

37st European Congress of Cytology, September 2012, Cavtat– Croatia

INTRAOPERATIVE FINDINGS IN GYNECOLOGICAL CYTOLOGY



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Case study I

CLINICAL HISTORY

A 40-year female patient was hospitalized at surgery Dpt for suspected obstructive uropathy of the left kidney and urolithiasis, and subsequently developed pyelonephritis symptoms.

Ultrasound finding

Enlarged left adnexa, a tumor mass 69x60mm in diameter, with a cystic inclusion (25x22mm), suspected as endometrioma.

Pelvic magnetic resonance imaging (MRI)

- increased left ovary, with two cystic formations containing no solid parts
- increased adnexa with the primary finding of a tumor formation with central necrosis, originating most likely in the lower part of the left ovary and extending into the retroperitoneum

Pelvic magnetic resonance imaging (MRI)

- uterus showing an intramural fibroid, otherwise normal
- cervix showing a Naboth cyst, otherwise normal
- Iliac lymph nodes marginally increased

Previous Pap smears:

- 2 years ago: normal finding
- 2 months ago: ASCUS

Due to a suspected tumor of the ovary, which performs compression on the ureter, the patient underwent surgery

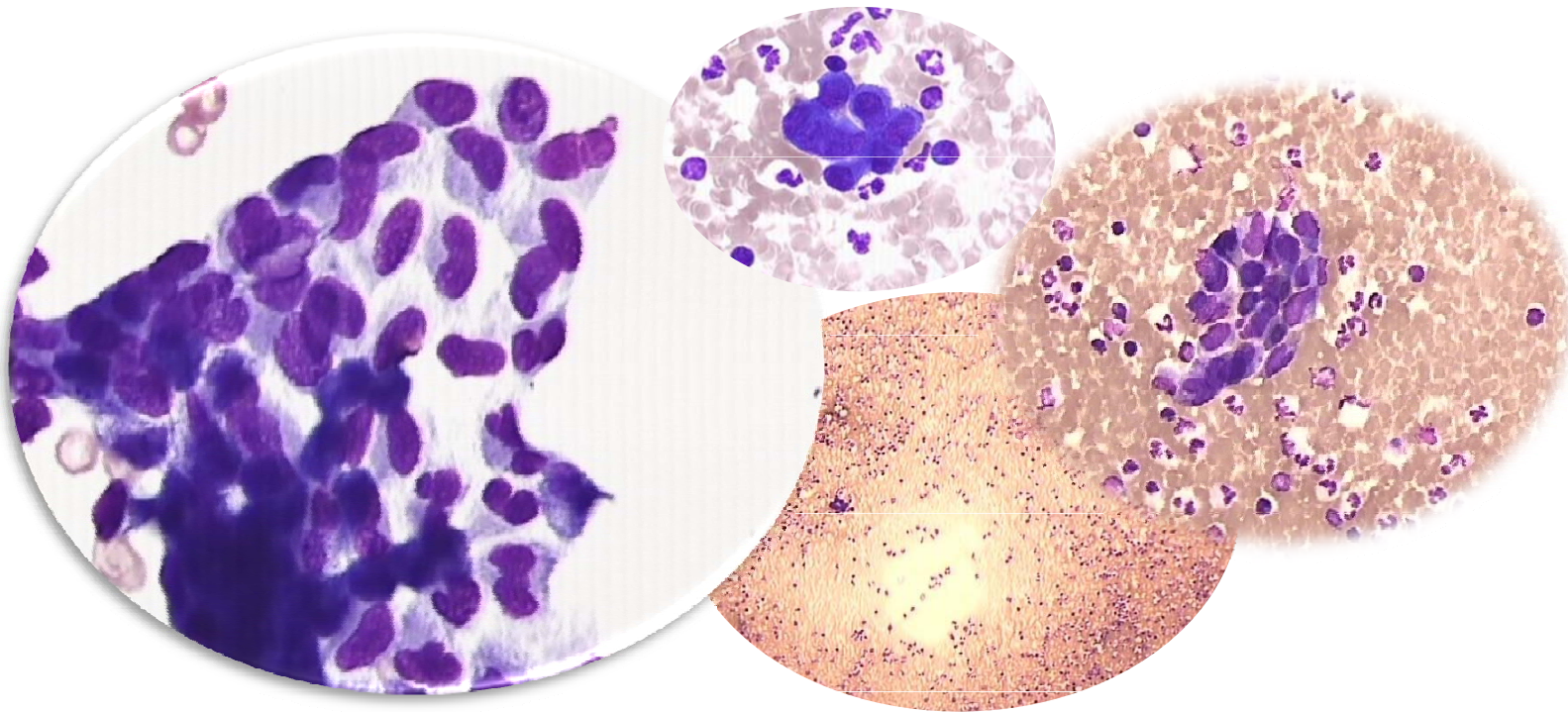
INTRAOPERATIVE CYTOLOGY

- two tubes, from aspiration of the ovarian cyst and of ascites, with few millilitres of blurry fluid material send to the cytology lab for urgent *intraoperative* cytological analysis

Cytological analysis – ovarian cyst

In the sample from the ovarian cyst, only well preserved erythrocytes were found, without any other cellular elements.

