

Ca-15.3 – [Serum] Analysis

Objective

The objective of this test is to measure the serum level of Cancer Antigen 15-3 (CA 15-3), a tumor marker primarily used for monitoring breast cancer treatment and detecting recurrence.

Materials and Methods

Materials:

- Serum sample from patient
- Immunoassay kits (ELISA, chemiluminescence) specific for CA 15-3
- Microplate reader or automated analyzer
- Standard laboratory equipment (pipettes, centrifuge)

Methods:

1. Sample Collection: Collect venous blood and separate serum via centrifugation.
2. Measurement: Perform CA 15-3 quantification using immunoassay methods.
3. Calibration: Use assay-specific calibrators to ensure accuracy.
4. Interpretation: Compare CA 15-3 levels to reference ranges and monitor changes over time.
5. Quality Control: Employ positive and negative controls to validate results.

Results

- Normal range: Typically < 30 U/mL (varies by laboratory)
- Elevated CA 15-3: May indicate breast cancer presence, progression, or recurrence
- Elevated levels can also be seen in benign breast diseases or other malignancies

Conclusion

CA 15-3 testing is a useful tool in the management of breast cancer patients. It aids in monitoring therapeutic response and detecting recurrence, but results should always be interpreted in conjunction with clinical and imaging findings.