

**Pretreatment Evaluation and Follow-Up of Endometrial Cancer
EVIDENCE TABLE**

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
1. Siegel R, Naishadham D, Jemal A. Cancer statistics, 2012. <i>CA Cancer J Clin</i> 2012; 62(1):10-29.	Review/Other-Tx	N/A	Cancer statistics in the United States is reviewed.	A total of 1,638,910 new cancer cases and 577,190 deaths from cancer are projected to occur in the United States in 2012.	4
2. Tavassoli FA, Devilee P. (Eds) <i>World Health Organization Classification of Tumours. Pathology and genetics of tumours of the breast and female genital organs</i> . Lyon: IARC Press; 2003.	Review/Other-Dx	N/A	Book chapter.	N/A	4
3. Pecorelli S. Revised FIGO staging for carcinoma of the vulva, cervix, and endometrium. <i>Int J Gynaecol Obstet</i> 2009; 105(2):103-104.	Review/Other-Dx	N/A	Revised FIGO staging for carcinoma of the vulva, cervix, and endometrium.	N/A	4
4. Hirahatake K, Hareyama H, Sakuragi N, Nishiya M, Makinoda S, Fujimoto S. A clinical and pathologic study on para-aortic lymph node metastasis in endometrial carcinoma. <i>J Surg Oncol</i> 1997; 65(2):82-87.	Review/Other-Tx	200 patients	To evaluate the correlation between PAN metastasis and histopathologic findings and to assess the clinical utility of identifying PAN metastasis of endometrial carcinoma.	PAN metastasis was seen in 18 (9.0%) and PLN metastasis in 40 (20.0%). The incidence of PAN metastasis according to clinical stages Ia, Ib, II, and III were 2.5%, 8.5%, 15.7%, and 33.3%, respectively. The incidence of metastasis was significantly higher in stage II than in stage Ia (P<0.05), and in stage III than in stage Ia (P<0.01). PAN metastasis occurred significantly more frequently in the first of each of the following groups: invasion of >1/2 of the myometrium (15.7%) vs invasion of <1/2 of the myometrium (3.6%) (P<0.01), the group with cervical invasion (23.5%) vs the group without (4.0%) (P<0.0001), the group with lymph-vascular space involvement (17.2%) vs the group without (1.0%) (P<0.0005), and PLN-metastasis-positive group (40.0%) vs the negative group (1.3%) (P<0.0001). Multivariate analysis showed a significant correlation between PAN and PLN metastases (P<0.0005). Positive PAN metastasis is not related to multiple PLN metastasis (bilateral PLN metastasis and the number of PLN metastatic groups). However, a correlation was seen between PAN metastasis and common iliac node metastasis. The prognosis was significantly poorer (P<0.05) for patients with both PLN and PAN metastases than for those with PLN metastasis alone.	4

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5. Chi DS, Barakat RR, Palayekar MJ, et al. The incidence of pelvic lymph node metastasis by FIGO staging for patients with adequately surgically staged endometrial adenocarcinoma of endometrioid histology. <i>Int J Gynecol Cancer</i> 2008; 18(2):269-273.	Observational-Tx	349 patients	To determine the incidence of PLN metastasis in endometrial cancer based on tumor grade and myometrial invasion as per the current FIGO staging system.	The incidence of PLN metastasis in relation to tumor grade and depth of myometrial invasion (none, inner half, and outer half) was as follows: grade 1: 0%, 0%, and 0%, respectively; grade 2: 4%, 10%, and 17%, respectively; and grade 3: 0%, 7%, and 28%, respectively.	3
6. Piver MS, Lele SB, Barlow JJ, Blumenson L. Paraaortic lymph node evaluation in stage I endometrial carcinoma. <i>Obstet Gynecol</i> 1982; 59(1):97-100.	Review/Other-Tx	41 women	To examine PAN in stage I endometrial carcinoma.	Surgical staging by para-aortic lymphadenectomy or lymph node biopsy is recommended at the time of primary surgery for early endometrial adenocarcinoma because of the high incidence of para-aortic node metastasis with grade 3 tumors or deep myometrial invasion.	4
7. Mariani A, Dowdy SC, Cliby WA, et al. Prospective assessment of lymphatic dissemination in endometrial cancer: a paradigm shift in surgical staging. <i>Gynecol Oncol</i> 2008; 109(1):11-18.	Observational-Tx	422 consecutive patients	To prospectively assess pelvic and PAN metastases in endometrial cancer with lymphatic dissemination, emphasizing the examination of para-aortic metastases relative to the IMA.	67% of patients with lymphatic dissemination had PAN metastases. 77% of patients with para-aortic node involvement had metastases above the IMA. Nodes in the ipsilateral para-aortic area below the IMA and ipsilateral common iliac basin were declared negative in 60% and 71%. The high rate of lymphatic metastasis above the IMA indicates the need for systematic pelvic and para-aortic lymphadenectomy (vs sampling) up to the renal vessels. The latter should include consideration of excision of the gonadal veins. Lymphadenectomy does not benefit patients with grade 1 and 2 endometrioid lesions with myometrial invasion \leq 50% and primary tumor diameter \leq 2 cm.	2
8. Kitchener H, Swart AM, Qian Q, Amos C, Parmar MK. Efficacy of systematic pelvic lymphadenectomy in endometrial cancer (MRC ASTEC trial): a randomised study. <i>Lancet</i> 2009; 373(9658):125-136.	Experimental-Tx	1,408 patients; 85 different centers	To investigate whether pelvic lymphadenectomy could improve survival of women with endometrial cancer.	The hazard ratio for overall survival was 1.04 and for recurrence-free survival was 1.25. The results show no evidence of benefit in terms of overall or recurrence-free survival for pelvic lymphadenectomy in women with early endometrial cancer. Pelvic lymphadenectomy cannot be recommended as routine procedure for therapeutic purposes outside of clinical trials.	1

