

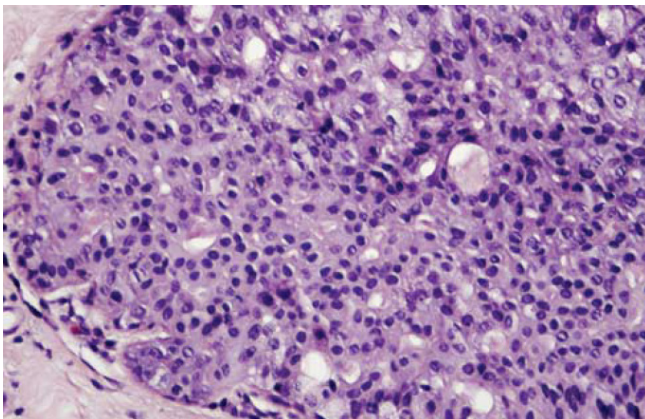
Classification & Cocktails: Atypical Ductal Hyperplasia

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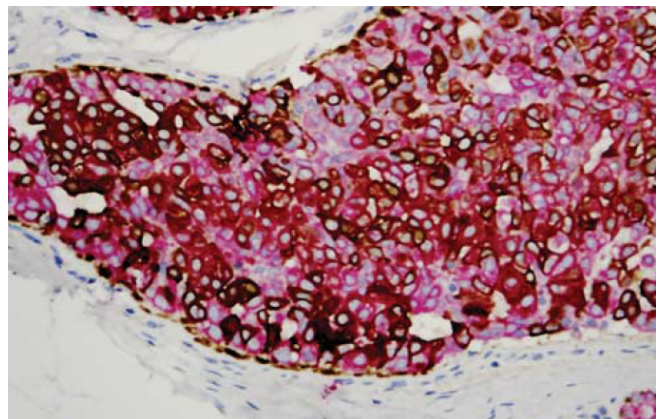
Advancements in technology have led to many improved methods of cancer screening. Breast cancer is one of the more prominent cancers we face today. The process of mammography aids in the detection and treatment of early-stage breast tumors. This efficient screening method, however, can uncover tumor results with varying degrees (benign, borderline, pre-invasive, and invasive). Usual ductal hyperplasia poses minimal to no increased risk of breast cancer, while atypical ductal hyperplasia and ductal carcinoma in situ can progress to invasive carcinoma, which could require radiation and surgical excision. Despite clinical guidelines, the histological differentiation between atypical ductal hyperplasia and ductal carcinoma in situ can be difficult.¹ Several previous studies have shown that the concordance among pathologists in diagnosing atypical ductal hyperplasia is especially poor, giving rise to potential misclassifications in treatment protocols.

In a study performed by Jain *et al.*, Biocare's breast cocktail (CK 5/14 + P63 + CK 7/18) was used to differentiate breast lesions. Results show, out of 81 cases, pathologists agreed on the stage of the lesions 70% of the time when only H&Es were examined, while 82% of the pathologists agreed on the classification of lesions after the immunohistochemical (IHC) "ADH5" stain was also examined.¹ Below are two images that represent the same lesion. After analysis of only the H&E slide (left), 78% of the pathologists in the study characterized this lesion as atypical ductal hyperplasia. After evaluating the H&E slide with the corresponding "ADH-5" immunostain (right) 100% of the pathologists classified it as usual ductal hyperplasia.¹ This observation is extremely significant. Before the analysis of the lesion with the immunostain, this patient could have been subject to surgery.

IHC stains, like Biocare Medical's breast cocktail, may help with improving diagnostic concordance rates and in reducing overdiagnosis and misclassification of atypical ductal hyperplasia lesions. Differentiating of tumors, such as atypical ductal hyperplasia from usual ductal hyperplasia, is imperative as treatment protocols significantly differ and could result in a decrease in the number of surgeries performed due to misclassified lesions.



Breast lesion-stained H&E



Breast lesion stained with Biocare's breast cocktail

Interested in adding Biocare's Breast cocktail
(CK 5/14 + P63 + CK 7/18) to distinguish your antibody menu?

This cocktail is available as a standard predilute (in both 6 ml and 25 ml sizes) and in a prediluted version specifically designed for use on the Ventana Ultra (Biocare Ultraline™ offering). For more information, please call 1-800-799-9499 or visit our website: <https://biocare.net/product/ck514-p63-ck718/>

1. Assessment run 60 2020. https://nordiqc.org/downloads/assessments/136_10.pdf. December 14, 2020.

2. Results of Run 60. B30, H18, CB. [Nodiqc.org/news.php#news_39](https://nordiqc.org/news.php#news_39). December 14, 2020.