FALSE NEGATIVES AND REASONS: ERZURUM RESEARCH AND TRAINING HOSPITAL PATHOLOGY DEPARTMENT EXPERIENCE

Dr Sevilay Özmen[1], Dr Ilknur Çalik[1], Dr Senay Erdogan, Dr Ozge Timur[2], Dr Hakan Sevimli[2], Dr Ayşe Çarlıoğlu[3], Dr Şenay Arıkan Durmaz[3], Dr. Fazlı Erdoğan[1]

[1] Department of Pathology, Erzurum Training and Research Hospital, Erzurum, Turkey
[2] Department of Internal Medicine, Erzurum Training and Research Hospital, Erzurum, Turkey
[3] Department of Endocrinology, Erzurum Training and Research Hospital, Erzurum, Turkey

False negatives (cytology as benign, histologically as malignant) reduces the sensitivity of the FNA. False-negative cases indicate malignant lesions undetectable by FNAB.

Fine needle aspiration biopsies (FNAB), adequate for examination, reported as benign re-evaluated with histopathological samples. 61 patients, 52 female and 9 male re-evaluated. 41 of them reported as benign. 20 of the patients, 7 female and 3 male reported as papiller carcinoma. 6 of the papiller carcinomas were single focus, 2 multicentric and 12 papiller microcarcinoma. (Table 1)

Benign	41
Papillar (single focus)	6
Papillar (multi centric)	2
Papillar (microcarcinom)	12

Table 1: Re-evaluation of false negative FNAB.

6 of the 8 patients malignant lobe was different from the lobe that FNA was made. Multicentric malignancy was detected in 2 cases.

Malignant FNA diagnosis forms 4-8% of all thyroid FNAs, as in literature. Most of them are papillary thyroid carcinoma. In fact papillary thyroid carcinoma cytopathological features are quite obvious, at the level of diagnostic. Patients diagnosed papiller thyroid carcinoma (PTC) with FNAB showed PTC at the rate of 96-100% with histopathoşogical samples. However, false negative value was 32.78% in our patients under observation. This value is over the false-negative rate ranging between 1-21.3% stated in the literature. However, the results of the histopathological report with the results of cytopathological reports examined in detail the majority of the cases with false-negative study (60%) constitute papillary microcarcinoma. This finding suggets that papiller thyroid carcinoma is overlooked with FNAB.

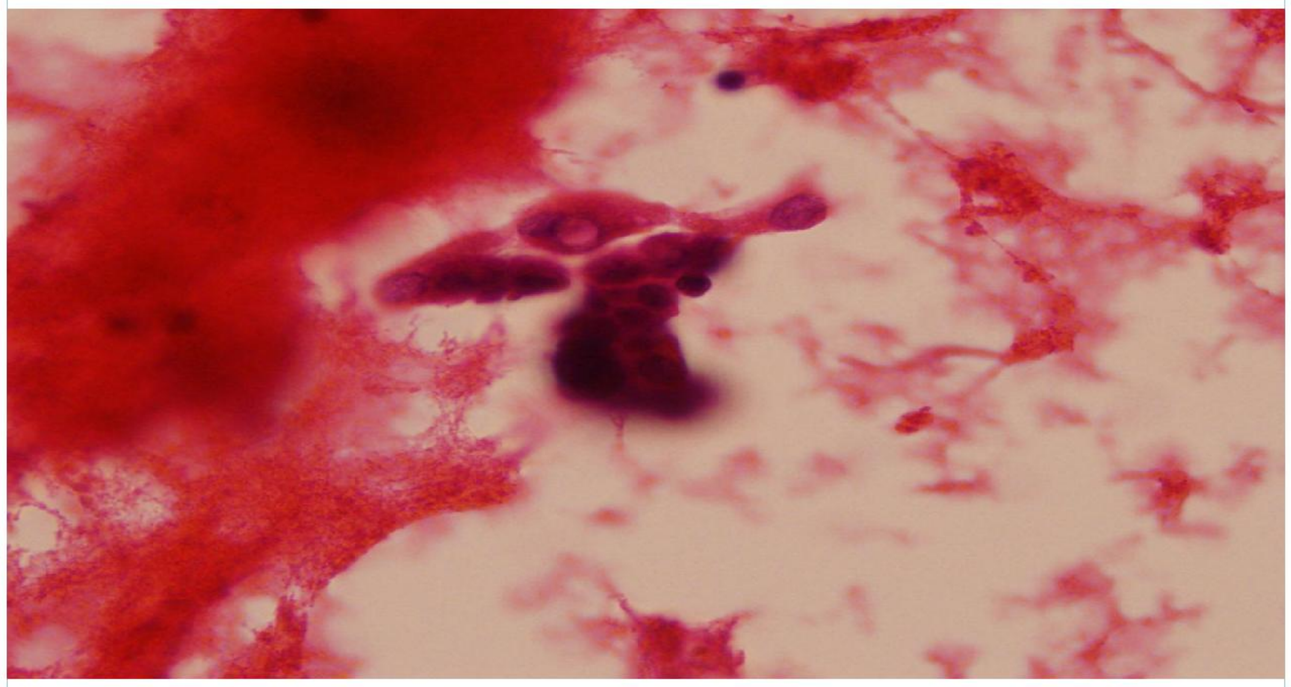
Our false-nagative rates are compatible with the literature as PTC excluded. Another reason for our false negative value is the patcy distribution of PTc in the same nodule.

In the study of Amrikach et al. from the 64 benign cytologically benign diagnosed cases, 11 were false negative. 9 of them were histologically papillary carcinoma, 1 with Hurthle cell carcinoma, and 1 follicular carcinoma. 7 of the spreads were re-evaluated and ın the 4 of them plenty of benign colloid follıcles were monitored. As FNA was performed without ultrasound, false negatives were due to sampling error. When 3 of them re-evaluated its thought to be accurate to diagnosed them as non-diagnostic.

In the study of Chang et al between 129 papillary carcinoma patients 19 of them were diagnosed as benign cytologically. The reason of false negativness is due to smaller tumor size.

In the study of Chow et al there were 3 false negative results. One of them was diagnosed as papiller carcinoma, 1 of them was microcarcinoma in hyperplastic nodule and 1 of them was diagnosed as meduller carcinoma.

As a result, FNAB accompanied with ultrasound, should be applied to all solid, hypoechoic nodules and nodules with microcalcification. Also, because of the presence of PTC showing a patchy distribution in a single nodule, multiple biopsies should be taken from more than one ares, from the large nodules seen sonographically suspicious. False negative results of FNA depends on sample error or pathologist's review error.



Picture: First FNA examination malignancy negative patients macroscopic specimen made in spreading imprint, micropapillary intranuclear inclusion with focus on microcarcinoma structure

DOI: 10.3252/pso.eu.17ece.2015
Poster presented at: ECE2015 16-20 May 2015 DUBLIN, IRELAND 17th EUROPEAN CONGRESS OF ENDOCRINOLOGY