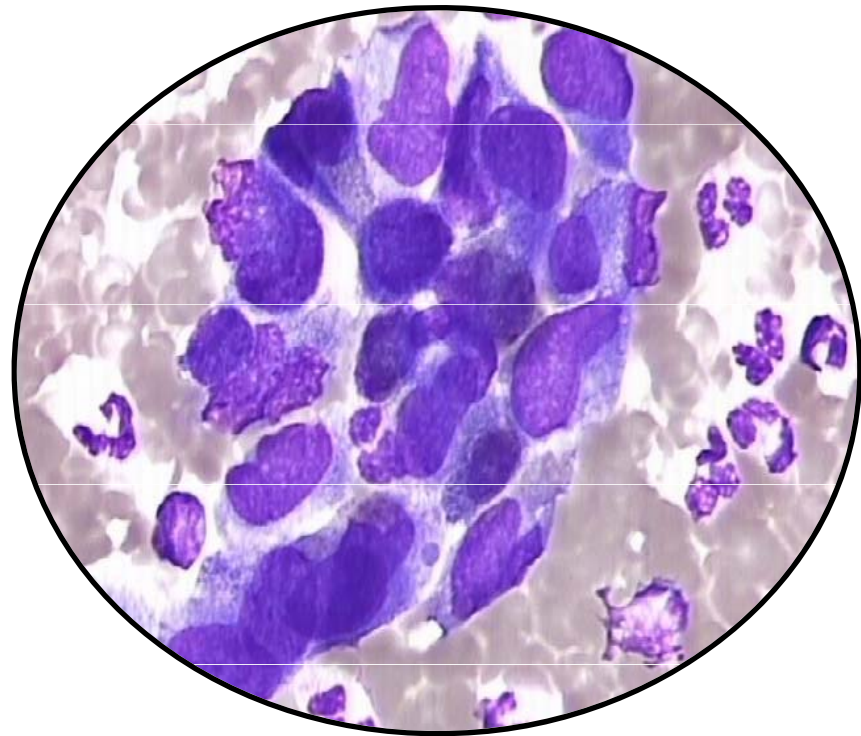
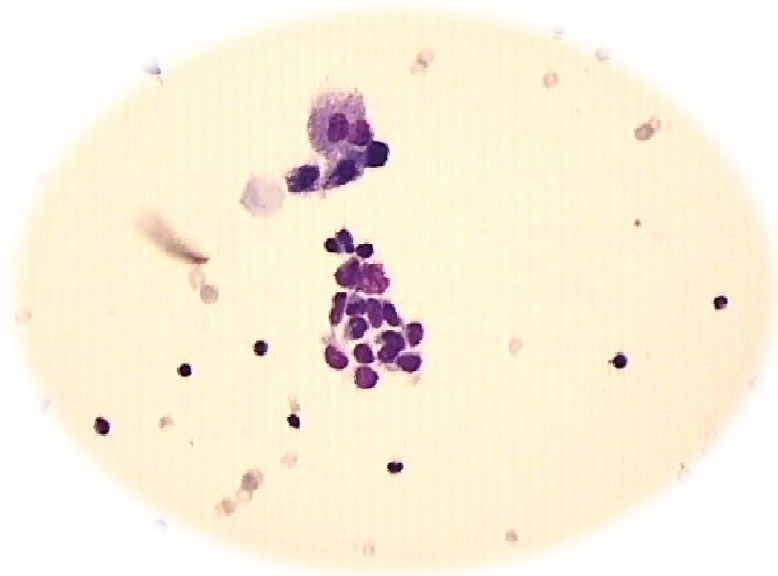
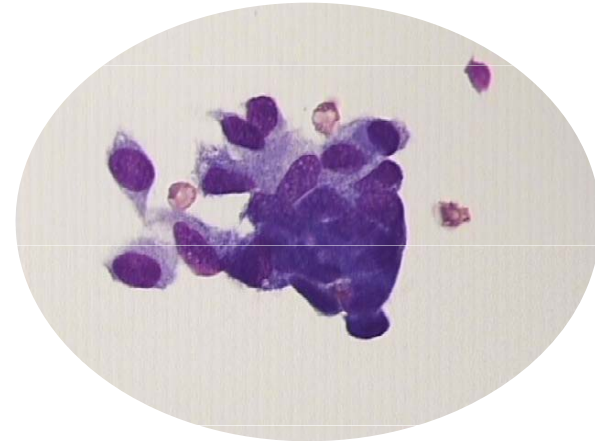
Cytological analysis - ascites



