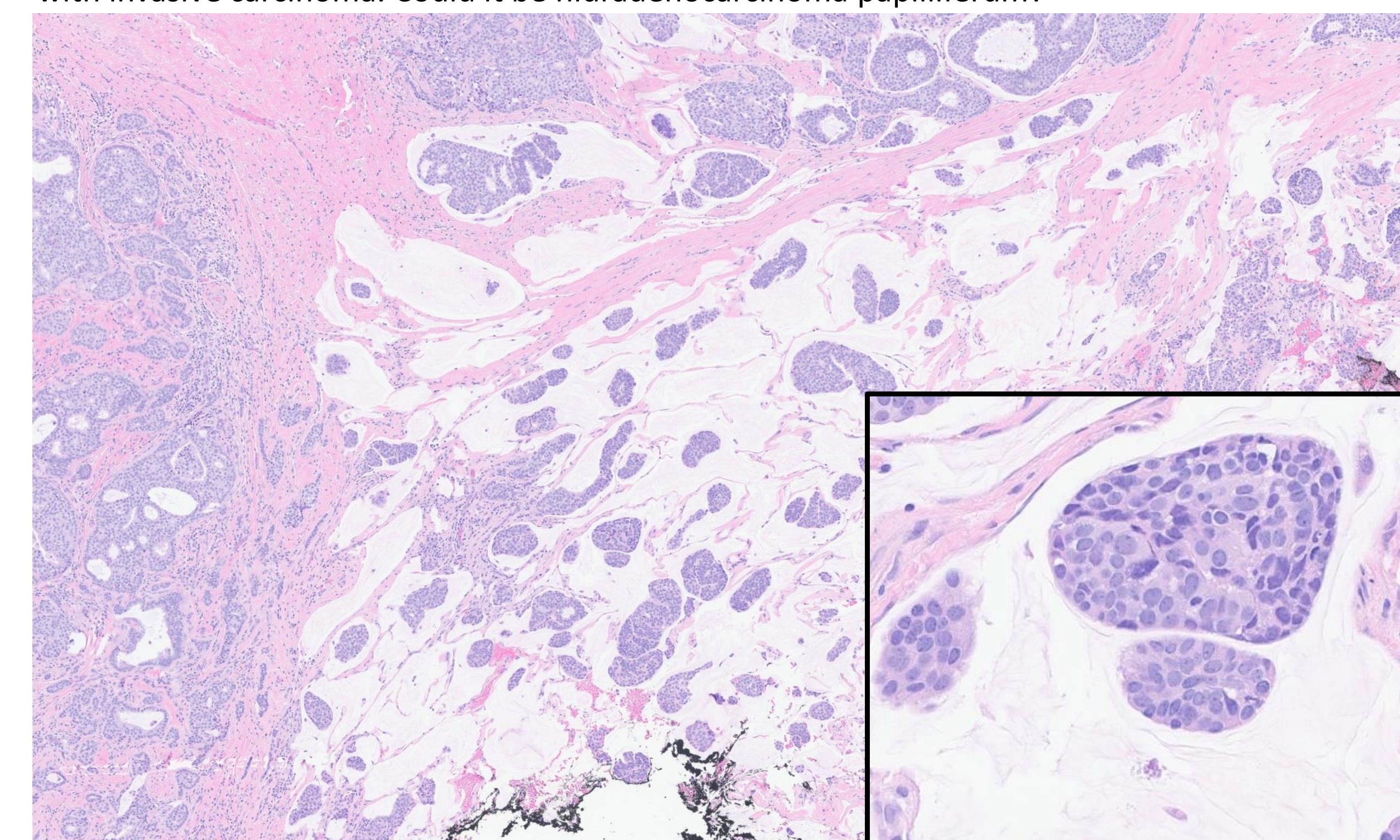
- 69-year-old with raised lesion on mons pubis. Procedure: mons pubis lesion excision.
- No prior malignancy.



