

Roberta Rubeša-Mihaljević,
Department of pathology
and cytology
Clinical Hospital Center, Rijeka
Croatia



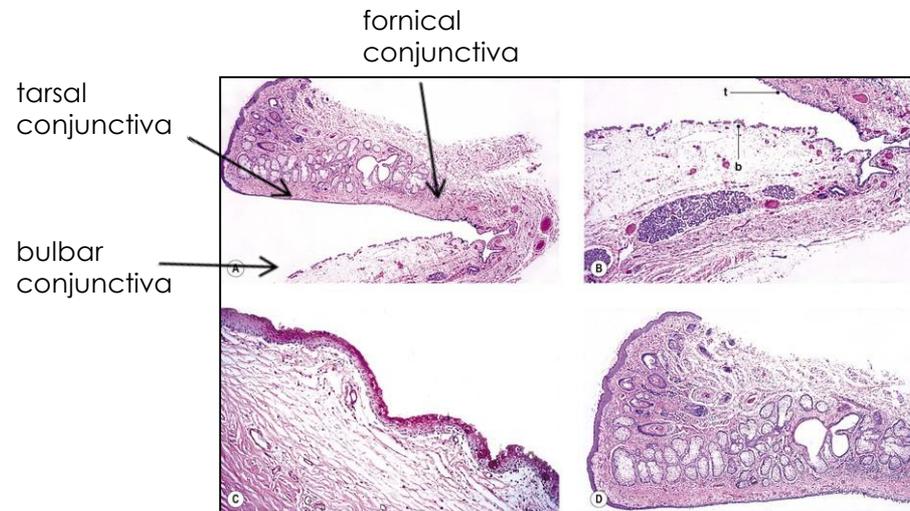
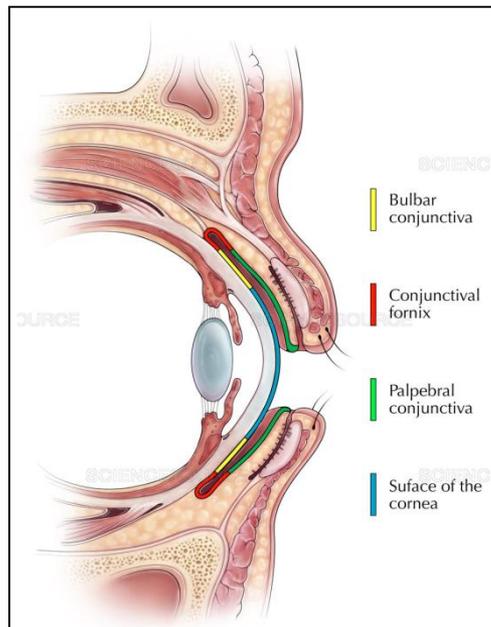
The role of cytology in the diagnosis of ophthalmic lesions of the eyelid, conjunctiva and cornea