Reactive mesothelial cells, peripheral blood with a high proportion of granulocytes and lymphocytes

Cytological analysis - ascites

Small clusters of morphologically suspect cells with hyperchromatic irregular nuclei with mostly degenerative and poorly preserved cytoplasm



Differential diagnosis

Possible differential diagnostic procedures and PHD findings will be discussed at the slide seminar

Case study II

CLINICAL HISTORY

A 32-year female patient was hospitalized for pelvic pain.

- **Ultrasound:** enlarged adnexa with a cystic inclusion in her right ovary
- **Ca125** marker: moderately increased

The patient underwent surgery to remove the cystic formation

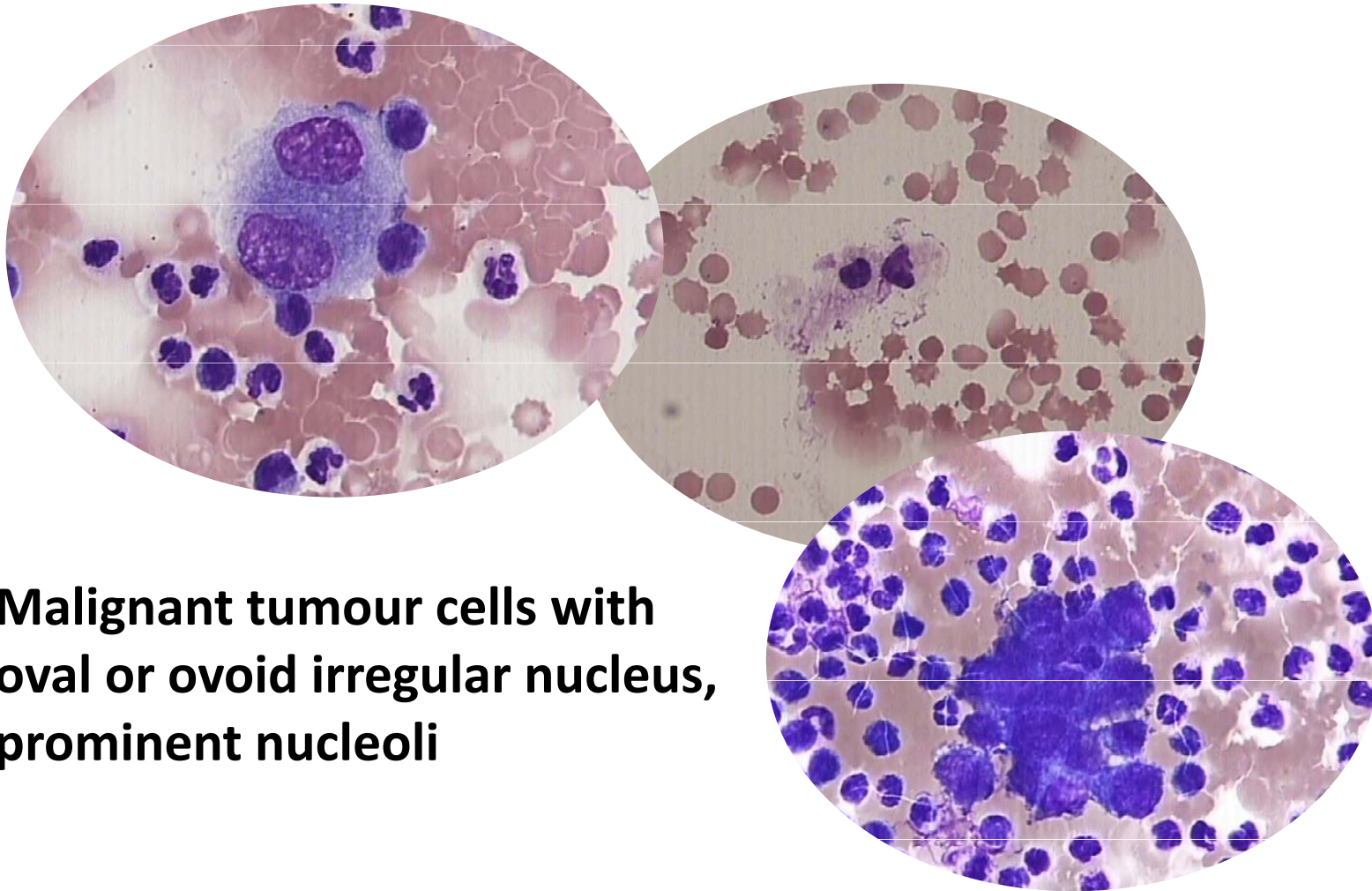
INTRAOPERATIVE CYTOLOGY

- ovarian cyst aspirate and abdominal lavage were sent to the cytology lab for *intraoperative* cytological analysis, which showed marked degenerative and necrotic changes

