

# The Role of tumor markers in ovarian carcinomas

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# Tumor Markers

are defined as molecules produced by malignant tumors and enter in the circulation

# Tumor Markers

- More than 100 tumor markers have been detected
- None of them are used for  
Diagnosis

# Tumor Markers

Can be used for

- Screening
- Differential diagnosis
- Prognosis
- Monitoring response to therapy
- Detecting recurrences

# The most important T.M used in O.C.

- CA-125
- HE4
- ROCA
- C.EA
- AF.P.
- h.c.G
- Inhibin
- Mesothelin

# Tumor Marker CA-125

Was first detected by *Best et al in 1981*

It is a 200K.D glycoprotein

Widely distributed in Adult Tissues

Pleura-pericardium-peritoneum

Endometrial and endocervical epithelium

# Tumor Marker CA-125

can be elevated in

- non-gynecologic conditions
- Gynecologic conditions

# Non-gynecologic conditions which CA-125 may be elevated

- Acute hepatitis
- Acute Pancreatitis
- Chronic liver disease
- Cirrhosis
- colitis
- congestive heart failure
- Diabetes
- Pericarditis
- Pneumonia
- Poly arthritis
- renal disease
- systemic lupus



# Gynecologic conditions which CA-125 may be elevated

Adenomyosis

Endometriosis

Benign ovarian tumors

Functional ovarian cysts

Meig's syndrome

Menstruation

Ovarian hyperstimulation

Myoma

Ovarian cancers

# Tumor Marker CA-125

- Normal value 35U/ml
- Post menopause 20U/ml
- 85% EOCs have elevated levels
- Elevated levels are found in 50%  
Of stage 1 and > 90% of stage 2-4O.C
- Frequently more elevated in serious type

## O.C. Screening by CA-125

- CA-125 is the only T.M studied in large trials
- CA-125 is not effective for screening because....
- It has been suggested P.E, TVS and CA-125
- ROCA
- At this time there is no screening test to reduce mortality from O.C!!!!

# The Role of CA-125 in DDx

- CA-125 is very useful in DDx
- Using 35 U/ml as normal value
- RMI (The risk of malignancy index)
- RMI combines CA-125, TVs and menopausal status
- is the best predictor

# The Role of CA-125 in prognosis

- is well established
- pre-op CA-125 level
- pre-op CA-125 < 60U/ml
- pre-op CA-125 < 30U/ml
- CA-125 level prior to third course of chemotherapy

# Detecting Recurrences

- Follow-up

  - First 2 years every 3 months

  - Next 3 years every 6 months

  - After 5 years annually

- Follow-up contain of

  - PE, TVs and CA-125