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9. Benedetti Panici P, Basile S, Maneschi F, et al. Systematic pelvic lymphadenectomy vs. no lymphadenectomy in early-stage endometrial carcinoma: randomized clinical trial. <i>J Natl Cancer Inst</i> 2008; 100(23):1707-1716.	Experimental-Tx	514 patients randomized to pelvic systematic lymphadenectomy (n=264) or no lymphadenectomy (n=250)	Randomized clinical trial was performed to determine whether the addition of pelvic systematic lymphadenectomy to standard hysterectomy with bilateral salpingo-oophorectomy improves overall and disease-free survival.	The median number of lymph nodes removed was 30 (interquartile range = 22-42) in the pelvic systematic lymphadenectomy arm and 0 (interquartile range = 0-0) in the no-lymphadenectomy arm (P<.001). Both early and late postoperative complications occurred statistically significantly more frequently in patients who had received pelvic systematic lymphadenectomy (81 patients in the lymphadenectomy arm and 34 patients in the no-lymphadenectomy arm, P=.001). Pelvic systematic lymphadenectomy improved surgical staging as statistically significantly more patients with lymph node metastases were found in the lymphadenectomy arm than in the no-lymphadenectomy arm (13.3% vs 3.2%, difference = 10.1%, 95% CI = 5.3% to 14.9%, P<.001). At a median follow-up of 49 months, 78 events (ie, recurrence or death) had been observed and 53 patients had died. The unadjusted risks for first event and death were similar between the two arms (hazard ratio for first event = 1.10, 95% CI = 0.70 to 1.71, P=.68, and hazard ratio for death = 1.20, 95% CI = 0.70 to 2.07, P=.50). The 5-year disease-free and overall survival rates in an intention-to-treat analysis were similar between arms (81.0% and 85.9% in the lymphadenectomy arm and 81.7% and 90.0% in the no-lymphadenectomy arm, respectively).	1
10. Shepherd JH. Revised FIGO staging for gynaecological cancer. <i>Br J Obstet Gynaecol</i> 1989; 96(8):889-892.	Review/Other-Tx	N/A	Revised FIGO staging for gynaecological cancer.	N/A	4

