



PET CT AXUMIN

Approval: K. Shamlou, MD

rev:2

7/15/2026

AXUMIN (F¹⁸-FLUCICLOVINE) PET/CT SCAN

Radiopharmaceutical: F¹⁸-Fluciclovine (Axumin)

Dose: 10 mCi

T ½: 110 min

Energy: 511 keV

CPT: 78815 (skull to mid-thigh)

Indications

Clinical indications for Axumin scan include, but are not limited to:

- Prostate cancer follow-up. Clinical concern for residual or recurrent disease in previously treated prostate cancer

Axumin scans are NOT approved for initial staging of prostate cancer.

Radiopharmaceutical

- 10 mCi F¹⁸-Fluciclovine (Axumin) administered as an intravenous bolus injection.

Patient Instructions

- Advise the patient to avoid any significant exercise for at least one day prior to PET imaging.
- Advise patients not to eat or drink for at least 4 hours (other than small amounts of water for taking medications) prior to administration of Axumin.
- Total time at facility is 1-1.5 hours
- Upon scheduling, if the patient has any pertinent studies, please instruct either the patient or the ordering physician's office to make them available for correlation.

EQUIPMENT

- Philips Gemini TF 64 PET/CT Scanner. Philips Vereos

Procedure

- Have the patient drink one 8 oz glass of water upon arrival to the facility.
- Place an intravenous catheter 22 gauge or larger in the patient's **RIGHT** arm. Injection into the right arm is preferred as stasis in the left axillary vein may be misinterpreted as a metastatic lymph node (Virchow's node). If the right arm cannot be used, beware of the possibility of image interpretation error and document reason on patient's history.
- It is preferred that the patient NOT void prior to imaging, if the patient is unable to hold their urine document on the paperwork that the patient voided prior to imaging.
- All metal must be removed from the patient prior to scanning, including (but not limited to) glasses, dentures, earrings, rings, and watches if arms are left down. Change pants if they have a zipper or metal fasteners.

Acquisition Protocol



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- Position the patient on the scanner, arms overhead is the preferred method of imaging, if patient is unable to keep his arms up secure them by the sides to minimize patient motion.
- Move the patient into the scanner until the innermost positioning laser is centered on the patient's forehead.
- Enter proper and accurate patient data on acquisition computer
- Perform CT survew (scout)
- Set parameters for CT, PET and Lung window. (with the femoral heads centered within the first PET bed position)
- Enter the scan room, inject Fluciclovine (Axumin) as intravenous bolus and flush with at least 20 mL of 0.9% sodium chloride solution and remove IV if possible. Immediately after injection a second technologist takes the radioactive syringe to the hot lab and measures the residual activity for numbers to be entered into CT console prior to PET imaging. (This should be done in a timely manner as imaging needs to start quickly)
- Perform Low Dose CT Scan for attenuation correction and follow prompts to move patient into PET gantry to perform PET scan.
- This should put the beginning of the PET data acquisition at 3-5 min post injection.
- When scanning is complete follow prompts to 'End Study'.

CT Parameters

Scout:

Length	1200mm
kV	120
Ma	30

Lung:

Slice Thickness	4 mm
Increment	4 mm
FOV	350 mm

Low Dose CT scan:

Slice Thickness	4 mm
Increment	4 mm
kV	120
mAs/slice (mA)	50-175
Collimation	64 x 0.625
Pitch	0.703 .75 rotation
Dose Management	DoseRight Index 15 Z and 3D modulation ON
Filter	Sharp (C)
FOV	700 mm

PET:

First 3 bed positions through pelvis	5 min/bed
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All remaining bed positions

2 min/bed 130

Processing

1. From Directory screen on PET/CT Host, highlight the patient's name you wish to begin processing.
2. Highlight the following image sets:
 - WB_CTAC PET
 - WB_NAC PET
 - Low Dose Sharp
3. Left click on the FUSION VIEWER button in the upper left corner of the Directory screen. This will take a few moments to open the images.
4. Ensure that all image sets are open on the proper image layout:

