

FIDUCIAL MARKERS

What are Fiducials?

- A fiducial (fih-DOO-shul) is a small piece of gold sometimes referred to as a seed or marker. It is about the size of a grain of rice and is implanted near a soft tissue tumor to act as a marker to define a lesion(s) location with sub-millimeter precision. It can be seen on an x-ray and acts as a tracking device for the treatment machine to follow. In most situations, approximately 1-4 fiducials are placed in or near the area to be treated.

When are Fiducials placed?

- Fiducial placement is usually performed 2-3 weeks prior to your CyberKnife treatment.

Who places Fiducials?

- Fiducials are placed by either a surgeon, pulmonary physician, radiation oncologist or interventional radiologist who have received special training for this procedure.

How are Fiducials placed?

- In most scenarios, fiducial placement is done as an outpatient service either in Procedure Center or the Radiology Department and you are able to return home in 4 to 8 hours. Depending on the initial clinical presentation, the fiducial markers may also be placed at the time of the original biopsy if the suspicion is high that potential CyberKnife treatment is anticipated.
- Your physician will prescribe the best fiducial placement for you and the CyberKnife staff will make all the arrangements.
- Depending on the exact fiducial placement procedure used, you may not be able to eat or drink for up to 6-24 hours prior to the fiducial placement procedure.
- Typically a local anesthetic, prophylactic pain medication and intravenous sedation will be administered during the procedure.
- A designated driver will be needed to drive you home after the procedure.
- Your pre-treatment set up and imaging will be scheduled about one week after the fiducial placement in order to allow the fiducials to settle into a stable position.

Special Precautions:

- You will need to stop any blood-thinning medication including Coumadin (Warfarin) and Plavix at least 5 days prior to the fiducial placement.
- You will need to stop over-the-counter blood-thinning medication including Aspirin, Ibuprofen (Motrin, Advil) and Naproxen (Aleve) at least 7 days prior to the fiducial placement.
- Other medications such as chemotherapy may be held for a period of time prior to the fiducial placement and/or CyberKnife treatment.
- Once implanted, fiducials remain implanted permanently. You cannot feel them. They are not magnetic or radioactive. They will not cause any future health problems; will not stop you from going through airport security; or prevent you from having a future MRI scan if needed.
- Lung Lesions: The specific fiducials placement procedure is determined by the location of the lesion to be treated. There is a chance that during the insertion of the fiducials, you may experience a collapsed lung (called a pneumothorax, pronounced noo-moh-THOR-ax). If this happens, a small tube may be placed between your ribs to help the lung to re-expand. A collapsed lung may make you feel short of breath and you will be put on oxygen if you need it. You may need to stay overnight in the hospital if a lung collapse occurs. If no pneumothorax occurs, you will be discharged the same day.