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11. Sohaib SA, Houghton SL, Meroni R, Rockall AG, Blake P, Reznik RH. Recurrent endometrial cancer: patterns of recurrent disease and assessment of prognosis. <i>Clin Radiol</i> 2007; 62(1):28-34; discussion 35-26.	Review/Other-Tx	86 patients	To evaluate patterns of disease and identify factors predicting outcome in patients presenting with recurrent endometrial adenocarcinoma following primary surgery.	Following primary surgery recurrent disease occurred within 2 years in 64% and within 3 years in 87%. Relapse was seen within lymph nodes in 41 (46%), the vagina in 36 (42%) the peritoneum in 24 (28%) and the lung in 21 (24%). Unusual sites of disease included spleen, pancreas, rectum, muscle and brain. Univariate survival analysis showed the factors significant for poor outcome were: multiple sites of disease, liver and splenic disease, haematogenous, peritoneal and nodal spread, poorly differentiated tumor, and early relapse. The presence of disease within the vagina, bladder or lung was not associated with poor prognosis. Multivariate analysis identified multiple sites of disease, liver and splenic metastases to be independent predictors of poor outcome.	4
12. DelMaschio A, Vanzulli A, Sironi S, et al. Estimating the depth of myometrial involvement by endometrial carcinoma: efficacy of transvaginal sonography vs MR imaging. <i>AJR</i> 1993; 160(3):533-538.	Observational-Dx	42 consecutive patients	Prospective study to compare TVUS with MRI for use in detecting the depth of myometrial involvement by endometrial carcinoma. Histologic examination results of the surgical specimen were considered the gold standard.	Overall staging based on US was correct with respect to histologic staging in 29 cases (69%; 95% CI, 52%-81%). Staging based on MRI findings was correct with respect to histologic staging in 31 cases (74%; 95% CI, 58%-85%). According to the authors, there is no difference in the staging diagnoses of TVUS and MRI. Also, concordance with histologic staging diagnoses and sensitivity and specificity indexes did not show statistical differences between the two techniques.	2
13. Kim SH, Kim HD, Song YS, Kang SB, Lee HP. Detection of deep myometrial invasion in endometrial carcinoma: comparison of transvaginal ultrasound, CT, and MRI. <i>J Comput Assist Tomogr</i> 1995; 19(5):766-772.	Observational-Dx	26 patients	To compare TVUS with MRI for use in detecting the depth of myometrial involvement by endometrial carcinoma. Histologic examination results of the surgical specimen were considered the gold standard.	The accuracy, sensitivity, specificity of TVUS was 69%, 50%, 81% respectively. The accuracy, sensitivity, specificity of CT was 61%, 40%, 75% respectively. The accuracy, sensitivity, specificity of MRI was 89%, 90%, 88%, respectively. Study recommends MRI instead of CT or TVUS for the evaluation of the depth of myometrial invasion in endometrial carcinoma.	3

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14. Kochli OR, Bajka M, Schar G, Schmidt D, Haller U. [Measuring the depth of invasion of endometrial carcinoma. Preoperative transvaginal ultrasound and correlation with intraoperative and histopathologic findings--a prospective study]. <i>Ultraschall Med</i> 1995; 16(1):8-11.	Observational-Dx	25 patients	Prospective study to determine the correlation of the assessment of depth of invasion in endometrial cancer by TVUS, and by intraoperative assessment with histopathology.	TVUS and the intraoperative assessment of depth of invasion had an accuracy of 80% if correlated with the definitive histopathology. The result of the frozen section was correct in all analyzed cases. The authors also evaluated the wrong assessments in the US group and in those patients who were assessed intraoperatively. In all these cases there were additional pathological findings, such as polyps, fibroids and uterus retroflexus.	3
15. Prompeler HJ, Madjar H, du Bois A, et al. Transvaginal sonography of myometrial invasion depth in endometrial cancer. <i>Acta Obstet Gynecol Scand</i> 1994; 73(4):343-346.	Observational-Dx	96 patients	To assess the diagnostic accuracy of TVUS for deep myometrial invasion. The myometrial invasion depth (>50% or <50%) was measured preoperatively using TVUS. Sonographic results were compared to the histopathological findings.	Sensitivity of 93% for invasion depths >50%. Predictive value of an invasion depth <50% was also 93%. Diagnostic accuracy was 81%. TVUS is a valuable, noninvasive diagnostic method for patients with endometrial cancer.	4
16. Teefey SA, Stahl JA, Middleton WD, et al. Local staging of endometrial carcinoma: comparison of transvaginal and intraoperative sonography and gross visual inspection. <i>AJR</i> 1996; 166(3):547-552.	Observational-Dx	16 patients	To prospectively compare TVUS, intraoperative sonography, and GVI of the uterus with the histopathologic findings in patients with endometrioid adenocarcinoma, and to compare the accuracies of TVUS, intraoperative sonography, and GVI in staging of the tumor.	Of the 16 uterine specimens, 8 had myometrial invasion, with 13 separate sites of tumor invasion. Intraoperative sonography correctly identified the location and depth (+/- 10% of the histologic depth) of tumor invasion at 4 (31%) sites, and TVUS at one (8%) site. TVUS and intraoperative sonography overestimated myometrial invasion due to adenomyosis, bulky intraluminal tumor, and lymphovascular invasion. When myometrial invasion was defined as absent, ≤50%, or >50%, TVUS was correct in 60% of cases, intraoperative sonography in 56%, and GVI in 53%. When myometrial invasion was defined as ≤50% or >50%, TVUS was correct in 93% of cases, IOS in 81%, and GVI in 80%.	2