AXIAL AC	AXIAL CT	FUSED AXIAL	AXIAL NOAC
COR AC	COR CT	FUSED COR	COR NOAC
SAG AC	SAG CT	FUSED SAG	COR ROT VOL

5. Left click on STOP button on MOVIE box below COR ROT VOL, and then left click on the X to remove this box.
6. Adjust the intensity of the COR ROT VOL image by holding down the scroll button I the middle of mouse and dragging down to brighten and push up to decrease intensity. You want to see a small amount of the skin in the background of image.
7. Adjust the intensity of the NOAC images by holding scroll button down and increasing or decreasing intensity accordingly.
8. **DO NOT** alpha blend Axumin images.
9. Right click again on FUSED COR image towards the top of the head and write down the first slice number that has data in all sets. (usually 3 or 4 images into the AXIAL AC data set)
10. Scroll through the AXIAL AC image until you get to end of images (usually just 2 to 3 images from each end of the AXIAL AC images). Write down the slice numbers from each end. Make sure that the AXIAL start and end numbers match for the PET and the CT data.
11. Scroll through COR AC until no activity is seen on each end and write the slice numbers down. Do the same for the SAG AC images.
12. Left click on the arrow next to the blue box and select ALL ANNOTATION OFF.
13. Left click on the triangulation tool on the left side of screen to turn OFF triangulation.
14. Left click on COR ROT VOL, then left click on the SAVE IMAGES AS icon (pencil writing on a disk).
15. In the description box type COR ROT VOL. Set Start Offset to 1, and End Offset to 30.
16. Left click on OK.
17. Left click on AXIAL AC, and then SAVE IMAGE AS.
18. In the Description box type AXIAL AC. Set Start Offset to smaller number and End Offset to larger one. Left click in the box next to ACTIVITY CONCENTRATION.
19. Do the same for the COR AC and the SAG AC images

20. Left click on AXIAL NOAC image, and then SAVE IMAGES AS.
21. In the Description box type AXIAL NOAC, and set Start Offset to smaller number for axial images and End Offset to larger number.
22. Left click on OK.
23. Do the same for COR NOAC, AXIAL CT, and the COR CT images.
24. Left click on OK.
25. Left click on the FUSED AXIAL images, and then SAVE IMAGES AS.
26. In the Description box type FUSED AXIAL SMART RGB. Change DATA in top right drop-down box to SECONDARY CAPTURE (SF). Set Start Offset to smaller number, and the End Offset to the larger one.
27. Left click on OK.
28. Do the same for the FUSED COR SMART RGB images and the FUSED SAG SMART IMAGES.
29. Once all of the images are saved, return to the DIRECTORY page, and left click on the REFRESH button at the top right of the screen. Verify that the AXIAL AC, AXIAL CT, AXIAL NOAC, and FUSED AXIAL SMART RGB saved images have the same number of images by looking at the # IMAGES column.
30. Do the same for the COR AC, COR CT, COR NOAC, and FUSED COR SMART RGB images.
31. Next, select the AXIAL AC, AXIAL NOAC, COR AC, COR NOAC, COR ROT VOL, and SAG AC images and the left click on COPY TO button at the upper left corner of screen. This will open a new window.
32. Highlight FUJIPACS at the right of the screen. Ensure that no other icons are highlighted. Left click on OK.
33. Do the same for the AXIAL CT, COR CT, CT SCOUT, DOSE INFO, FUSED AXIAL SMART RGB, FUSED COR SMART RGB, FUSED SAG SMART RGB and LUNG images.
34. Ensure all pertinent patient history is typed under 'technologist notes' being sure to include:
 - Dose (of FDG)
 - Scan time (in seconds) per bed position
 - Diagnosis
 - History and symptoms
 - Dates of any radiation therapy
 - Dates of any chemotherapy
 - Date of last dose of any granulocyte-stimulating factor (GSF), i.e. Neulasta or Neupogen.
 - Surgical history
 - Any prior studies pertinent to this examination.
35. VIEW images for accuracy.
36. Ensure that all image sets match in number of slices (i.e. axial images all have same number of slices).
37. Ensure that the COR ROT VOL has 30 images.
38. Verify that all image sets are complete with no slices missing.
39. Place online for Radiologists' interpretation.