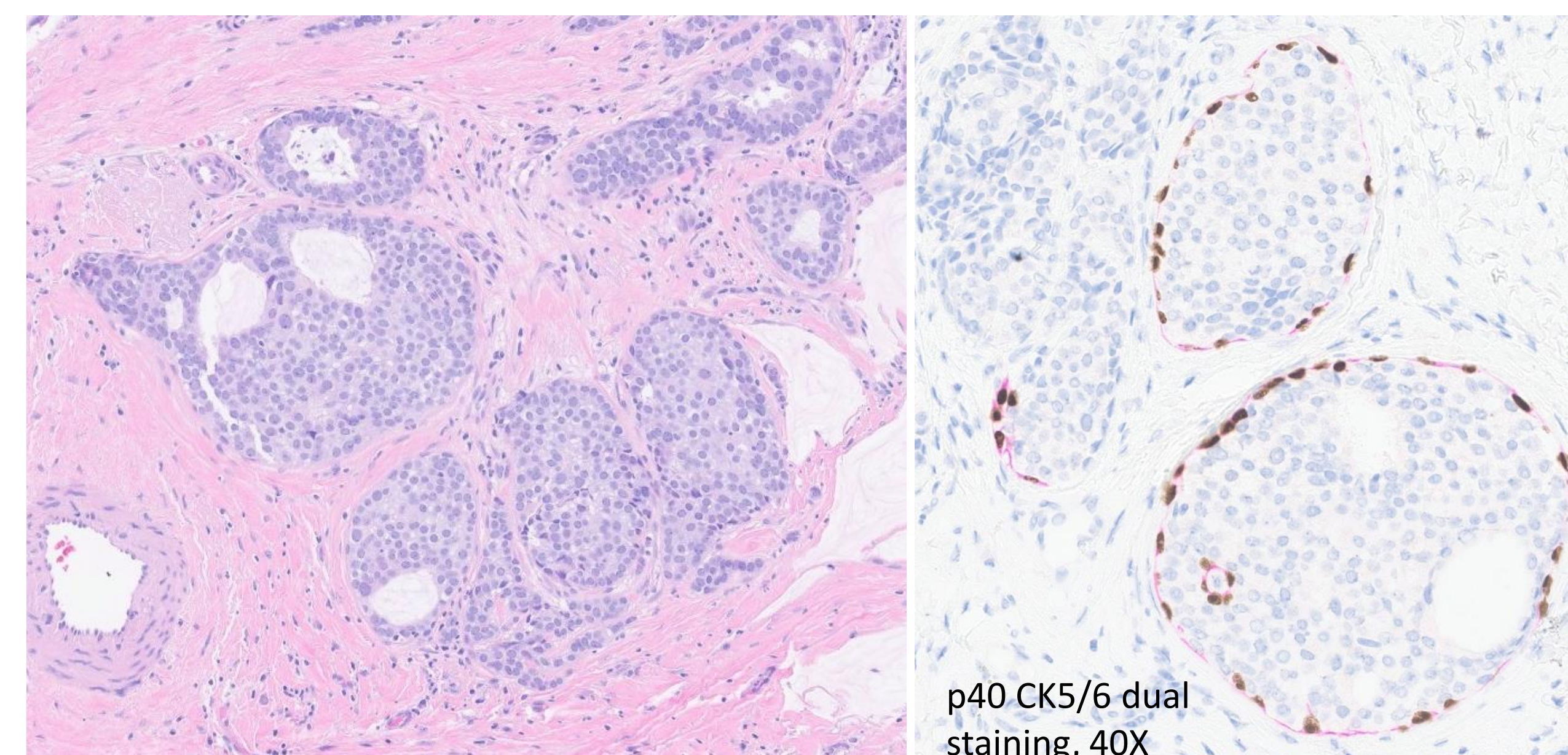
1X, from this low power, there is tumor in the dermis, with multiple distinct areas, the central area with papillary structures, peripheral solid areas, what could it be?



B, 20X, insert 40X. This area outside of the papillary lesion shows solid nests and ductal structures. From the high power, there seem to be no myoepithelial cells. This area is consistent with invasive carcinoma. Could it be hidradenocarcinoma papilliferum?