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17. Arko D, Takac I. High frequency transvaginal ultrasonography in preoperative assessment of myometrial invasion in endometrial cancer. <i>J Ultrasound Med</i> 2000; 19(9):639-643.	Observational-Dx	120 patients	To assess the depth of myometrial invasion by endometrial cancer using preoperative 5-9 MHz, high frequency TVUS as compared with postoperative assessment using histopathologic examination.	Of 106 (88.3%) patients with proven myometrial invasion, 98 cases (92.5%) were revealed by US. In 109 cases (90.8%) invasion was believed to be present on TVUS. Histologically proven invasion that correlated with US was shown in 88 patients (73.3%). In 32 patients (26.7%) US could not correctly predict the depth of myometrial invasion. The depth of invasion was underestimated in 10 (8.3%) cases and overestimated in 22 (18.3%) cases. Preoperative assessment of invasion of the uterine wall by TVUS had an accuracy of 73%.	3
18. Savelli L, Ceccarini M, Ludovisi M, et al. Preoperative local staging of endometrial cancer: transvaginal sonography vs. magnetic resonance imaging. <i>Ultrasound Obstet Gynecol</i> 2008; 31(5):560-566.	Observational-Dx	74 women	Prospective study to compare the accuracy of TVUS and MRI in the preoperative staging of endometrial carcinoma.	Sensitivity, specificity, PPV, NPV, and accuracy for TVUS in the evaluation of myometrial infiltration were 84%, 83%, 79%, 88% and 84%, respectively. Sensitivity, specificity, PPV, NPV, and accuracy for MRI were 84%, 81%, 77%, 87% and 82% respectively. Sensitivity, specificity, PPV, NPV, and accuracy for detection of cervical involvement were 93%, 92%, 72%, 98% and 92% for TVUS; and 79%, 87%, 58%, 95% and 85% for MRI.	2
19. Kanat-Pektas M, Gungor T, Mollamahmutoglu L. The evaluation of endometrial tumors by transvaginal and Doppler ultrasonography. <i>Arch Gynecol Obstet</i> 2008; 277(6):495-499.	Observational-Dx	120 women	To examine the relation between uterine histopathologic alterations and US findings in women diagnosed with endometrial cancer.	Diagnostic accuracy, sensitivity, specificity, PPV and NPV of TVUS was 69%, 66%, 72%, 60% and 75% respectively. TVUS has moderate sensitivity and moderate-to-high specificity which limit its use. However, endometrial thickness, myometrial invasion and resistance index values determined by Doppler US can indicate the tumor grade allowing individualized treatment to be planned for endometrial tumors.	3