- abdominal lavage sample
 - single cells and small clusters of malignant cells with prominent nucleoli and dispersed cytoplasm were found

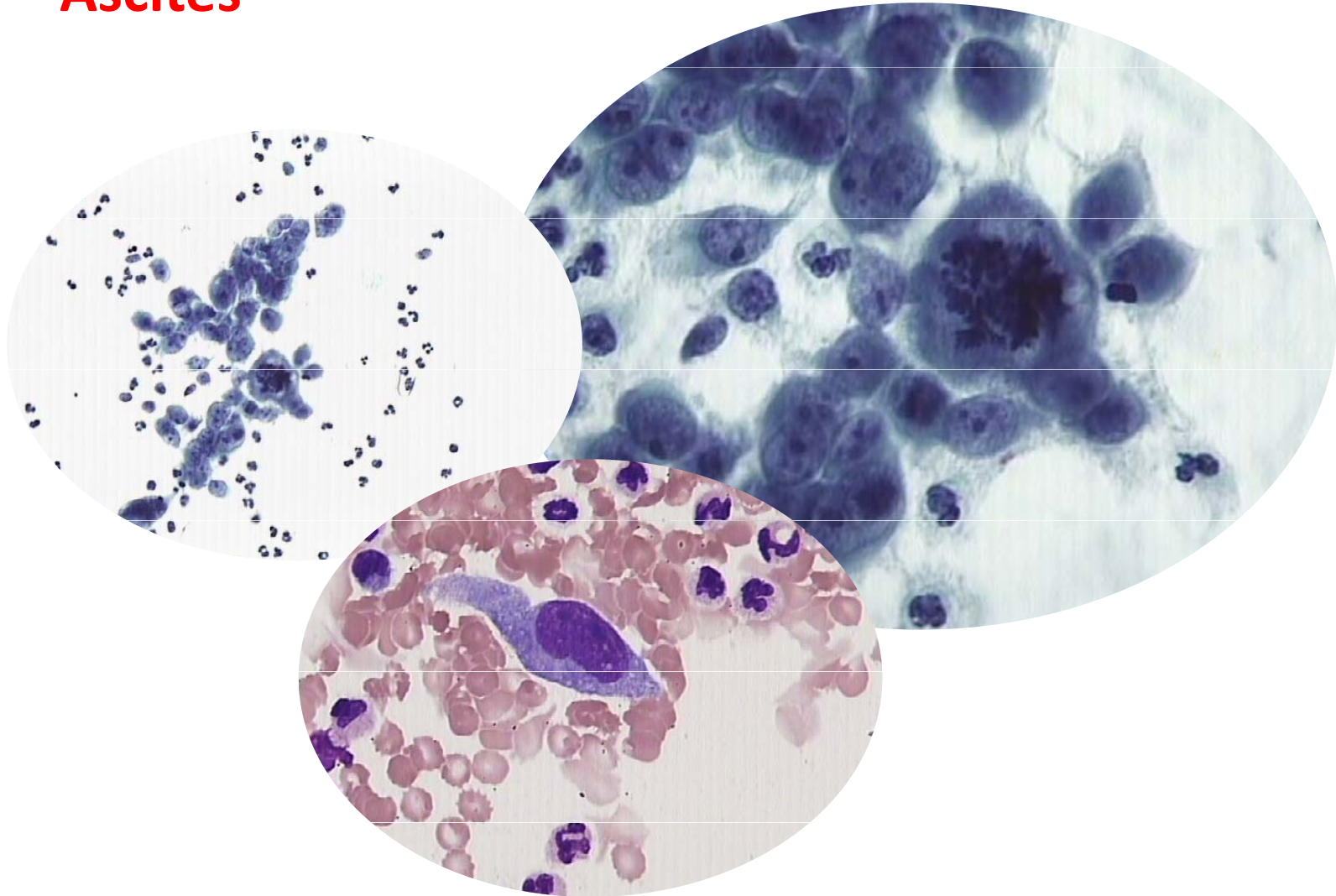
- ovarian cyst sample
 - necrosis and highly degenerative changes, along with same malignant findings as from abdominal lavage

Ovary



**Malignant tumour cells with
oval or ovoid irregular nucleus,
prominent nucleoli**

Ascites



Differential diagnosis

Adenocarcinoma

Carcinoma clarcellulare

Melanoma