Personalised medicine brings the right medicine to the right patient at the right time.[1] Biomarkers are an important element of personalised medicine, as they help to identify the patients that are likely to respond to a medicine and avoiding unnecessary treatment for those unlikely to respond.[2]

HOW BIOMARKERS HELP GUIDE PATIENTS TO THE RIGHT MEDICINE

What are biomarkers? [2]

They are indicators that provide information about normal biological processes, disease processes or pharmacological responses to a therapeutic intervention.

Examples of biomarkers include everything from pulse and blood pressure through basic chemistries to more complex laboratory tests of blood and other tissues.[3]

Health literate patients are being able to:

- understand how biomarkers are used
- comprehend the result of a biomarker test
- make informed decisions jointly with their physician[4]

Definition:[5]

Health literacy refers to the **capacity to make sound health decisions in the context of everyday life**
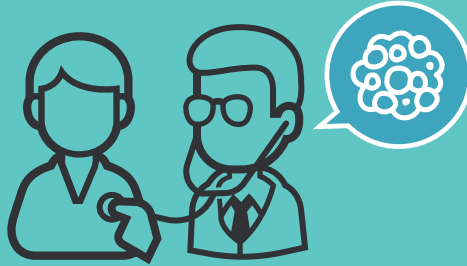
home   community   workplace

healthcare   market   political

HOW BIOMARKERS ARE USED IN CANCER TREATMENT

STEP 1:
CANCER DIAGNOSIS[6]

Initial assessment of the malignancy of a tumour and identification of the type of cancer.

STEP 2:
BIOMARKER ANALYSIS[2]

Secondary diagnosis via biomarker, can provide information about the best treatment for that patient.

Lung cancer (example)

- 2 main types – non-small cell and small cell[7]
- Several biomarkers found in lung cancer, e.g.:[8]

ROS   ALK   EGFR   KRAS   PD-L1

*

STEP 3:
TREATMENT DECISION[6]

Patient and physician can discuss test results to make the right treatment decision.

CANCER LITERACY: PAVING THE WAY FOR PERSONALISED TREATMENT[4]

With health literacy, the promise of personalised medicines can be fulfilled by bringing together:

... choosing the right therapy option to help with the fight against cancer

Patient + Physician

Biomarker: PD-L1[9]
(example)

The PD-L1 is a protein signal of cancer cells that mimics normal cells to escape elimination by the immune system.[9]

The PD-L1 expression status may help predict the most effective treatment for a specific patient.[9]

For more information visit:
http://www.immuno-oncology.msd.eu

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* Reactive oxygen species (ROS), Anaplastic Lymphoma Kinase (ALK), Epidermal Growth Factor Receptor (EGFR), V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog (KRAS) and Programmed Death-Ligand 1 (PD-L1).

MSD