

Prostate cancer test Stockholm3

Clinical Immunology/transfusion medicine

Alternative search words

Stockholm 3
Sthlm-3
PSA
Prostate cancer

Indications/complementing analyses

Prostate cancer is the most common cancer in Sweden and one of the most common cancers in the world.

Prostate specific antigen (PSA) is today analyzed to detect men with elevated risk for prostate cancer but the test cannot distinguish between aggressive and non-aggressive cancer. This often results in false positive answers resulting in unnecessary diagnostics and treatments.

The Stockholm3 test is a clinical diagnostic test ordered to help determine the presence of prostate cancer. The test combines five plasma protein markers (tPSA, fPSA, fhK2, PSP94, GDF-15), more than 100 genetic markers and clinical data (e.g. age, previous biopsy results, family history) to determine the risk of aggressive prostate cancer (defined as Gleason Score ≥ 7). The test is applicable for men aged 50-70 years and has been validated on almost 60,000 men in the STHLM3 study (The Lancet Oncology 2015; <http://dx.doi.org/10.1016/S1470-2045%2815%2900361-7>). The link will open in a separate window).

Method

Microarray (plasma protein biomarkers)
SNP-array (genetic markers)

Referral

The Stockholm3 test can be ordered electronically or by paper referral. Please contact Karolinska University Laboratory Study Center (email: studiecenterlab.karolinska@sll.se or phone +46 (0)8-517 70 437) to set up electronic ordering or receive paper referrals.

Sampling

Tube 1: EDTA 4 ml (purple cap) for plasma analysis

Tube 2: EDTA 4 ml (purple cap) for DNA analysis

Tube 3: LiHep 3.5 ml (light green cap) for PSA analysis

Handling and transport

- Directly after sampling, invert the tubes slowly 5-10 times.
- Tube 1 (EDTA QX plasma): Centrifuge tube 1 for 10 minutes at 2000 x G. Transfer plasma into a new tube with no additives (Sarstedt 55.555) with a red cap. Label the tube "EDTA Plasma Aliquot, barcode extension QX" and freeze (-20°C)
- Tube 2 (EDTA QV): Freeze (-20°C) tube 2
- Tube 3 (LiHep): Centrifuge tube 3 for 10 minutes at 2000 X G. Transfer plasma into a new tube with no additives. Label the tube "LiHep PSA Aliquot, barcode extension 19" and freeze (-20°C)

Keep samples frozen and transport frozen (-20°C)

Reference interval

Negative [0-10%], Positive [11-100%]

Analysis result

The result of the Stockholm3 test is a risk score indicating the risk to identify aggressive prostate cancer (Gleason Score ≥ 7) in biopsy as well as a recommendation for further treatment.