

## **CANCER ANTIGEN (CA)27.29**

### ***INTRODUCTION***

Cancer antigen CA 27.29 is present on the apical surface of normal epithelial cells and is usually considered to be a mucin marker.

### ***NORMAL RANGE***

<38 U/mL

### ***CLINICAL USE***

As an aid in monitoring patients previously treated for Stage II or Stage III breast cancer

### ***INTERPRETATION***

#### **Increased Levels**

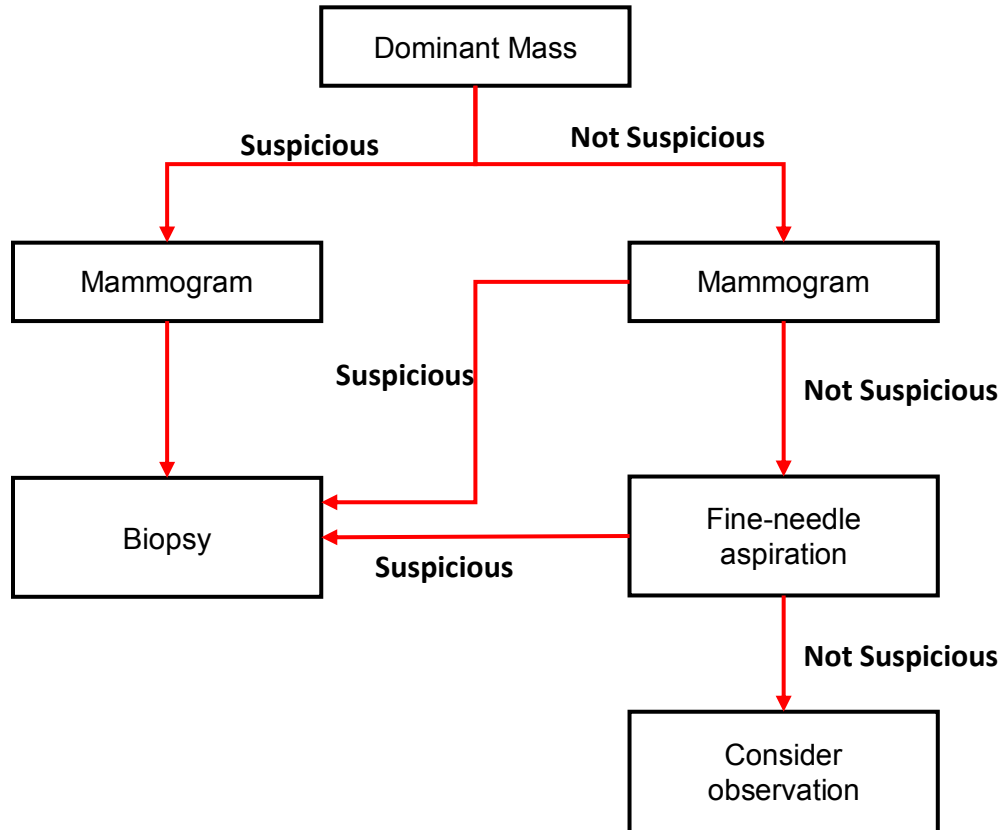
- One third of early Stage I and Stage II breast cancers and two thirds of Stage II & Stage IV breast cancers
- Associated malignancies of Colon / Stomach / Liver / Lung / Pancreas / Ovary / Prostate
- Benign diseases of breast and liver
- Disorders of kidney
- Ovarian cysts
- Tuberculosis
- Sarcoidosis
- Endometriosis
- Systemic Lupus Erythematosus (SLE)
- Lactation
- Pregnancy

#### ***HIGH RISK FACTORS FOR BREAST CANCER***

- Increased age
- Female gender
- Race
- Pre-existing benign breast disease
- Family history of breast / ovarian cancer
- Exposure to radiation
- Environmental factors

## EARLY DETECTION OF BREAST CANCER

### ALGORITHM FOR “TRIPLE DIAGNOSIS” TECHNIQUE



### LABORATORY DIAGNOSIS

The diagnosis of breast cancer is made by –

- Mammography / Ultrasound
- Biopsy & Histologic evaluation
- Fine Needle Aspiration Cytology (FNAC)
- Immunohistochemistry for Estrogen receptor (ER), Progesterone receptor (PR) & HER2
- BRCA1 & BRCA2 screening in patients with family history of breast cancer

### LIMITATIONS

- Lacks predictive value in early stage breast cancer, hence has no role in screening or diagnosis of malignancy
- Concentration of CA 27.29 in a given specimen varies with different assay methods
- Level of CA 27.29 should not be interpreted as absolute evidence of presence or absence of malignant disease. It should always be used in conjunction with other diagnostic procedures.