Hôpital Maisonneuve-Rosemont
Centre affilié à l'Université de Montréal

Tumours vs Sarcomas

A tumour is an abnormal cellular proliferation; and only some tumours are related to cancer. Certain tumours may be benign, meaning that they are non-cancerous and limited to a specific area. Benign tumours generally do not spread to neighbouring tissues, although there are some exceptions. By definition, sarcomas are malignant tumours, meaning that they have the potential to spread to neighbouring structures as well as to distant organs. If they occur, secondary cancerous masses are called metastases.

Sarcomas originate in bone or in the soft tissues, including muscle, cartilage (joints), nerves, etc. A name is attributed to each cancer according to which tissue is produced by the tumour. For example, the osteosarcoma is a sarcoma that produces bone.

Sarcomas account for approximately 1% of cancers diagnosed in adults and 15% of cancers diagnosed in children; this makes it a rare disease. In Canada, approximately 1200 patients are diagnosed with a sarcoma each year.

This pamphlet aims to provide you with information that will allow you to better understand your tumour and the treatments that will be offered to you. It will also guide you towards reliable sources of information and personal ressources.

Main categories of sarcomas

Bone sarcomas

Bone sarcomas generally develop directly in the bone tissue, which makes them primary bone tumours. However, bone sarcomas may also be secondary to other diseases, such as Paget, or due to a malignant transformation in a previously benign tumour that has been present in the bone for many years.

Osteosarcoma is the most common variety of bone sarcoma. Children between the ages of 10 and 20 and adults between the ages of 50 and 70 are the two age groups that run the highest risk of developing an osteosarcoma. Ewing's sarcoma, on the other hand, is found primarily in adolescents. Respectively, osteosarcomas and Ewing's sarcomas represent 54% and 36% of malignant bone tumours in children younger than 19 years of age (Ref: Health Canada).

Soft tissue sarcomas

Soft tissue sarcomas are the most common forms of sarcoma. The reported incidence of soft tissue sarcomas in the population is of approximately 1/100 000. They are found more frequently in adults than in children, and all types of tissue may be affected. The names of sarcomas as well as their characteristics depend on the type of tissue which they form. The most common soft tissue sarcomas in adults are liposarcomas (fatty tissue tumours), leiomyosarcomas (smooth muscle tumours) and synovial sarcomas. In children, rhabdomyosarcomas (striated muscle tumour) are the most common form of soft tissue sarcomas.

Treatment of sarcomas

Sarcomas are often located in the limbs, and most frequently in the lower limbs. The most common treatment for a sarcoma is resection (surgery to remove the tumour). This is done in a way that minimizes the loss of functional capabilities as much as possible, while still removing enough normal surrounding tissue to avoid recurrence of the tumour. In rare cases, when the sarcoma has spread to vessels or nerves that are essential to the function of the limb, amputation may be necessary. Radiotherapy may also be administered before or after the operation, especially in the case of a soft tissue sarcoma. In the majority of bone sarcoma cases, chemotherapy will be favoured as a first line of treatment, followed by surgery.

Radiotherapy

Radiotherapy is the destruction of cancerous cells by the ionizing radiation of a linear particle accelerator. Radiation destroys the DNA contained in the cancerous cells, rendering them incapable of reproduction. Some of the healthy cells surrounding the cancerous cells are also damaged by the radiation, but they generally succeed in repairing themselves. The aim of radiotherapy is to allow a better control of the tumour.

Patients generally consult a medical doctor when they discover a mass, but do not always bear in mind that it may be cancerous as these masses are generally painless. In general, tumours only become painful when they exert pressure on other organs or spread to a neurovascular structure (nerves or arteries).

As sarcomas are a rare form of cancer, they are not generally suspected when a mass appears or the first symptoms are manifested.