C, 20X, insert 40X. This area shows nests of tumor cells floating in mucin, typical of carcinoma with mucinous differentiation. Can hidradenocarcinoma papilliferum show mucinous differentiation? Can it be something else?

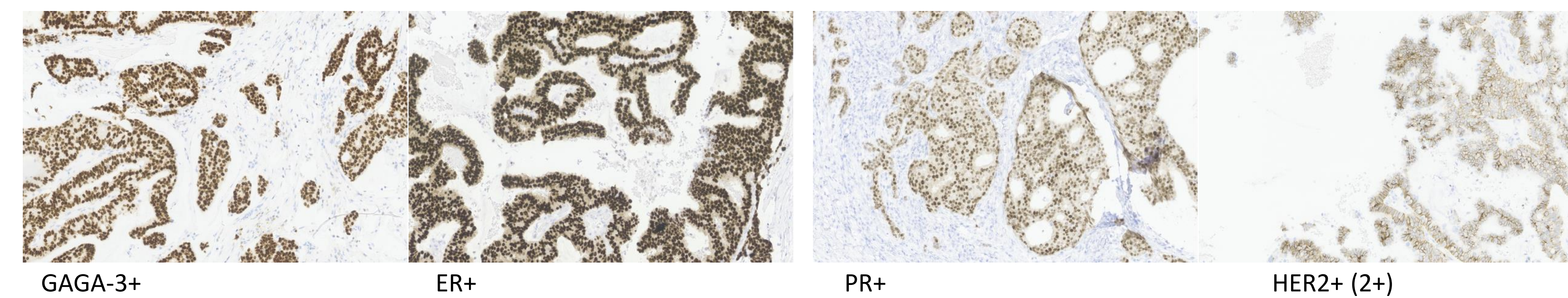


D, H&E 20X, insert p40 and CK5/6 dual staining, 40X. p40 and CK5/6 dual staining shows that there are some myoepithelial cells around some ductal lesions. Is this a non-invasive, in situ component? The myoepithelial cells are missing in the papillary and invasive parts in A, B and C.

A, 40X, The papillary structures are not connected to the epidermis. These cells seem to have decapitation secretion. Apocrine differentiation?

Can it be hidradenoma papilliferum? Vulva location, papillary structures, apocrine differentiation, not connected to epidermis.

## Additional immunohistochemistry results:



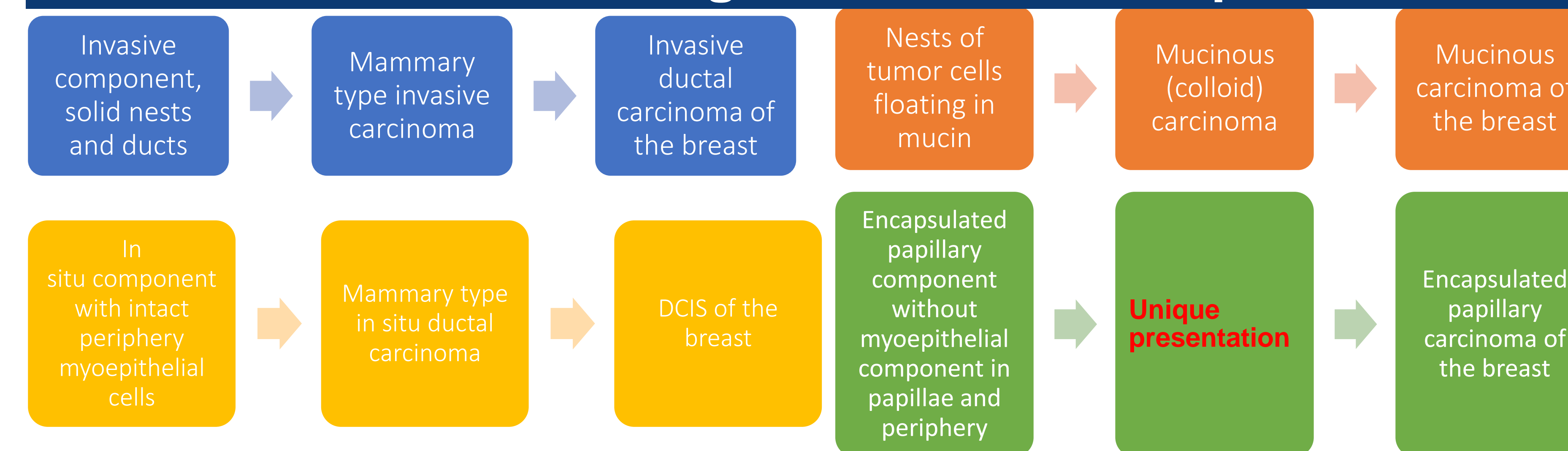
Anogenital mammary-like glands were once believed to be ectopic breast tissue in the milk line but are now recognized as normal anogenital structures. Lesions affecting these glands bear a remarkable resemblance to their mammary gland counterparts.