Cytology of accessible lesions in ophthalmology

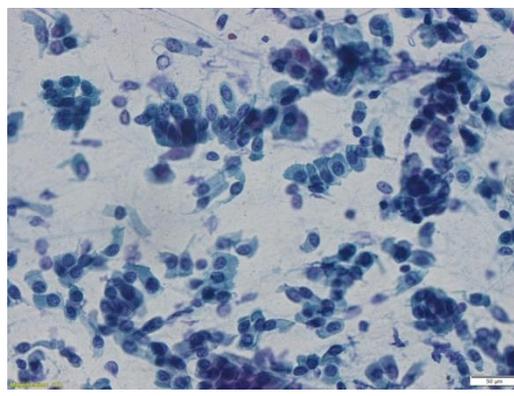
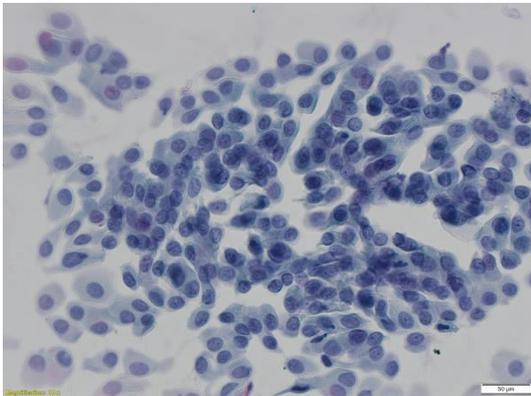
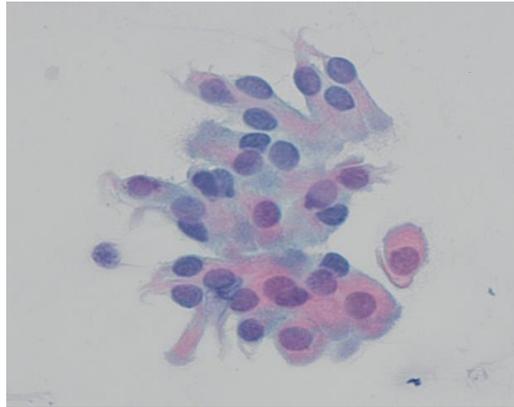
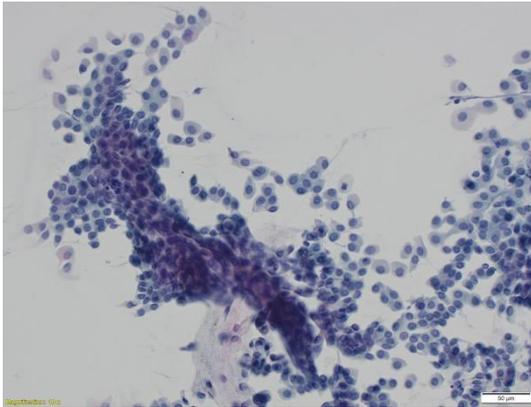
- fast, simple, safe
- when clinical examination is not enough to establish the diagnosis
- warrants early diagnosis
- helps planning the extent of the surgical procedure