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20. Yamashita Y, Mizutani H, Torashima M, et al. Assessment of myometrial invasion by endometrial carcinoma: transvaginal sonography vs contrast-enhanced MR imaging. <i>AJR</i> 1993; 161(3):595-599.	Observational-Dx	40 patients	Prospective study to compare TVUS with CE-MRI to determine preoperatively the depth of myometrial invasion in patients with early-stage endometrial carcinoma.	Findings on TVUS were accurate in 27/40 patients (accuracy, 68%); the depth of invasion was overestimated in 5 patients and underestimated in 8 patients. The results of unenhanced T2-weighted MRI were accurate in 27 patients (accuracy, 68%), with 4 overestimations and 9 underestimations. The results of CE-MRI were accurate in 34 patients (accuracy, 85%), with 5 underestimations and one overestimation.	2
21. Szantho A, Szabo I, Csapo ZS, Balega J, Demeter A, Papp Z. Assessment of myometrial and cervical invasion of endometrial cancer by transvaginal sonography. <i>Eur J Gynaecol Oncol</i> 2001; 22(3):209-212.	Observational-Dx	52 women	To assess efficiency of TVUS in the assessment of myometrial invasion and cervical involvement of endometrial cancer.	Myometrial invasion evaluated by TVUS was accurate in 46/52 cases (accuracy 88%, sensitivity 86%, specificity 90%, PPV 92%, NPV 83%). TVUS is a reliable method for assessing myometrial invasion and cervical involvement.	3
22. Liu ZZ, Jiang YX, Dai Q, et al. Imaging of endometrial carcinoma using contrast-enhanced sonography. <i>J Ultrasound Med</i> 2011; 30(11):1519-1527.	Observational-Dx	35 patients	To evaluate the utility of contrast-enhanced US as an adjunct to conventional TVUS for detecting endometrial carcinoma and defining the depth of myometrial invasion.	Of the 34 tumors identified by contrast-enhanced US, 28 (82.4%) showed early wash-in, and 6 (17.6%) showed late wash-in. Similar numbers of cases showed early and late wash-out. The enhancement phases did not differ significantly across groups with different average tumor diameters or histologic grades ($P>.05$). Contrast-enhanced US contributed the most to tumor imaging in patients with a thin endometrium after endometrial biopsy because it enhanced the contrast between the tumor and tissue. The diagnostic accuracy of contrast-enhanced US for determining the myometrium infiltration depth was 85.3%.	3
23. Valenzano M, Podesta M, Giannesi A, Corticelli A, Nicoletti L, Costantini S. [The role of transvaginal ultrasound and sonohysterography in the diagnosis and staging of endometrial adenocarcinoma]. <i>Radiol Med</i> 2001; 101(5):365-370.	Observational-Dx	19 patients	To evaluate the accuracy of sonohysterography in early diagnosis of endometrial tumor lesions and in the detection of myometrial infiltration for staging.	Depth of myometrial invasion accuracy assessed in 17/19 (89.4%) women. Sensitivity was 88%, specificity 100%, PPV 100% and NPV 33%. Sonohysterography allowed to evaluate exactly the depth of myometrial invasion in 15/16 cases (93.7%), in which a myometrial infiltration was suspected. For this, the sensitivity was 85.7%, the specificity was 100%, the PPV 100% and NPV 90.9%.	3

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24. Dessole S, Rubattu G, Farina M, et al. Risks and usefulness of sonohysterography in patients with endometrial carcinoma. <i>Am J Obstet Gynecol</i> 2006; 194(2):362-368.	Observational-Dx	32 patients	Prospective study to assess the risk of malignant cell dissemination into the peritoneal cavity through the fallopian tubes in patients with endometrial carcinoma undergoing sonohysterography and to evaluate the accuracy of sonohysterography in the estimation of myometrial invasion by the tumor and its role in the preoperative staging.	Fluid spilled into peritoneal cavity containing malignant and suspicious cells in 2/32 (6.3%) and 6/32 (18.8%) cases. Sonohysterography was useful to assess the depth of myometrial invasion and may have a role in preoperative staging.	2
25. Alcazar JL, Errasti T, Zornoza A. Saline infusion sonohysterography in endometrial cancer: assessment of malignant cells dissemination risk. <i>Acta Obstet Gynecol Scand</i> 2000; 79(4):321-322.	Review/Other-Dx	14 consecutive patients	To assess the risk of malignant cells dissemination in patients with endometrial cancer undergoing saline infusion sonohysterography.	Saline infusion sonohysterography could be satisfactorily performed in all patients. There was no spillage from either tube in 9 patients. Mean fluid volume obtained from the other 5 patients was 4.4 mL. Cytologic analysis revealed the presence of malignant cells in the spilled fluid in one case (7.1%, 1/14).	4
26. Grossman J, Ricci ZJ, Rozenblit A, Freeman K, Mazzariol F, Stein MW. Efficacy of contrast-enhanced CT in assessing the endometrium. <i>AJR</i> 2008; 191(3):664-669.	Observational-Dx	259 patients; 2 reviewers	Retrospective study to determine the efficacy of contrast-enhanced CT in detecting a thickened endometrium. TVUS used as the reference standard.	Overall sensitivity and specificity of CT in detecting the thickened endometrium was 53.1% and 93.5%, respectively, relative to TVUS. PPV and NPV were 66.7% and 89.1%, respectively. Kappa, the statistical measure of agreement between CT and sonography data, was 0.5049. All cases of a triangular endometrium were normal in size on sagittal reconstruction images. Routine pelvic CT correctly identifies a normal endometrium in most patients.	2
27. Tsili AC, Tsampoulas C, Dalkalitsis N, Stefanou D, Paraskevaidis E, Efremidis SC. Local staging of endometrial carcinoma: role of multidetector CT. <i>Eur Radiol</i> 2008; 18(5):1043-1048.	Observational-Dx	21 women	Prospective study to evaluate the accuracy of MDCT in local staging of endometrial carcinoma and more specifically in the assessment of the depth of myometrial invasion and presence of cervical infiltration.	Sensitivity, specificity and accuracy of MDCT in evaluating myometrial invasion were 100%, 80% and 95%, respectively, and for assessing cervical infiltration were 78%, 83% and 81%, respectively. MDCT proved accurate in local staging of endometrial carcinoma.	2

