Phyllodes tumors

Are rare and appear almost exclusively in female breasts. They have a leaf-like pattern of cells, called "Phyllodes" from Greek, meaning "leafy". Phyllodes tumors often grow rapidly, but they rarely spread outside the chest. Most Phyllodes tumors are benign, others are borderline and less malignant, or malignant. All three types require surgery to prevent recurrence.

General classification

Phyllodes tumor = PT
Benign Phyllodes tumor = BPT
Borderline Phyllodes tumor = BLPT
Malignant Phyllodes tumor = MPT
Fibroadenoma = FA

Phyllodes tumors can occur at any age 12>, but usually develops in women in their 40s. (Fibroadenoma) Benign Phyllodes tumors are usually diagnosed at a younger age than the malignant type. And, as with many forms of breast cancer, Phyllodes tumor is almost uncommon in men.

Signs and symptoms

The most common symptom of a Phyllodes tumor is a chest swelling or lump. The lump is easy to feel yourself or a doctor to feel when examining the breasts. They often appear in the upper, outer quadrant of the breast, where most of the gland tissue is present. All three types of Phyllodes tumors tend to grow rapidly. The tumor can grow to 20-30 millimeters (mm) or larger in the course of a few weeks or months. The average tumor size is about 5 cm, but they can be several times larger.

The swelling or lump is usually not painful. In some cases, a visible thickening is seen when it begins to press against the skin of the breast. In more advanced cases, a Phyllodes tumor can cause an ulcer on the skin. This can happen regardless of whether the tumor is benign, borderline or malignant. The Phyllodes tumor can also cause the veins to expand under the skin, making parts of the breast appear blue.

Diagnosis

Phyllodes tumors are rare. Your doctor will encounter them much less often compared to other tumors, which makes the diagnosis more difficult.

A Phyllodes tumor can also look like a kind of solid breast growth called a fibroadenoma. A fibroadenoma is a benign, growing clump of normal breast cells. It is the most common breast mass and is seen in younger women. (it is less common for fibroadenomas to appear in women in menopause).
There are two differences between fibroadenomas and Phyllodes tumors. First, Phyllodes tumors tend to grow much faster than fibroadenomas.

Secondly, Phyllodes develops about 10 years later in life, when women are > 40. (Can also be much earlier) In contrast, women develop fibroadenomas more often when they are in their thirties. These two differences can help doctors determine if the tumors are the result of Phyllodes tumors or fibroadenomas.

As with many tumors, the diagnosis of Phyllodes tumors includes several steps:
• The woman or her doctor can feel the lump in the chest, which is the first step in the diagnosis.
• After finding a lump the doctor can make a mammogram, ultrasound, X-rays of the breast. The images also help to locate the lump.
• An MRI is sometimes used to get extra images of the tumor.

These images help with surgery.
A Phyllodes tumor appears on a mammogram as a round mass with well-defined margins. In some cases, the tumor appears to have round lobes.

Additional tests will still be needed to determine what it is. Additional imaging can be performed with an ultrasound that echoes the sound waves used to create an image. Phyllodes tumors resemble well-defined masses, with eventual cysts in them when viewed by ultrasound.

As with the diagnosis of other tumors and cancers, a doctor can order a biopsy to take samples of the tissue to be examined under a microscope.

A biopsy is the only way for a doctor to absolutely determine that growth is a Phyllodes tumor. A radiologist will perform either a hollow core needle biopsy or an excision biopsy. A core needle biopsy is where a hollow needle takes a sample of the tumor through the skin. An excisional biopsy is the removal of the entire tumor through surgery. A radiologist will perform the biopsy or puncture.
In the case of a puncture, individual cells of the lesion are removed with a thin needle for examination. With a biopsy, a small piece of tissue is removed from the lesion with a thick needle. If the diagnosis cannot be made with certainty using the puncture or the biopsy, the doctor can propose an excisional biopsy. Here the entire tumor is removed by means of an operation.

Once a biopsy has been taken, a pathologist examines the tissue under a microscope to make a definitive diagnosis. In this process, the pathologist will also classify the Phyllodes tumor as benign, borderline or malignant.

A pathologist will often see a benign tumor:
• well-defined borders
• cells that do not divide quickly
• connective tissue cells that still look normal
• no “overgrowth” of connective tissue cells

For a malignant tumor, a pathologist often sees:
• not well defined edges
• cells that divide quickly
• connective tissue cells with an abnormal appearance
• an overgrowth of connective tissue cells
For borderline cases, a pathologist will see symptoms that lie between the benign and malignant forms. The main difference between the types of tumors is that the malignant tumors, especially those with a lot of connective tissue overgrowth, tend to return more quickly. Malignant tumors can spread to other sites (organs – especially the lungs), although this is often not the case.

**Treatment:**
The only way to treat Phyllodes tumors effectively is to remove the tumor with free cutting edges. Benign Phyllodes tumors should also be treated to prevent them becoming so large that it causes complications.

When removing Phyllodes tumors, obtaining a tumor-free margin is important. The required size of this margin (= the distance between the phyllodes tumor and the edge of the removed tissue) is reported in the literature in varying degrees, but in most cases obtaining a margin greater than 10 mm seems to contribute to reducing the chance of return of the Phyllodes tumor.

**Prognosis:**

After the surgical removal of a Phyllodes tumor, few complaints are to be expected. In addition to local pain complaints, there can be a wound infection but this is rare.

A doctor will regularly check for recurrence (return) of the phyllodes tumor. Recurrences are most common in the first 2 years after treatment.

When there is a malignant Phyllodes tumor or recurrence Phyllodes, a doctor may recommend additional treatment options, such as extended surgery and radiation. Irradiation may be necessary if it is not possible to remove the tumor with free margins, and in these cases it may reduce the risk of recurrence.