The external surface of eye includes: eyelid, lid margin, conjunctiva and cornea

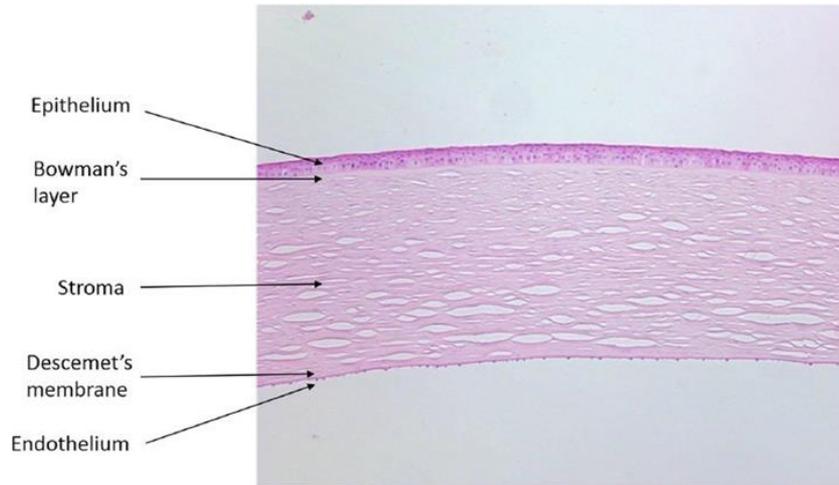
Conjunctiva



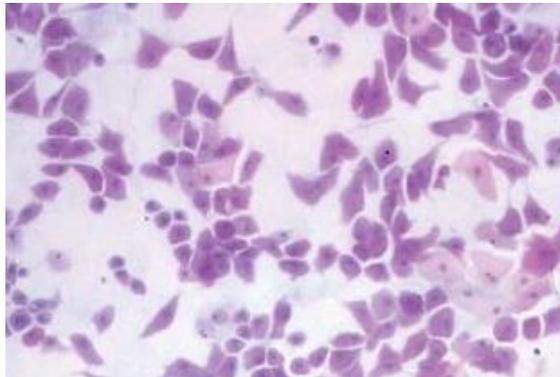
Cytology of the conjunctiva



Cornea



Cytology of the cornea



Sampling techniques

Scrape Cytology

- spatula
- cotton swab
- cytobrush
- hockey blade



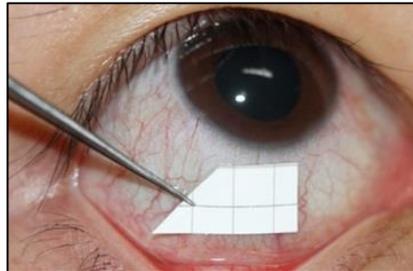
FNA

-close cooperation
between the
ophthalmologist and
the cytopathologist

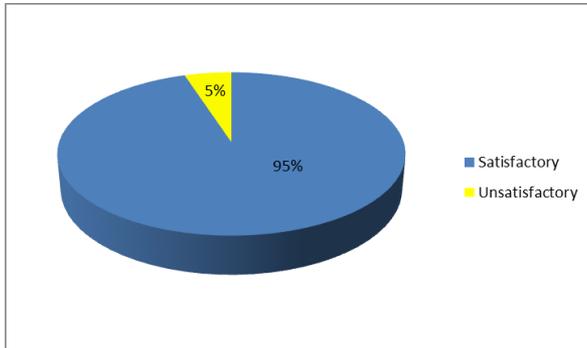


Impression cytology

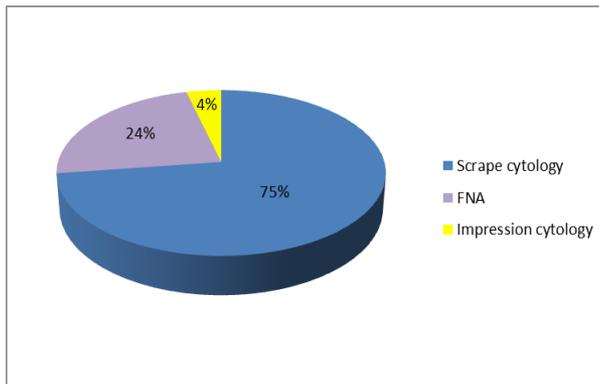
-cellulose filter



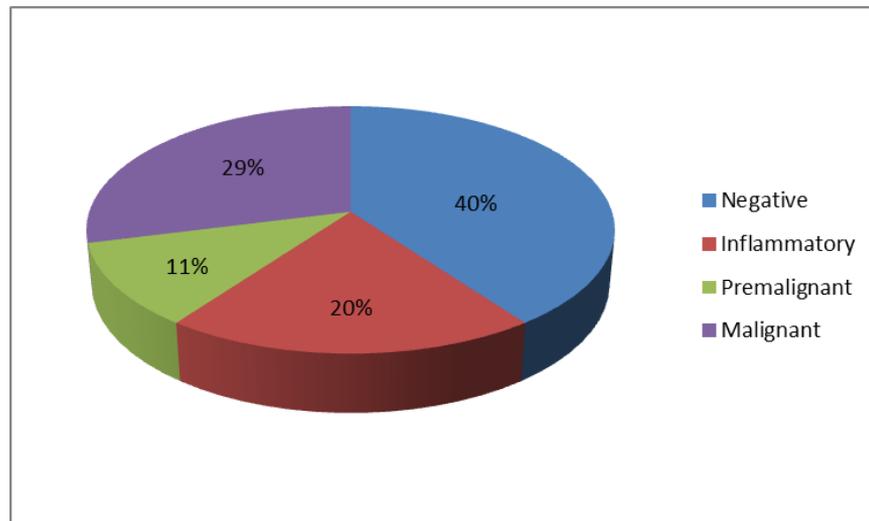
Sampling



- 97 samples of patients treated at the Department of ophthalmology
- samples obtained from accessible lesions of the conjunctiva, cornea, eyelid or lacrimal apparatus