Sarcomas are often difficult to diagnose and require the participation of several specialized health professionals in a number of different fields. Patients only receive their definitive diagnosis after submitting to several examinations (medical imagery, biopsies, physical examinations, etc.) and sometimes only after the surgery has been conducted. It is for this reason that you have been directed to a hospital with a multidisciplinary team of specialized medical doctors (surgeons, radiologists, oncologists, radio-oncologists, pathologists, clinician nurses, research assistants, etc).

Sarcoma treatments may cause physical disabilities, especially if first treated as a different kind of tumour and so it is very important to be followed and treated at an expert facility.

After treatment

After your surgery, your doctor will propose a follow-up routine to ensure that you recover properly from your surgery, and to keep in contact with you so as to detect any signs of a recurrence early on.

These check-ups may include radiological or physical examinations. It is very important that you be present at these appointments and that you undergo the examinations requested by your doctor, even if they seem distressing to you.

The usual follow-up regimen is a check-up every three months for the first two years following the surgery, then every six months for up to three years following the surgery, and yearly for up to ten years after the surgery.

The local recurrence of a sarcoma is not a rare phenomenon. New masses are known to develop on the margins of the original tumour, even if the surgery allowed for a complete removal of the tumour (negative margins). Patients must remain vigilant; in many cases, it is the patient who detects the first signs of a recurrence.

Certain sarcomas are known for their potential to develop metastases. When there is diffusion of tumoral cells in the body, dissemination most frequently occurs in the lung. If the disease is incurable, treatments aimed at reducing the size of the sarcoma may be included in the palliative care. It is possible that experimental treatments being tested in your hospital may be offered to you if the standard treatments have not been effective. Your doctor will inform you if you are an eligible candidate for such studies.

Frequently asked questions

Can my disease be cured?
Yes. The majority of our patients with localised sarcomas that have not developed signs of metastasis (detected with complementary radiological examinations, CT scans, TEP scans) have a good chance of being cured. Another factor in the prognosis is the sub-category of sarcoma.

Each case is different, and the only person who can supply you with reliable and accurate information is your doctor. As yet, there are still many unknown factors in the development of sarcomas, and so it is possible that there are no clear-cut answers to some of your questions. We recommend that you pose any questions that you may have directly to the doctors tending to your recovery rather than relying on the multiplicity of statistics and information that can be found on the internet. Internet sources are not necessarily reliable and may not correspond to your situation. Several reliable sources of information are provided at the end of this pamphlet.

Who may I talk to for psychological support?
The diagnosis of a cancer is a bewildering and difficult time for you and those surrounding you. It can be difficult to comprehend everything your doctor is explaining to you, even if you feel that you are in a state to understand the situation.

Sometimes, it can be helpful to discuss the situation with other competent persons. We have several ressources available in our team at HMR, including a psychologist who tends specifically to our oncologic patients. You may ask the nurses for information concerning the support services provided by the hospital. Organisations such as the Canadian Cancer Society also offer support for individuals affected by cancer. Information about the Canadian Cancer Society can be found at http://www.cancer.ca/

How can I have access to an income during my treatment ?
The Canadian Cancer Society offers services to cancer patients with low incomes, including financial aid for the transport between care centres and the patient's home. When necessary, they also provide financial aid in procuring material such as elastic sleeves and socks.

Where can I find more information ?

Support hotlines
Canadian Cancer Society, Cancer support service :
1 888 939-3333
Quebec Cancer Foundation, Mutual aid service :
1 800 363-0063

General information on sarcomas
Canadian Cancer Society : http://www.cancer.ca
Search engine for reliable information :
http://www.ncbi.nlm.nih.gov/pubmed
Mayo clinic : http://www.mayoclinc.org/soft-tissue-sarcoma/
Rizzoli institute : http://www.ior.it/en/
Sarcoma UK : http://www.sarcoma-uk.org/
Onco-orthopedic research HMR (french) :
http://www.hmrortho.ca
Quebec Cancer Foundation (french) : http://www.fqc.qc.ca/
General Information : http://www.bonetumor.org

Notes

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