

# HISTHOPATHOLOGIC VERIFICATION OF ATYPIA OF UNDETERMINED SIGNIFICANCE IN BETHESDA SYSTEM

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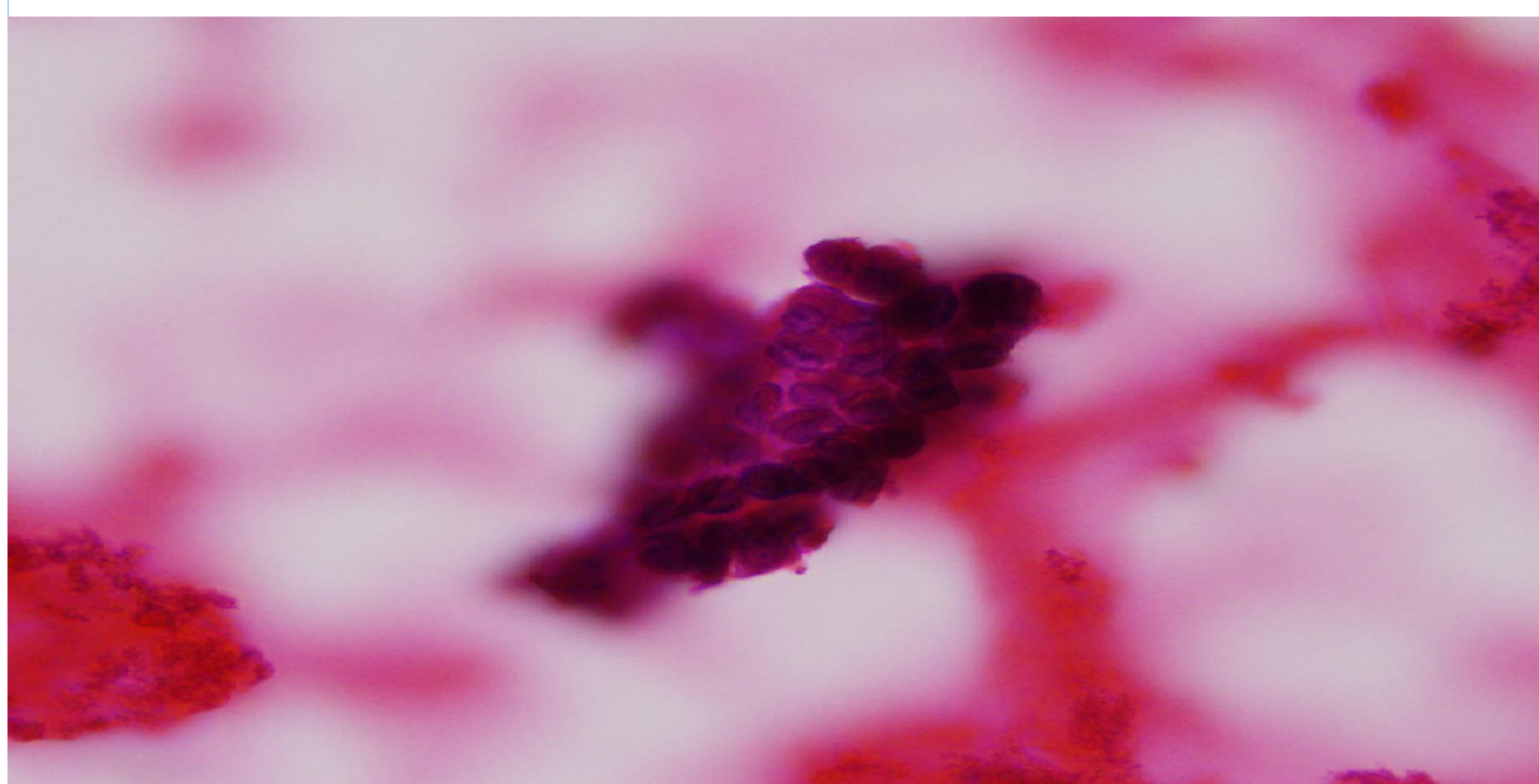
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## INTRODUCTION:

The pathologist cannot easily decide some thyroid fine needle aspiration biopsy (FNA) into the benign, suspicious, or malignity and this condition are reported as “atypia of undetermined significance” (AUS) or “follicular lesion of undetermined significance” in the Bethesda System. Diagnosis of AUS of a thyroid nodule is leaved an endocrinologist as well as the patients in a difficult situation. However the risk of malignancy at AUS is approximately 5% to 15%. Our aimed to this study is to determined histopathologic verification of atypia of undetermined significance according to Bethesda system.

## MATERIALS AND METHODS:

Results of FNA were used totally in 402 patients with nodular goitre from our hospital records from 2012 to 2014. Twenty people (19 women and 1 man) out of this study population were diagnosed AUS. All the patients had undergone total or subtotal thyroidectomy. We retrospectively re-evaluated postoperative biopsy results and compared with those histopathologic diagnoses.



**Figure:** Spread containing mostly benign-looking thyrocyte showing structural and focal cytologic atypia (nuclear crowding, nuclear cleavage) spread

## RESULTS:

It was found that postoperative biopsy results of the patients who were diagnosed AUS were adenomatous hyperplasia (5%, n=1), nodular goitre (65%, n=14), papillary carcinoma (5%, n=1), hashimoto thyroiditis (%15, n=3) and microfollicular adenoma (5%, n=1).

AUS diagnosis constitutes 3-18% of the cytological diagnosis in the literature. In the study of Jack Yang et al 152 (3.2%) of 4703 cases were diagnosed as AUS. 52 of them underwent surgery. 19 of them have nodular goiter, 14 have hashimoto thyroiditis, 7 have follicular adenoma, 2 have Hurthle cell adenoma, 2 have Hurthle cell carcinoma, 8 have papillary carcinoma. Malignant lesions were 19.2%. In our cases malignancy rate is 5%, below the values in the literature. The values recommended by Bethesta for the diagnosis of AUS should be about 7% of all thyroid FNA. This value was 4.87% in our series. AUS diagnosis should not be used indiscriminately. In patients diagnosed with AUS appropriate clinical approach and clinical correlation should be used and cytology should performed again.

## CONCLUSIONS:

Our finding demonstrated that AUS category substantially indicated to benign cellular change. This date was found in accordance with prediction of Bethesda system. Therefore, a repeated FNA should be performed after an appropriate period of time. The factors including follicular lesion in part suspicious follicular neoplasia, existence of lymphoid cell, hypocellularity and artefact of sample preparation may lead to misdiagnosis of malignity in patients with AUS.

