



Solutions for cancer diagnostics

PSA EQM

PSA F/T

TG

B2-MG

hCG

AFP

NSE

CEA

WALLAC

PerkinElmer
life sciences.

Today's best

for early detection



tools

of cancer and for monitoring of treatment

With its unique series of products for PSA detection, PerkinElmer Life Sciences has spearheaded a new approach to early detection of prostate cancer. By allowing more reliable early detection, our new products have great potential in screening programs. They help to reduce both the anguish, and the huge monetary cost of false positive results. In addition to products for prostate cancer detection, PerkinElmer supplies sensitive kits for various other markers that have proven suitable in monitoring treatment of various types of cancer.

High sensitivity and wide dynamic range with DELFIA chemistry

Kits for the detection of key tumour marker analytes are based on the DELFIA chemistry. Lanthanide chelate labels are detected with high sensitivity by means of time-resolved fluorometry. The method supports consistency in assay reproducibility, and wide measurement ranges for minimum dilution.



Complete systems to support all methods of working

For sample preparation and measurement, all instrumentation is supplied. Users can choose between a semi-automatic system or the fully automatic, high-throughput AutoDELFLIA.



F/T PSA provides

the key to



PSA EQM

PSA F/T

prostate cancer screening

Early detection of prostate cancer – Why?

Prostate cancer is one of the most common forms of cancer in men and the incidence increases with age. The disease may be cured when localized and the main goal of screening is to detect those cases that are potentially curable.

In the early stages of prostate cancer there may be no symptoms at all. This is why early detection through regular examinations is recommended. The American Cancer Society recommends that screening based on the prostate specific antigen test (PSA) and digital rectal examination (DRE) should be offered annually for all men over 50. For men at high risk, such as those with a family history of prostate cancer or African ancestry, screening should start at the age of 40.

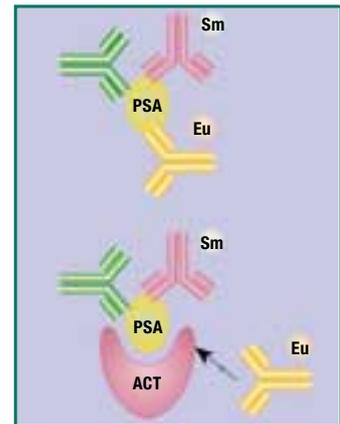
PerkinElmer Life Sciences supports early detection and management of prostate cancer with a PSA test, PSA F/T, which provides more information than conventional tests for total PSA.

Unique properties of the dual DELFIA F/T PSA assay

Signs and symptoms of prostate cancer are very similar to benign growth of the prostate (BPH). Total PSA alone does not allow good distinction between prostate cancer and benign growth of the prostate (BPH). To provide better distinction, both total and free forms of the serum PSA need to be measured, and their relative proportions compared. As a result of unique dual-label technology, the DELFIA F/T PSA kit is able to provide results for both free and total PSA from one single measurement and the ratio of free to total PSA can be calculated.

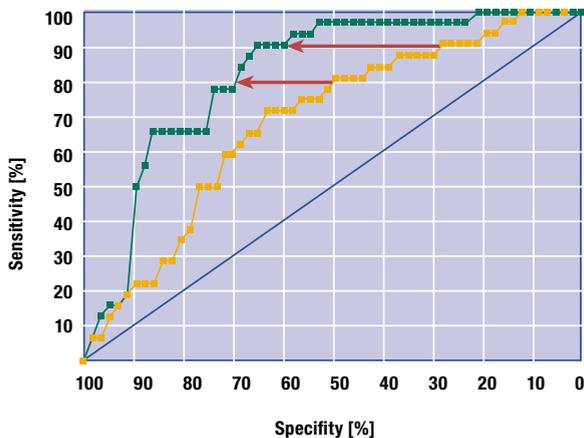
Equimolar Total PSA test

In post-operative follow-up, where a sensitive total PSA assay is needed, PerkinElmer offers the DELFIA PSA EQM test, which has 0.05 µg/L sensitivity. Due to the design of the assay and the specification of the monoclonal antibodies used, neither the free nor the complexed forms of the marker are over- or underestimated.