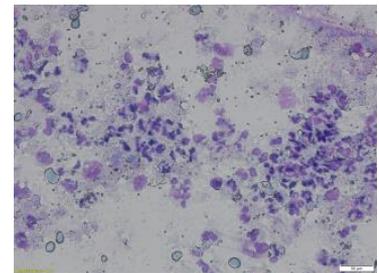
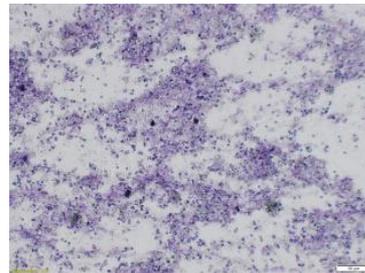
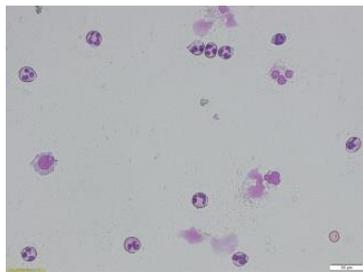
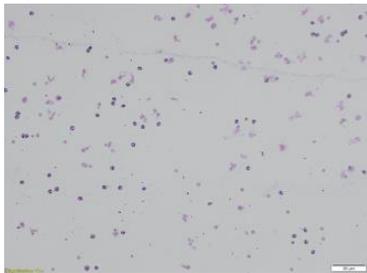
Classifying of samples



- of 31 abnormal cytological findings 28 were confirmed histologically

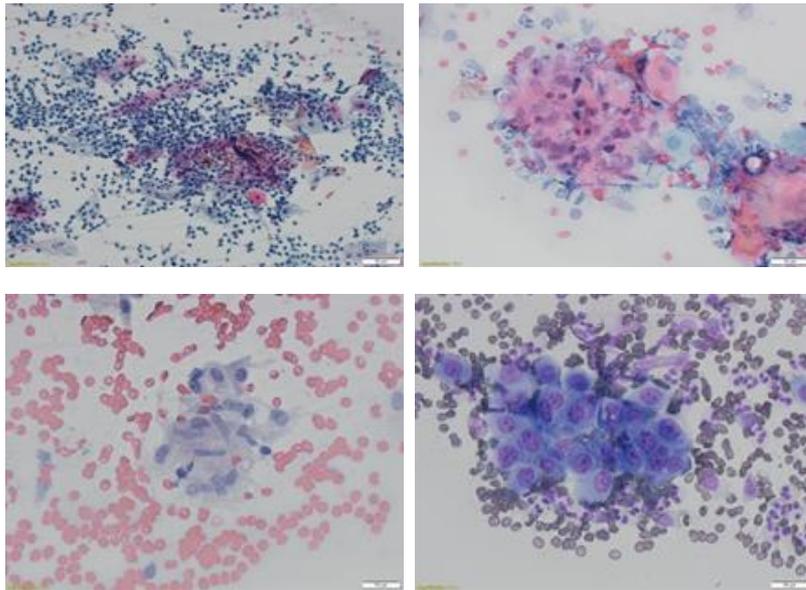
Inflammatory lesions

- the bacteria most commonly responsible for bacterial keratitis are Streptococcus, Staphylococcus species and Enterobacteriaceae
- viruses - Herpes simplex, Zoster, Adenoviruses
- fungal keratitis - due to trauma



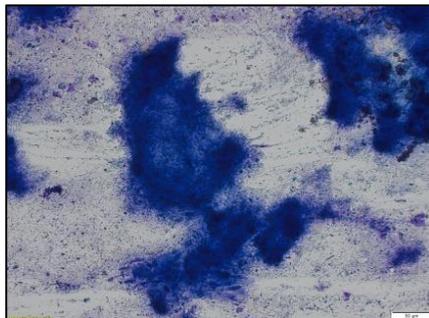
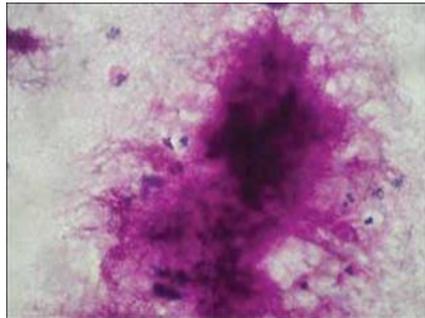
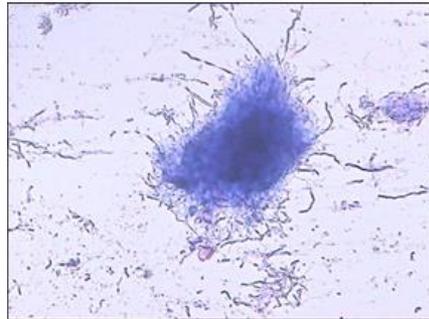
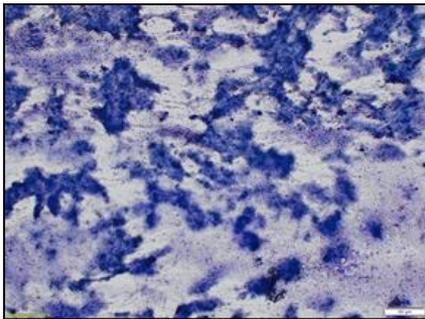
Acute inflammatory changes - aspiration of the vitreous body fluid

