

## Information about PET/CT

**P**ET/CT scanning joins two scans into one image. PET (positron emission tomography) is a nuclear medicine imaging technique that produces images that provide information about cell function. An FDG-PET scan uses a small amount of a radioactive sugar substance called FDG to show differences between healthy tissue and diseased tissue. A CT (computed tomography) scan uses special x-ray equipment to take many images from different angles around the body. A computer then combines these views and produces an image that shows a cross-section of the area being looked at. The entire FDG-PET/CT scan procedure takes about two hours.

### Research Sponsorship

This research study is run by the American College of Radiology Imaging Network (ACRIN), a national cancer research organization sponsored and funded by the National Cancer Institute (NCI). The goal of ACRIN is to increase the length and quality of life for cancer patients by conducting studies to evaluate medical imaging procedures.

*“As different therapies are becoming available for treatment of lung cancer, it becomes more important to discover whether a treatment is working. Our hope is that FDG-PET can help individualize cancer treatment and improve the prognosis for these patients.”*

**Wolfgang Weber, MD**  
ACRIN 6678 Principal Investigator

## Learning About FDG-PET/CT

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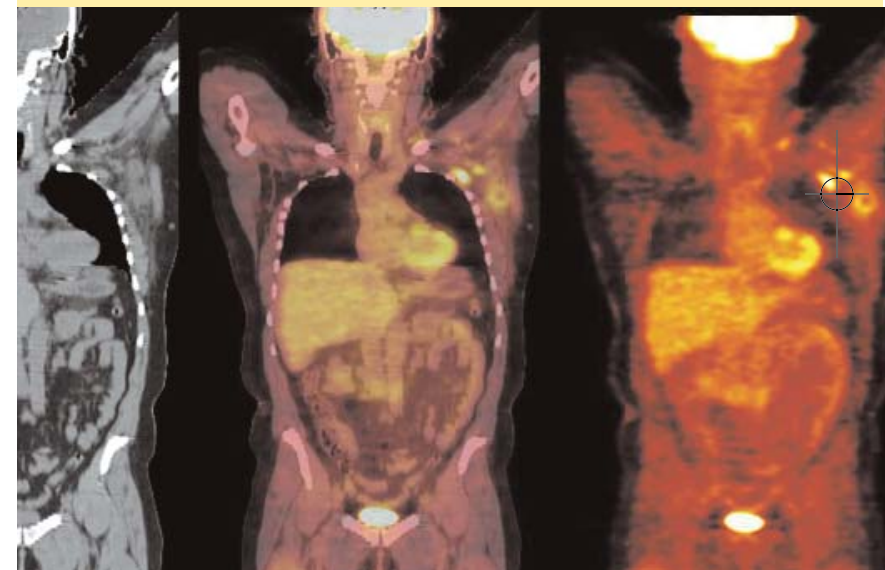
### For Information, Contact:

[www.acrin.org](http://www.acrin.org)

## Learning About FDG-PET/CT:

Can FDG-PET/CT Provide Helpful Information About Non-small Cell Lung Cancer Treatment?

### PET Scan Images



**ACRIN**<sup>™</sup>  
AMERICAN COLLEGE OF  
RADIOLOGY  
IMAGING NETWORK

Funded by the National Cancer Institute  
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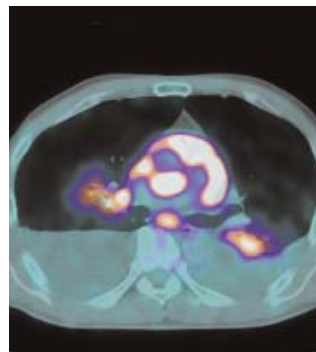
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## Study Information

If you have non-small cell lung cancer (NSCLC), your doctor may talk to you about joining this study to evaluate a type of scan called FDG-PET/CT. Doctors want to learn whether FDG-PET/CT can provide information early during lung cancer treatment about how well the chemotherapy is working to control the cancer. Learning more about FDG-PET may help doctors make better treatment decisions in the future.

Doctors want to know as soon as possible whether patients are getting better from a specific chemotherapy treatment. If this research study proves that doctors can find out early when a patient is not getting better from a treatment, they will be able to make other treatment plans so the patient does not experience unnecessary side effects and can potentially benefit from different treatments.

If you decide to join this study, you will have either two or three FDG-PET/CT scans as part of being in this study. The FDG-PET/CT scans are not routinely performed to follow-up lung cancer treatment. The results of the FDG-PET/CT scans done early in your treatment will not be given to your regular doctor unless something serious is found on the CT portion of the scan.



An FDG-PET/CT Lung Image

## Frequently Asked Questions

### Who can join this study?

You may be eligible for this study if:

- You have non-small cell lung cancer:
  - Groups A and B: Stages IIIB or IV
  - Groups C: Stages IIIA, IIIB, or IV
- You are at least 18 years old
- If female, you are not pregnant, and using birth control if sexually active
- You are able to undergo PET imaging
- Your tumor is the size specified in the study

### Who cannot join this study?

You cannot join this study if:

- You have had radiotherapy, lung surgery, or chemotherapy in the past three months
- You have poorly controlled diabetes or signs of a type of pneumonia called post-obstructive pneumonia
- You have had another kind of cancer (except some kinds of skin cancer or small cancers that have not spread) in the past three years

### What if I choose to join this study?

Your doctor or a nurse will talk with you about joining the study. You will be given information in an “informed consent form” that will tell you about all the study procedures and the possible risks and benefits. If you decide to join this study, you will be in one of three study groups.

You and your doctor can decide what group (Group A, B, or C) can fit your schedule and treatment planned.

Number of FDG-PET scans for:

- **Group A:** 3 scans
- **Group B:** 2 or 3 scans
- **Group C:** 2 scans

**Study participants in Group A** will have two FDG-PET/CT scans before starting cancer treatment. The comparison of two scans will help doctors learn how similar the results are from the two different FDG-PET/CT scans before treatment begins. Also, participants in Group A will have one scan after the first chemotherapy cycle.

**Study participants in the Group B** will have one FDG-PET/CT scan before starting chemotherapy and one scan after the first cycle of chemotherapy. If possible, a third FDG PET/CT scan will be done after the second cycle of chemotherapy.

The information from the scans in Groups A and B will help doctors learn about the best time to evaluate the cancer treatment with FDG-PET/CT.

**Study participants in Group C** will have two FDG-PET/CT scans before starting cancer treatment. The comparison of these two scans will help doctors learn how similar the results are from the two different FDG-PET/CT scans before treatment begins.

### How long will I be on the study?

Depending on the group, once you enroll, you could be in the study from one to 12 months.

### Will it cost me anything to be in this study?

ACRIN and your insurance carrier will assume responsibility for the costs of any study-related examinations and treatments. Study participants and their health insurance company may be billed for the costs of routine medical care (care that would have happened even if you were not in the study). Study participants will be responsible for any insurance co-payments and deductibles as required by the insurance plan.