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28. Connor JP, Andrews JI, Anderson B, Buller RE. Computed tomography in endometrial carcinoma. <i>Obstet Gynecol</i> 2000; 95(5):692-696.	Observational-Dx	492 women	A retrospective review to determine the value of CT scans for preoperatively detecting extrauterine-nodal disease and postoperative recurrent disease in patients with endometrial cancer.	Among 492 women eligible for analysis, 178 (36%) had a total 326 CT scans. Sensitivity, specificity, PPV, and NPV of preoperative CT scans for nodal involvement were 57%, 92%, 50%, and 94%, respectively. Recurrence diagnosed by CT in asymptomatic patients was 4.4% and 46% of patients with suspected recurrence were confirmed by CT. Kaplan-Meier analysis showed no survival advantage in women with subclinical recurrences diagnosed by CT scan. Routine preoperative CT scanning rarely alters treatment and is a poor predictor of nodal disease. CT in the postoperative period might be helpful for detection and follow-up of recurrent disease, but there was no difference in survival when subclinical recurrence was found by CT.	3
29. Bouros D, Papadakis K, Siafakas N, Fuller AF, Jr. Patterns of pulmonary metastasis from uterine cancer. <i>Oncology</i> 1996; 53(5):360-363.	Review/Other-Dx	90 patients	To examine the frequency and the pattern of pulmonary metastasis in patients with pulmonary metastasis.	Lung metastases were found at the time of diagnosis of the primary tumor in 20 patients (22%). The usual pattern of pulmonary metastasis involved multiple pulmonary nodules in 65 patients (72%); solitary pulmonary nodules in 16 (18%), mass lesion in 10 (11%), lymphangitic spread in 3, and pleural effusion in 6 (6.7%). Cavitation and tracheal metastasis were observed in one case each.	4
30. Gadducci A, Cosio S, Fanucchi A, Cristofani R, Genazzani AR. An intensive follow-up does not change survival of patients with clinical stage I endometrial cancer. <i>Anticancer Res</i> 2000; 20(3B):1977-1984.	Observational-Tx	133 patients	To determine whether there is a clinical benefit of an intensive follow-up protocol in endometrial cancer patients. Patients had initial abdominal surgery for clinical stage I endometrial cancer between 1988 and 1997 and were periodically followed-up until April 1999 or until death. After surgery, 89 patients received postoperative adjuvant treatment.	Intensive surveillance protocol did not have any significant impact on the outcome of patients with clinical stage I endometrial cancer. Simplified follow-up programs tailored for patient subsets with different recurrence risk are required.	2
31. Labi FL, Evangelista S, Di Miscia A, Stentella P. FIGO Stage I endometrial carcinoma: evaluation of lung metastases and follow-up. <i>Eur J Gynaecol Oncol</i> 2008; 29(1):65-66.	Review/Other-Dx	210 patients	To evaluate the incidence of lung metastases in the follow-up of women submitted to surgery for endometrial carcinoma, in particular for FIGO Stage I.	One patient out of the group studied has developed lung metastasis 6 years after surgery. She was staged as FIGO IB (T1b Mx G1).	4