Inflammatory lesions



Chronic granulomatous
inflammatory changes

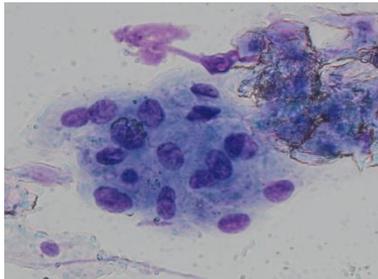
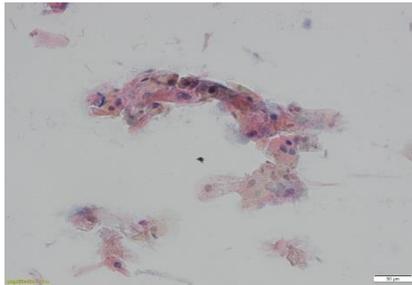
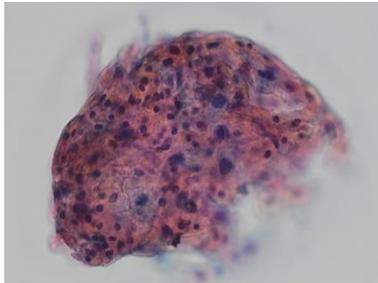
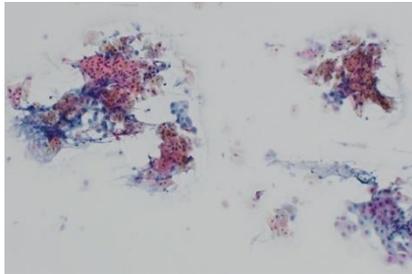
Inflammatory lesions



Actinomycosis

Premalignant lesions

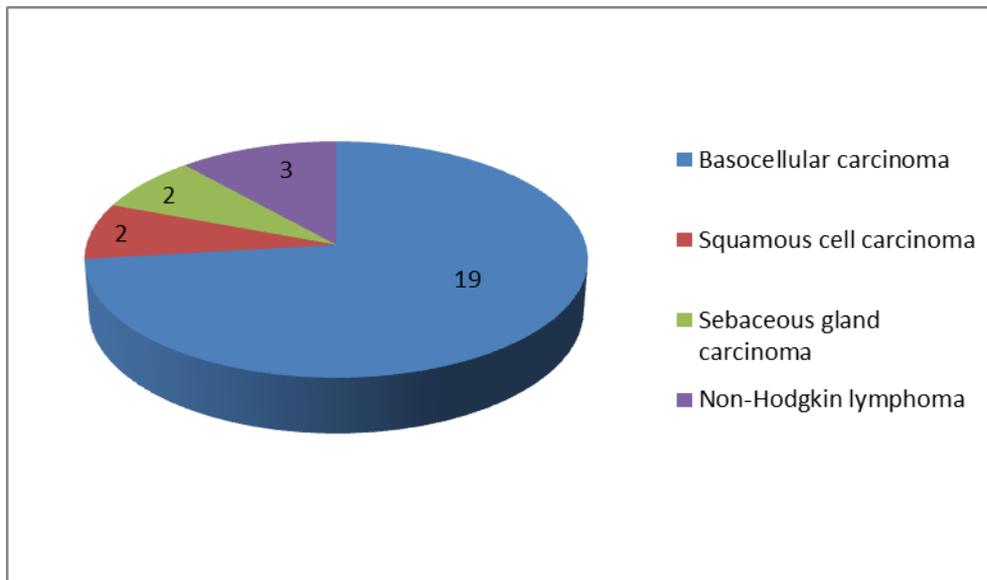
- abnormalities ranging from mild to severe dysplasia or carcinoma in situ



