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 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 chest. All three types of Phyllodes tumors tend to grow rapidly. The tumor can grow to 2-3 centimeters (cm) 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 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.
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 some 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 tumor to view under a microscope.

A biopsy is the only way for a doctor to absolutely determine that growth is a Phyllodes tumor.

A physician will perform either a 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 removes the entire tumor.

Some researchers think the best way is to use an excision biopsy if it is assumed that the nodule is a Phyllodes tumor. This is because examining the entire tumor is often necessary to make a correct diagnosis. The core needle biopsy sample may not provide sufficient evidence to confirm that it is a Phyllodes tumor.

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 - often the lungs or bones).

**Treatment:**
The only way to treat a Phyllodes tumor effectively is to completely remove the tumor, with a generous margin of 1 cm. Surgery helps prevent future tumors and complications of the existing tumor. A benign tumor can help to reassure a woman that the tumor is not cancerous or harmful. Benign Phyllodes tumors, however, still need to be treated because they can become large and can evolve to borderline or malignant when recurring. Margin is very important (minimum is 1 cm margin). The growth will eventually create a visible lump on the chest and can break through the skin, causing pain and discomfort if not treated.

**Prognosis:**

After treatment of a Phyllodes tumor the patient should have limited problems. The removal of the tumor usually does not result in further complications except mild pain from the procedure and then need to take it easy. A doctor will regularly check for recurrence, which has the most probability within one or two years. In case of (recurrences) malicious tumors can provide a doctor with additional treatment options that can be recommend if a tumor comes back.

These can be surgery for breast removal (or a possible breast-saving surgery) or radiation. Irradiation can be given if it is not possible to obtain the desired margin, as it is thought to reduce the risk of recurrence to 50%. Metastases of Phyllodes tumor are rare, but adequate margins have been obtained. The risk for the spreading of the (Benign Phyllodes, Borderline Phyllodes) tumor beyond the breast is very low for this type of cancer. Malignant Phyllodes tumor can spread to the lungs, bones and other organs. Chemotherapy is in principle not applied only in case of metastasis.

**Cancer risk**

In cases of malignant Malignant Phyllodes tumor there is a (limited) risk of the cancer spreading to the lungs, or bones and no noticeable influence on future breast cancer or cancer outside the chest. However, it is a tumor that is easier to treat and remove than other types.