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32. Rockall AG, Meroni R, Sohaib SA, et al. Evaluation of endometrial carcinoma on magnetic resonance imaging. <i>Int J Gynecol Cancer</i> 2007; 17(1):188-196.	Observational-Dx	96 patients	To assess diagnostic performance of T2-weighted and dynamic gadolinium-enhanced T1-weighted MRI in the preoperative assessment of myometrial and cervical invasion by endometrial carcinoma and to identify imaging features that predict nodal metastases.	For the identification of any myometrial invasion, the sensitivity, specificity, PPV and NPV, (superficial or deep) were 0.94, 0.50, 0.93, 0.55, respectively, on T2-weighted and 0.92, 0.50, 0.92, 0.50, respectively, on dynamic T1-weighted, and for deep myometrial invasion were 0.84, 0.78, 0.65, 0.91, respectively, on T2-weighted and 0.72, 0.88, 0.72, 0.88, respectively, on dynamic T1-weighted. For any cervical invasion, the sensitivity, specificity, PPV and NPV (endocervical or stromal) were 0.65, 0.87, 0.57, 0.90, respectively, on T2-weighted and 0.50, 0.90, 0.46, 0.92 respectively, on dynamic T1-weighted, and for cervical stromal involvement were 0.69, 0.95, 0.69, 0.95, respectively, on T2-weighted and 0.50, 0.96, 0.57, 0.95, respectively, on dynamic T1-weighted. Sensitivity and specificity for the detection of nodal metastases was 66% and 73%, respectively. MRI may allow accurate categorization of cases into low-risk or high-risk groups ensuring suitable extent of surgery and adjuvant therapy.	3
33. Kinkel K, Kaji Y, Yu KK, et al. Radiologic staging in patients with endometrial cancer: a meta-analysis. <i>Radiology</i> 1999; 212(3):711-718.	Review/Other-Dx	6 studies for CT; 16 for US; and 25 for MRI	Meta-analysis to compare the utility of CT, US, and MRI in staging endometrial cancer.	Summary receiver operating characteristic analysis showed no significant differences in the overall performance of CT, US, and MRI. In the assessment of myometrial invasion, however, CE-MRI performed significantly better than did nonenhanced MRI or US (P<.002) and demonstrated a trend toward better results, as compared with CT. The lack of data on the assessment of cervical invasion at CT or US prevented meta-analytic comparison with data obtained at MRI.	4

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34. Sala E, Crawford R, Senior E, et al. Added value of dynamic contrast-enhanced magnetic resonance imaging in predicting advanced stage disease in patients with endometrial carcinoma. <i>Int J Gynecol Cancer</i> 2009; 19(1):141-146.	Observational-Dx	50 patients	To assess the added value of DCE-MRI in predicting advanced stage disease in patients with endometrial carcinoma.	The depth of myometrial invasion was correctly determined in 78% (39/50) of the cases on T2-weighted alone, increasing to 92% (46/50) with the addition of DCE-MRI (95% CI for improvement, 4.4%-23.6%, P=0.016). The addition of DCE-MRI led to the correct detection of deep myometrial invasion in all cases. Tumor extension to uterine cornu was the only variable significantly associated (P=0.014) with incorrect estimation of depth of myometrial invasion.	3
35. Haldorsen IS, Salvesen HB. Staging of endometrial carcinomas with MRI using traditional and novel MRI techniques. <i>Clin Radiol</i> 2012; 67(1):2-12.	Review/Other-Dx	N/A	To review the value of MRI and novel MRI techniques (diffusion, perfusion, spectroscopy, blood oxygen level-dependent - MRI, and MRI with new contrast agents) in endometrial carcinomas.	CE-MRI is the imaging technique of choice, and DWI MRI may help to identify malignant lesions and assess myometrial invasion. Novel MRI techniques may potentially increase diagnostic accuracy, enabling a refined, tailored surgical procedure and better prediction of treatment outcomes.	4
36. Wu LM, Xu JR, Gu HY, Hua J, Haacke EM, Hu J. Predictive value of T2-weighted imaging and contrast-enhanced MR imaging in assessing myometrial invasion in endometrial cancer: a pooled analysis of prospective studies. <i>Eur Radiol</i> . 2013;23(2):435-449.	Review/Other-Dx	11 articles (548 patients)	To obtain diagnostic performance values of T2-weighted and CE-MRI in the prediction of myometrial invasion in patients with endometrial cancer.	For assessing any myometrial involvement, the pooled sensitivity, specificity, PPV and NPV for CE-MRI were 0.81 (95% CI, 0.72, 0.88), 0.72 (95% CI, 0.64, 0.79), 0.65 (95% CI, 0.56, 0.73) and 0.85 (95% CI, 0.78, 0.91); for T2-weighted, they were 0.87 (95% CI, 0.78, 0.94), 0.58 (95% CI, 0.47, 0.69), 0.64 (95% CI, 0.54, 0.73), 0.84 (95% CI, 0.73, 0.92) respectively. The pooled specificity of CE-MRI (0.72) was significantly higher than T2-weighted (0.58) (P<0.05). For assessing deep myometrial involvement, there was no statistically significant difference between CE-MRI and T2-weighted, (P>0.05).	4