Dual label assays, such as for the free and total forms of PSA are made possible by highly specific monoclonal antibodies and the unique fluorescence properties of certain lanthanide metals, used as tracers. In this assay Sm-labelled antibodies are used to measure the total PSA and Eu-labelled antibodies are used to measure the free PSA portion. This unique dual label concept eliminates sampling errors.

Standard PSA test



First clinical tests with DELFIA F/T PSA show a clear improvement in diagnostic specificity.

(Björk, T. et al. Urology 48 [6] 1996)

- ← A better specificity was reached at all sensitivity levels
- PSA F/T
- PSA-total

Sensitivit





needed for post-operative follow-up

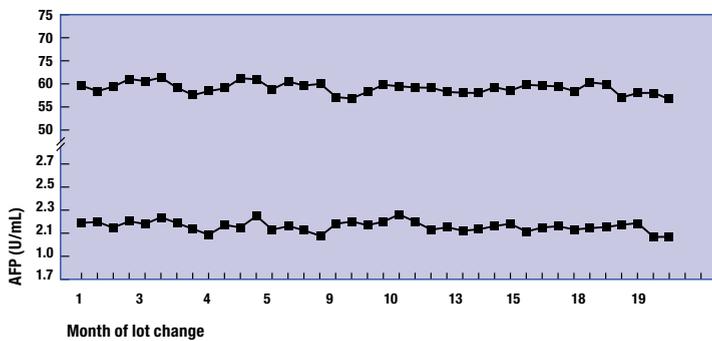
Wide measurement range – minimal dilutions

The sensitivity of the DELFIA method with measurement ranges over five orders of magnitude make it ideal in many detection and treatment monitoring applications. In the DELFIA hCG assay, the wide dynamic range (0.5-10,000 U/L) means it is suitable for the detection of trophoblastic cancer. As well as for PSA and hCG, assays for CEA, AFP, TG, β 2-MG and NSE support treatment monitoring for various types of cancer.

Consistency in assay reproducibility

In cancer treatment monitoring and follow-up, it is essential that relatively small changes are detected. This is only possible with a kit that is stable over time.

Minimal lot to lot variation



DELFIA tumor marker kits provide constant results with time. Known concentrations measured with DELFIA hAFP over a period of 18 months.

PSA EQM

Prostate specific antigen

- Equimolar measuring principle of total serum PSA
- Serum PSA is the predominant tumour marker for monitoring the effect of therapeutic interventions
- Dynamic range 0.05-500 μ g/L

PSA F/T

Prostate specific antigen

- Improved differential diagnosis for prostate cancer and BPH
- Dynamic range (Free) 0.04-250 μ g/L (Total) 0.05-250 μ g/L

CEA

Carcinoembryonic antigen

- The best marker available for colorectal cancer
- Dynamic range 0.2-500 ng/mL

AFP

Alpha-feto protein

- The assay is used for diagnosis and monitoring of hepatoma and testicular cancer
- Dynamic range 0.1-1000 U/mL

TG

Thyroglobulin

- The assay is important for follow-up of patients with thyroid cancer
- Dynamic range 0.2-1000 ng/mL

β 2-MG

β 2-microglobulin

- For detection of lymphomas and myelomas
- Dynamic range 0.15-32 mg/L

NSE

Neuron specific enolase

- Used for pretreatment evaluation and monitoring of small cell lung cancer (SCLC) and also for hepatoma, colorectal cancer, neuroendocrine cancer, lung cancer and neuroblastoma
- Dynamic range 1-1000 μ g/L

hCG

Human chorionic gonadotropin

- Elevated levels are associated with trophoblastic and testicular cancer
- Dynamic range 0.5-10000 U/L



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