About Cancer staging

Cancer staging is the process of determining how much cancer is in the body and where it is located.

Cancer staging provides a common language that helps doctors to communicate about the cancer extent (i.e. how large the tumour is and the extent to which it has spread) for individual patients. It helps both doctors and their patients to decide and plan the best treatment options and assess individual prognosis (anticipated outcome of the different treatments)*.

Using a common language also facilitates the exchange of information between treatment centres and in clinical research and trials. At a policy level, cancer staging is used to inform and evaluate treatment guidelines, national cancer control planning and research.

Although there are several staging systems in use, the most widely used is the **TNM** classification**, first developed in the mid-20th century by Professor Pierre Denoix at the Gustave-Roussy Institute and was further developed by the Union for International Cancer Control (UICC).

Cancer stages

The TNM staging system is used to describe the stage of many types of cancer such as breast, lung, prostate etc, but not all. Different staging systems are used for other types of cancer such as blood cancers.

Although stage definitions differ by cancer type, in general:

- stage I cancers are small and localised (i.e. have not yet spread)
- stage II cancers are larger but are still localised
- stage III cancers often have spread to nearby lymph nodes
- stage IV cancers have metastasised (spread) to other parts of the body

The cancer stage can also give some indication of the expected prognosis. For example, stage I cancers in general but not always have a better prognosis than stage IV cancers.

Cancer staging for cancer control activities

Cancer staging allows comparison of outcomes around the world and offers the opportunity for a more long-term evaluation of outcomes at a population (rather than just individual) level. The use of the same stage definitions such as the TNM classification across populations over a defined time period helps to make these comparisons effectively.

Cancer data which includes information on cancer incidence by stage is also valuable for effective national cancer control planning. For example, if more stage IV (late stage) cancers are diagnosed in one specific geographic region, a different response and resources will be needed to support cancer control interventions compared to another region where more cancers may be more typically found at an earlier stage.

Cancer staging can also indicate the effectiveness of screening programs. The introduction and implementation of an effective screening program for a cancer would reduce the number of late-stage

diagnosis for that cancer and see a greater distribution of early stage diagnosis compared to before the introduction of a screening program.

To learn more about cancer staging, watch our short educational videos or visit https://www.uicc.org/resources/tnm

* It is important to note that the treatment ultimately depends on not only the extent of the cancer but also the cancer type

**Each individual aspect of TNM (Tumour, Node, Metastasis) is termed as a category:

- **T** describes the size of the main (primary) **tumour**
- **N** describes whether the cancer has spread to the nearby lymph **nodes**
- **M** describes whether the cancer has **metastasised** (spread from the primary tumour to another part of the body)