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UNDERSTANDING PRIMARY AND SECONDARY CANCER
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The discovery of new tumours is directly related to the progress in medicine. People have learned to treat or prevent many infectious diseases. Life expectancy has increased significantly, as has the mutual influence of humans and the environment. But people remain mortal, and cancer is becoming the leading cause of death. In 2007 the top three DALY (disability-adjusted life year) leaders looked like this: respiratory diseases and tuberculosis, maternal and neonatal disorders, cardiovascular diseases, and oncological diseases occupied only the sixth rank. Ten years later the situation has changed significantly: cardiovascular diseases took the first place, the second – oncological.

Most of people don't know which types of tumours can produce metastases. People only know that this disease has a high mortality rate and therefore some refuse treatment because of fear or mistrust that they can be cured and return to normal life.

A primary tumour is a tumour growing at the anatomical site where tumour progression began and resulted in the formation of a cancerous mass. Most cancers develop at their primary site but then start to metastasize or invade other parts of the body.

‘Secondary cancer’ is a term used to describe cancer that has spread (metastasized) from the place where it first started to another part of the body. Secondary cancers are the same type of cancer as the original (primary) cancer.

In order to detect any cancer metastasis, it is necessary for it to invade a secondary organ and begin to develop. Primary tumour growth and neoangiogenesis, EMT (epithelial-to-mesenchymal transition), invasion, intravasation, survival in the circulation, extravasation, dormancy and secondary tumour growth are the stages of cancer metastases formation.

There are different types of cancer, for example breast, prostate, lung, colorectal, liver etc. that have common sites of metastasis (bone, liver and lung). During remission, the doctor and the patient hope for a complete recovery from cancer, because MRI, CT scan, PET scan, ultrasound and X-ray cannot reveal a secondary lesion in dormant state. The highest probability of remission occurs in stage 1 and stage 0 cancers. In patients with stage 2 cancer, the prognosis is not so reassuring, but the probability of remission is still present. Stage 3 cancer leaves little to no chance of remission and involves the treatment aimed at stopping and slowing down the progress of the disease, as well as reducing the effect of symptoms in order to prolong life. Stage 4 cancer does not give a chance of remission.

Currently, 30-50% of cancers can be prevented by avoiding risk factors. Early detection and management of patients who have developed cancer can reduce the burden of cancer. Active use of combined therapy, including operative manipulations and both chemical and X-ray therapy, plays the role in the dynamic of survival.