

Tumour Marker Requesting Guidance for Primary Care

PSA (prostate specific antigen)

MEN ONLY

Relevant cancer:

Prostate cancer

Typical clinical presentations that might warrant measurement:

Frequency, urgency, nocturia, dysuria, acute retention, back pain, weight loss, anaemia, prostate enlargement.

Caution – other conditions marker may be raised in include:

Benign prostatic hyperplasia, urinary tract infection, prostatitis and after catheterisation.

Caution – other malignancies marker may be raised in include:

None known.

Notes:

- Take samples prior to digital rectal examination and >6 weeks after invasive procedures (e.g. prostatectomy)
- Objective information for asymptomatic men requesting PSA measurement is available at www.scotland.gov.uk/Resource/Doc/1094/0088915.pdf

CA125 (cancer antigen 125)

WOMEN ONLY

Relevant cancer:

Ovarian cancer

Typical clinical presentations that might warrant measurement:

Pelvic mass; persistent (more than 12 times / month) and continuous or worsening unexplained abdominal or urinary symptoms, abdominal bloating, irritable bowel symptoms, increased urinary frequency.

Caution – other conditions marker may be raised in include:

Pregnancy, menstruation, endometriosis, benign ascites, acute hepatitis, chronic renal failure, heart failure, pleural effusion and others.

Caution – other malignancies marker may be raised in include:

Breast, cervical, endometrial, hepatocellular, lung, pancreatic and other cancers.

Paraproteins (M-Protein)

Relevant cancers:

B-cell proliferative disorders (e.g. multiple myeloma, AL-amyloidosis, Waldenstrom's macroglobulinaemia and some low grade non-Hodgkin's lymphomas).

Typical clinical presentations that might warrant measurement:

Unexplained anaemia, bone pain, weakness or fatigue, raised ESR, viscosity or abnormal globulins, hypercalcaemia, renal failure, spontaneous fractures and/or recurrent infections.

Caution – other conditions where paraproteins may be present:

Conditions, usually autoimmune or infective, in which there is a chronic stimulation of the immunoglobulin response, monoclonal gammopathy of unknown significance (MGUS), and following peripheral blood stem cell transplant (PBSCT), with an increasing prevalence in the elderly.

Notes:

When requesting paraprotein investigation please send both a serum and a urine specimen.

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Top tips for optimal requesting

- **The need for informed consent should be considered.**
- **Opportunistic screening with panels of tumour markers is not helpful. CA125 should not be measured in men nor PSA in women.**
- Serial results are usually most useful, as the main application of serum tumour markers is for monitoring patients with a previously diagnosed malignancy.
- Provision of brief and relevant clinical information on the request form is very helpful to the laboratory.
- AFP, hCG, CEA, CA15-3 and CA19-9 should only be requested as and when advised by the specialist secondary care team. This should be indicated on the request form.

Useful resources

Laboratory staff are always pleased to provide advice on test requesting and interpretation.

For further information please see the following:

General:

- ‘Serum tumour markers: how to order and interpret them’
<http://tinyurl.com/TumourMarkers>
- Scottish Referral Guidelines for Suspected Cancer
www.healthcareimprovementscotland.org
- Information about laboratory testing
www.labtestsonline.org.uk

Specific:

- **PSA:** NHS Scotland Prostate Cancer Risk Management Programme
www.scotland.gov.uk/Resource/Doc/1094/0088915.pdf
- **CA125:** SIGN Guideline 135 - Management of epithelial ovarian cancer
www.sign.ac.uk/assets/sign135_2018.pdf
- **Paraproteins:** <http://tinyurl.com/Paraproteins>



The Royal College of Pathologists
Pathology: the science behind the cure