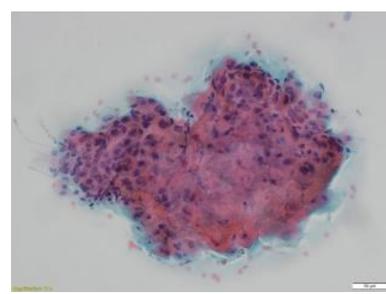
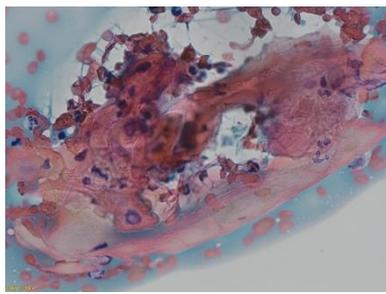
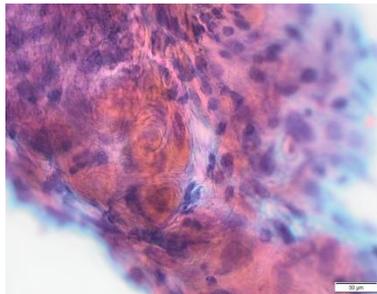
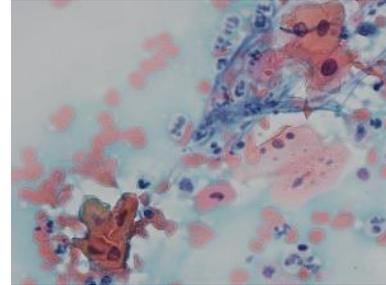
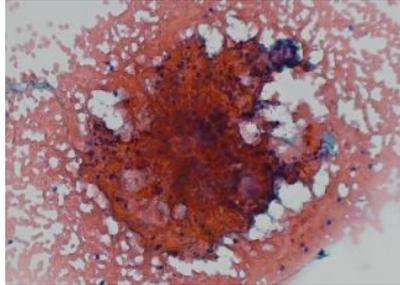
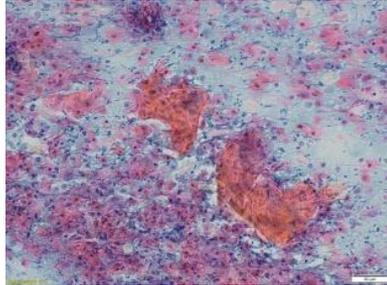
cytology - abnormal keratinization with parakeratosis, dyskeratosis, atypical squamous cells

histopathology - In situ carcinoma of the conjunctiva

Malignant tumors

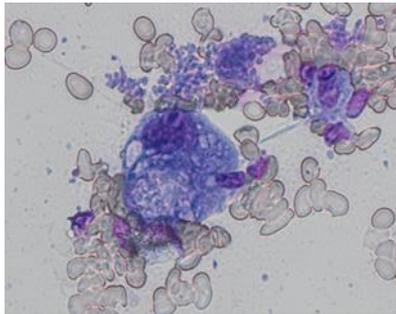
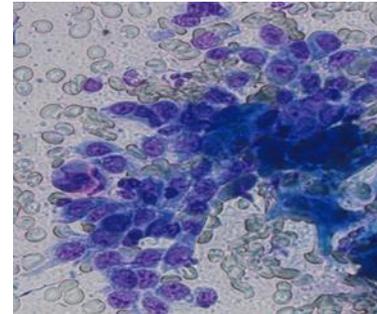
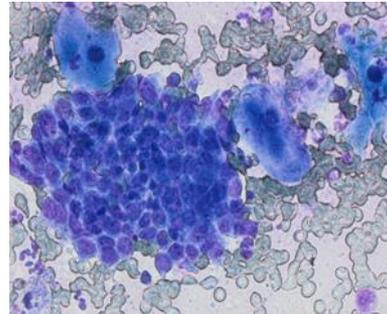
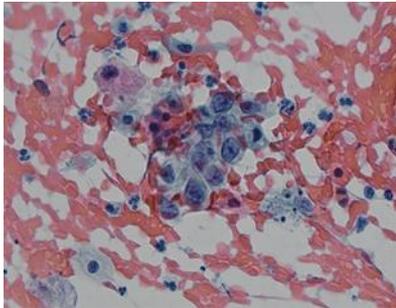


