Staging and Follow-up of Ovarian Cancer

Ovarian cancer is a cancer that begins in the ovary or the adjacent fallopian tube and can spread (metastasize) to the peritoneum (a thin membrane that lines the abdominopelvic cavity), liver, spleen, lymph nodes, and lungs. Imaging tests are used to diagnose and stage ovarian cancer both before and after initial treatment. Staging helps plan treatment. Treatment options include surgical removal of the cancer, chemotherapy, and radiation therapy. Chemotherapy and radiation may be used before surgery to hopefully shrink tumors enough for surgical removal. Monitoring for recurrence includes laboratory test (high CA-125 levels) or a clinical examination.

Contrast-enhanced CT of the pelvis (https://www.radiologyinfo.org/en/info/abdominct) , abdomen, and sometimes the chest is the most appropriate imaging technique for diagnosing and staging initial and recurrent ovarian cancer. CT detects local and metastatic tumors and can be used for guided biopsy to diagnose suspicious masses. CT may not find small tumors, especially in the intestines, peritoneum, and lymph nodes.

A PET/CT scan (https://www.radiologyinfo.org/en/info/pet) using fluorine-18-2-fluoro-2-deoxy-D-glucose is used for staging cancer that has metastasized or reoccurred. PET scans are not appropriate for initial diagnosis because they may give false-negative results. PET scans detect metabolic activity (tumors have high metabolism) and help locate microscopic tumors not found on routine CT.

Contrast-enhanced MRI (https://www.radiologyinfo.org/en/info/bodymr) is not used often in ovarian cancer imaging; MRI is a long procedure; if the individual moves the image is not accurate. MRI is appropriate for inconclusive CT scans (borderline tumor findings) and helps preserve fertility (no radiation exposure).

If kidney disease prevents contrast-enhanced imaging, both CT and MRI without contrast may be appropriate.

For more information, see the Ovarian Cancer (https://www.radiologyinfo.org/en/info/ovarian-cancer) page.

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