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Titel des Beitrags: National Academy of Clinical Biochemistry laboratory medicine practice guidelines for use of tumor markers in testicular, prostate, colorectal, breast, and ovarian cancers.

Abstract: BACKGROUND: Updated National Academy of Clinical Biochemistry (NACB) Laboratory Medicine Practice Guidelines for the use of tumor markers in the clinic have been developed. METHODS: Published reports relevant to use of tumor markers for 5 cancer sites--testicular, prostate, colorectal, breast, and ovarian--were critically reviewed. RESULTS: For testicular cancer, alpha-fetoprotein, human chorionic gonadotropin, and lactate dehydrogenase are recommended for diagnosis/case finding, staging, prognosis determination, recurrence detection, and therapy monitoring. alpha-Fetoprotein is also recommended for differential diagnosis of nonseminomatous and seminomatous germ cell tumors. Prostate-specific antigen (PSA) is not recommended for prostate cancer screening, but may be used for detecting disease recurrence and monitoring therapy. Free PSA measurement data are useful for distinguishing malignant from benign prostatic disease when total PSA
is <10 microg/L. In colorectal cancer, carcinoembryonic antigen is recommended (with some caveats) for prognosis determination, postoperative surveillance, and therapy monitoring in advanced disease. Fecal occult blood testing may be used for screening asymptomatic adults 50 years or older. For breast cancer, estrogen and progesterone receptors are mandatory for predicting response to hormone therapy, human epidermal growth factor receptor-2 measurement is mandatory for predicting response to trastuzumab, and urokinase plasminogen activator/plasminogen activator inhibitor 1 may be used for determining prognosis in lymph node-negative patients. CA15-3/BR27-29 or carcinoembryonic antigen may be used for therapy monitoring in advanced disease. CA125 is recommended (with transvaginal ultrasound) for early detection of ovarian cancer in women at high risk for this disease. CA125 is also recommended for differential diagnosis of suspicious pelvic masses in postmenopausal women, as well as for detection of recurrence, monitoring of therapy, and determination of prognosis in women with ovarian cancer. CONCLUSIONS: Implementation of these recommendations should encourage optimal use of tumor markers.