Malignant tumors



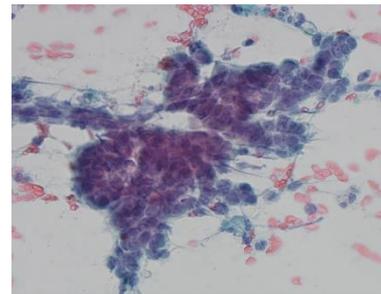
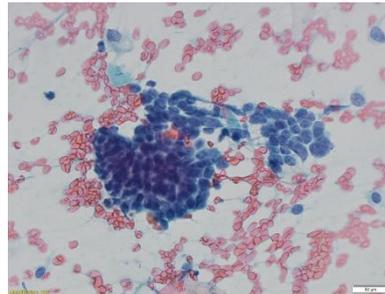
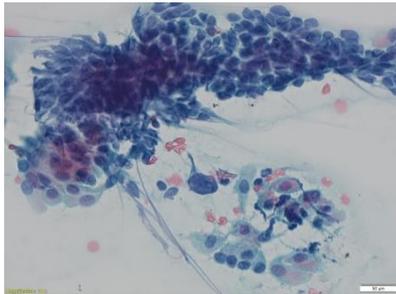
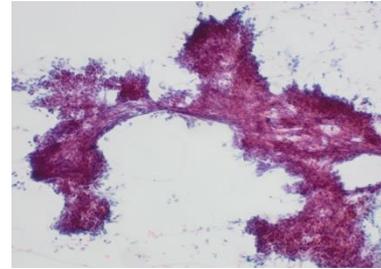
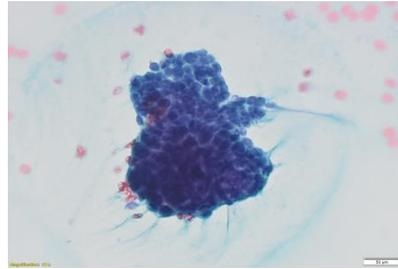
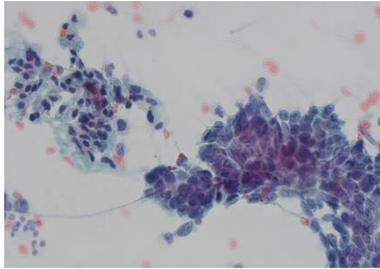
Squamous cell carcinoma

Malignant tumors



Squamous cell carcinoma

Malignant tumors



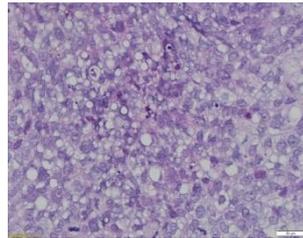
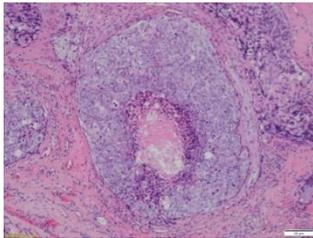
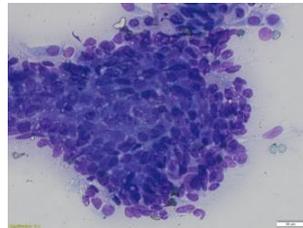
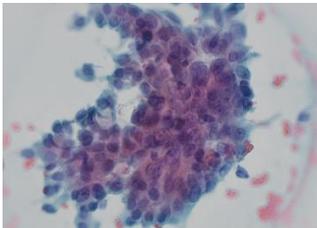
Basocellular carcinoma

