

## What is involved in a PET scan?

You will be injected with a sugar solution containing a very small amount of a radioactive drug, which collects in any tumors that may be present. You will then rest comfortably for approximately 45 minutes before lying on a machine called a PET scanner for approximately 1 hour. The scan detects the radioactivity and produces a picture or tomograph, which is read by a radiologist or nuclear medicine physician. Results are usually reported to your referring physician within 24 to 48 hours.

### Is a PET scan safe?

Yes. The amount of radioactivity involved is very low and is quickly ejected from the body. The PET process has been used for more than 20 years worldwide on many thousands of patients.

### Are there any side effects that I may experience?

There are no side effects from this procedure, so you should feel fine afterward.

### Are there people who should not have a PET scan?

PET scans are not recommended for pregnant women and nursing mothers.

### How do I prepare for a PET scan?

Your medical team will advise you, but normally you will not eat or drink anything except water for four to six hours before being tested. Drink two glasses of water one hour before being tested and refrain from heavy exercise for 12 hours prior. Continue to take your medications unless instructed otherwise. Lastly, let your medical team know if you are diabetic, as special preparations by you may be necessary.

### How does PET compare to mammograph?

Unlike mammography, which detects only suspicious masses, PET also helps in tumor staging – determining if the cancer is early or advanced – and identifying spread and recurrences.

### Is it possible that I may be asked to have more than one PET scan?

Yes. PET is very useful as a tool in periodically checking to see how effectively a course of therapy is progressing, so your doctor may want to use it to monitor your response to treatment.

### Will Medicare reimburse my PET scan?

Yes. Medicare recently announced they are expanding coverage of PET scans to include breast cancer patients. While coverage will not include PET scans used to make an initial diagnosis of breast cancer; it will cover PET scans used when:

- There is a need for more information about the cancer's location or size ("staging" or "restaging").
- There is some doubt about the existence of breast cancer.
- There is concern that the cancer may have spread ("metastasized").
- The physician wants to monitor the patient's response to treatment to see if the cancer is responding when a change in treatment is being considered.

### Will my insurance company pay for a PET scan?

Most insurance companies do pay for PET imaging and follow the Medicare guidelines stated above.

### Where can I go to get information on PET?

Go to the patient website of the Academy of Molecular Imaging (AMI) at [www.petscan.org](http://www.petscan.org); PETNET Pharmaceuticals website at [www.petnetpharmaceutical.com](http://www.petnetpharmaceutical.com) or call 310-267-2614 for a PET center near you.

she fought breast cancer



Kim Pierce

Positron Emission Tomography

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PN008

# Kim's Story Could Be Your's

*Kim Pierce believes  
a PET scan prevented her  
from becoming a  
cancer statistic.*

Like many women, Kim Pierce had the normal concerns about breast cancer, so she got her annual mammograms and performed self-examinations in between. And, like lots of women, when she discovered a lump in her breast, Kim had the standard tests performed all over again. But when the results came back negative and her physician told her to "wait and watch," it bothered her.

After two years of waiting and watching, Kim's concern had grown to alarm. That's when she heard about PET imaging.

PET is normally not performed to diagnose breast cancer even though it is one of the most accurate tests available to women for whom mammography is not effective—women like Kim with dense fibrous breasts or implants.

When the PET scan showed that the other tests had been wrong and she did have a large tumor in her left breast, Kim was immediately scheduled for surgery. Luckily, because of PET, Kim's cancer was diagnosed before it had spread, and ten years later she is still active as a business administrator in the UCLA School of Medicine.

But why didn't mammography or ultrasound detect Kim's tumor and what role can PET imaging play in the diagnosis and treatment of breast cancer? Please take a few minutes to learn why.

## The Truth About Breast Cancer

The American Cancer Society reports that:

- 1 of 9 women will get it
- This year, 193,706 women will find out they have breast cancer, and 40,600 will die of it
- It's the leading cause of death in women between 40 and 55
- Early detection greatly increases the chances of survival

### Why You Should Know About PET

PET stands for Positron Emission Tomography. PET imaging is a remarkable medical diagnostic technology that can search the body for cancer, Alzheimer's and other neurological diseases and heart disease. Unlike CT or MRI that produce pictures of anatomy, PET shows the biology of the human body.

That's why PET imaging can indicate whether a tumor is benign or malignant, show the deficits in brain activity that typify Alzheimer's or indicate the viability of heart tissue left too long without blood flow. Because PET scans the entire body in a single examination, it can also show if a primary cancer has spread to other parts of the body (metastasis). PET can identify silent cancer and assess the right treatment sooner, increasing one's

chance for survival. In general, PET is 8% to 43 % more accurate than CT or MRI in diagnosing cancer depending on the clinical question (on average PET is about 90% accurate & CT/MRI are 70% accurate). PET changes the treatment in 15% to 50% of cancer patients.

The use of PET imaging is growing at an astounding rate, and as reimbursement coverage expands, more and more hospitals and oncology groups across the country are ordering PET scanners.

## The Power of PET

PET can be used for:

- Discriminating between benign and malignant tumors in women for whom mammography is not effective
- Staging of newly discovered breast cancer
- Detecting distant metastases
- Evaluating tumor response to therapy

### Kim's Questions that You Should Ask:

#### What are the risk factors for breast cancer?

Women over the age of 50 have about 77% of all breast cancer, so age is a factor. Having blood relatives who have had breast cancer is another risk factor. So is heavy drinking of alcohol and obesity and high-fat diets.

Lesser risk factors include having been treated for other cancers, having had early menstrual periods or later menopause, not having had children, and, possibly, prolonged hormone treatment.

#### If I can feel a lump, why can't mammography pick it up?

This was Kim's primary question and the reason she asked for a PET scan. The search for improved diagnosis and staging of breast cancer has brought some success, mainly through early mammographic detection of disease. However, mammography misses a considerable number of cancers and results in unnecessary biopsy of many benign tumors. Mammography is also not effective for women with dense or fibrous breasts

#### At what age should I become concerned about breast cancer?

Although advancing age is a primary risk factor, every woman should perform self-examinations beginning in the teen years. If you have questions or concerns, ask your doctor.

#### When should I see a specialist?

Any time you or your doctor think you may have breast cancer, you should see a specialist. If you have anxieties or multiple risk factors, a specialist may help ease your mind or find a cancer before it's too advanced. Similarly, feel free to ask a second opinion about a diagnosis or suggested treatment.

#### What if my doctor won't refer?

Seek a second opinion or have your physician speak with an experienced PET center physician to determine if PET will be beneficial in your case. Arm yourself with information since you may need to convince someone that you really want a PET scan.

