Post-treatment Follow-up of Prostate Cancer

Men who have been treated for prostate cancer (https://www.radiologyinfo.org/en/info/prostate-cancer) need regular prostate-specific antigen (PSA) blood tests to check if the cancer has come back. High PSA is a strong sign the cancer may be back but does not indicate if it is local or has spread outside of the prostate area. The recommended imaging test depends on the initial cancer treatment:

- Surgery to remove the prostate (radical prostatectomy)
- Radiation to the prostate and pelvic area
- Hormone therapy, chemotherapy, or immunotherapy (systematic therapies)

Specialized PET/CT (https://www.radiologyinfo.org/en/info/pet) scanning is appropriate for all three scenarios. In addition, each case has differences in follow-up tests.

Radical prostatectomy removes the prostate and some surrounding tissue. Because prostate cancer spreads slowly, if the cancer comes back, it will likely be in nearby tissue. MRI (https://www.radiologyinfo.org/en/info/mr_prostate) with intravenous contrast is usually the right test to find the cancer.

Radiation kills tumor cells to stop them from growing. If the cancer comes back, it will likely come back to the prostate. In addition to the PET/CT, a diagnostic MRI and MRI or transrectal ultrasound–guided biopsy of the prostate (https://www.radiologyinfo.org/en/info/prostate-biopsy) is appropriate.

Systematic therapies are typically used in more advanced cases, often to shrink the cancer so that it can be surgically removed. If the cancer comes back, it is likely to have spread to the bones and lymph nodes. A whole-body bone scan (https://www.radiologyinfo.org/en/info/bone-scan) and CT of the abdomen and pelvis (https://www.radiologyinfo.org/en/info/abdominct) with intravenous contrast can be done in place of the specialized PET/CT scan.

See the Prostate Cancer Treatment page (https://www.radiologyinfo.org/en/info/pros_cancer) for more information.

— By Frank J. Rybicki Jr. and Jennifer W. Uyeda, MD. This information originally appeared in the *Journal of the American College of Radiology*.

Disclaimer

This information is copied from the RadiologyInfo Web site (http://www.radiologyinfo.org) which is dedicated to providing the highest quality information. To ensure that, each section is reviewed by a physician with expertise in the area presented. All information contained in the Web site is further reviewed by an ACR (American College of Radiology) - RSNA (Radiological Society of North America) committee, comprising physicians with expertise in several radiologic areas.

However, it is not possible to assure that this Web site contains complete, up-to-date information on any particular subject. Therefore, ACR and RSNA make no representations or warranties about the suitability of this information for use for any particular purpose. All information is provided "as is" without express or implied warranty.

Please visit the RadiologyInfo Web site at **http://www.radiologyinfo.org** to view or download the latest information.

Note: Images may be shown for illustrative purposes. Do not attempt to draw conclusions or make diagnoses by comparing these images to other medical images, particularly your own. Only qualified physicians should interpret images; the radiologist is the physician expert trained in medical imaging.

Copyright

This material is copyrighted by either the Radiological Society of North America (RSNA), 820 Jorie Boulevard, Oak Brook, IL 60523-2251 or the American College of Radiology (ACR), 1891 Preston White Drive, Reston, VA 20191-4397. Commercial reproduction or multiple distribution by any traditional or electronically based reproduction/publication method is prohibited.

Copyright ® 2026 Radiological Society of North America, Inc.