Malignant tumors



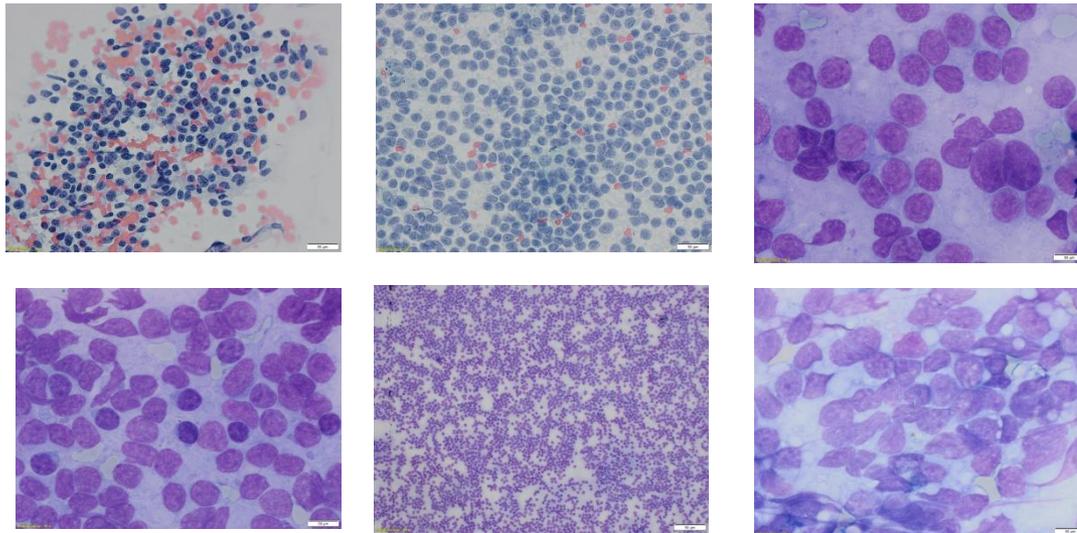
Sebaceous gland carcinoma

A 78-year old patient presenting with a painless, enlarging mass in the eyelid



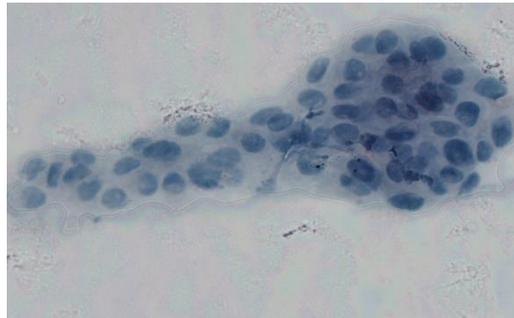
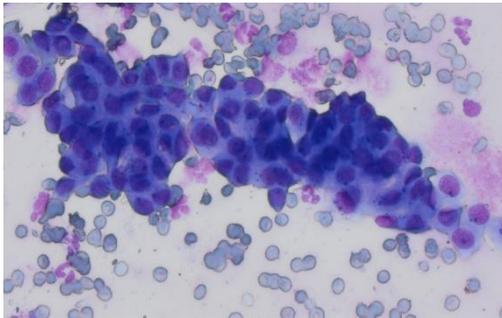
Malignant tumors

- the majority of ocular adnexal lymphomas are extranodal neoplasms
- 10-30% are secondary tumors in patients with disseminated lymphoma
- the most common are extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT) type, follicular lymphoma and diffuse large B-cell lymphoma



Extranodal marginal zone lymphoma (MALT)

Malignant tumors



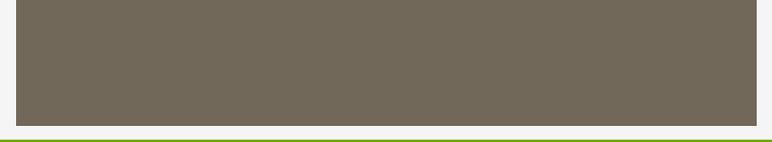
-a patient previously treated for conjunctival melanoma was suspected for relapse

-cytology: cells expressing inflammatory changes and reparatory changes, HMB-45⁻

-histopathology: granuloma pyogenicum

Conclusion

- ocular surface lesions are easily accessible to the application of cytology techniques, which are rapid, non-invasive, easy to perform
- facilitates the clinical management of the patient and the therapeutic decision
- the specific location of the ocular lesions requires a close cooperation between the ophthalmologist and cytologist



Thank you for your attention!