Table: main entities of anogenital mammary-like glands and their histological breast counterpart

	Anogenital Mammary-like glands	Breast
<b>Papillary lesions</b>	<b>Benign:</b> <ul style="list-style-type: none"> <li>Hidradenoma papilliferum</li> </ul> <b>Malignant:</b> <ul style="list-style-type: none"> <li>Hidradenocarcinoma papilliferum</li> </ul>	<b>Benign:</b> <ul style="list-style-type: none"> <li>Intraductal papilloma</li> </ul> <b>In situ:</b> <ul style="list-style-type: none"> <li>Papilloma with DCIS</li> <li>Papillary DCIS</li> </ul> <b>Malignant:</b> <ul style="list-style-type: none"> <li>Encapsulated Papillary Carcinoma</li> <li>Solid Papillary Carcinoma</li> <li>Invasive Papillary Carcinoma</li> </ul>
<b>Lesions of the glandular epithelium</b>	<b>Benign:</b> <ul style="list-style-type: none"> <li>Lactating adenoma</li> <li>Tubular adenoma</li> </ul> <b>In situ lesion:</b> <ul style="list-style-type: none"> <li>Mammary type in situ ductal carcinoma</li> </ul> <b>Invasive:</b> <ul style="list-style-type: none"> <li>Mammary-type invasive and in situ ductal carcinoma</li> <li>Mammary-type lobular invasive carcinoma</li> </ul>	<b>Benign:</b> <ul style="list-style-type: none"> <li>Lactating adenoma</li> <li>Tubular adenoma</li> </ul> <b>In situ lesion:</b> <ul style="list-style-type: none"> <li>Ductal carcinoma in situ (DCIS)</li> </ul> <b>Invasive lesions:</b> <ul style="list-style-type: none"> <li>Breast carcinoma of "No Special Type" (old name: Invasive ductal carcinoma)</li> <li>Invasive lobular carcinoma</li> </ul>
<b>Fibroepithelial and Spindle Cell Lesions</b>	<ul style="list-style-type: none"> <li>Fibroadenoma</li> <li>Phyllodes Tumor (benign, borderline, malignant)</li> </ul>	<ul style="list-style-type: none"> <li>Fibroadenoma</li> <li>Phyllodes Tumor (benign, borderline, malignant)</li> </ul>
<b>Fibrocystic change</b>	Adenosis tumor	Sclerosing adenosis
<b>Other</b>	Extramammary Paget disease	Mammary Paget disease

Adapted from Dmitry V. Kazakov, Dominic V. Spagnolo, Denisa Kacerovska, and Michal Michal, Lesions of Anogenital Mammary-like Glands: An Update, *Adv AnatPathol*, Volume 18, Number 1, January 2011

## The final diagnosis and follow-up



- Follow-up radical vulvectomy shows mammary-like adenocarcinoma with features of invasive ductal breast carcinoma, 1.6 cm.
- One right groin sentinel lymph node positive for metastatic carcinoma.
- STAGE (AJCC 8TH ED) pT1b N1a

## Conclusions

- Tumors of anogenital mammary-like glands show a closer resemblance to primary lesions of the breast than of skin.
- Classify these lesions similar to well-established entities that occur in the breast, rather than as cutaneous adnexal tumors.