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37. Manfredi R, Mirk P, Maresca G, et al. Local-regional staging of endometrial carcinoma: role of MR imaging in surgical planning. <i>Radiology</i> 2004; 231(2):372-378.	Observational-Dx	37 consecutive patients	Prospective study to assess the value of MRI in depicting the depth of myometrial infiltration, cervical invasion, and presence of enlarged lymph nodes in patients with endometrial adenocarcinoma compared with surgicopathologic findings.	Respective sensitivity, specificity, diagnostic accuracy, and PPV and NPV in assessing myometrial infiltration were 87%, 91%, 89%, 87%, and 91%; those for cervical infiltration, 80%, 96%, 92%, 89%, and 93%; and those for lymph node assessment, 50%, 95%, 90%, 50%, and 95%. There was significant agreement between MRI and surgicopathologic findings in assessment of myometrial invasion (P<.001). Myometrial and cervical invasion and lymph node enlargement were correctly assessed with MRI in 28 (76%) of 37 patients. Quantitative analysis showed a significant improvement in tumor and myometrium contrast-to-noise ratios during the equilibrium phase compared with the arterial and precontrast phases (P<.001).	2
38. Sala E, Wakely S, Senior E, Lomas D. MRI of malignant neoplasms of the uterine corpus and cervix. <i>AJR</i> 2007; 188(6):1577-1587.	Review/Other-Dx	N/A	To review the role of MRI in the imaging of malignant neoplasms of the uterine corpus and cervix, describing its role in staging, treatment planning, and follow-up.	MRI is not officially incorporated in the International Federation of Gynecology and Obstetrics (FIGO) staging system, but is already widely accepted as the most reliable imaging technique for the diagnosis, staging, treatment planning, and follow-up of both endometrial and cervical cancer.	4
39. Nagar H, Dobbs S, McClelland HR, Price J, McCluggage WG, Grey A. The diagnostic accuracy of magnetic resonance imaging in detecting cervical involvement in endometrial cancer. <i>Gynecol Oncol</i> 2006; 103(2):431-434.	Observational-Dx	135 consecutive women	Retrospective study to determine the diagnostic accuracy of MRI in detecting cervical involvement by endometrial cancer.	For cervical involvement by MRI, sensitivity was 72%, specificity 93.2%, PPV 89.8%, NPV 80.2%, positive likelihood ratio 10.7 and negative likelihood ratio 0.3. For cervical stromal invasion alone, the sensitivity was 84.4%, specificity 87.4%, PPV 67.5%, NPV 94.7%, positive likelihood ratio 6.7 and negative likelihood ratio 0.18. MRI is able to accurately predict cervical involvement in endometrial cancer and allows a decision to be made on the type of hysterectomy to be offered.	3

**Pretreatment Evaluation and Follow-Up of Endometrial Cancer
EVIDENCE TABLE**

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
40. Takahashi K, Yoshioka M, Kosuge H, et al. [The accuracy of computed tomography and magnetic resonance imaging in evaluating the extent of endometrial carcinoma]. <i>Nihon Sanka Fujinka Gakkai Zasshi</i> 1995; 47(7):647-654.	Observational-Dx	36 patients	To determine the accuracy of CT and MRI in evaluating the extent of the tumor in 36 patients with endometrial carcinoma.	Linear regression analysis for measurements of residual normal myometrium revealed significant positive correlations ($P<0.001$) between MRI ($r = 0.861$) and CT ($r = 0.826$) findings and pathologic evaluation. Thirty-six patients were divided into two groups according to our previous CT and MRI criteria: the superficial myometrial invasion group and advanced tumor group. In MRI findings, higher incidences of deep ($\geq 1/2$) myometrial invasion ($P<0.001$), vessel permeation ($P<0.05$) and cervical involvement ($P<0.05$) were observed in the advanced group. In CT findings, deep myometrial invasion ($P<0.001$) was observed in the advanced group. The incidence of extrauterine extension of the tumor did not differ significantly between CT and MRI findings. The accuracy figures for cervical involvement evaluated by CT and MRI were 83% and 86%, respectively. In four of 6 patients, in whom an intact junctional zone was detected by MRI, the tumor was localized in the endometrium. The remaining 2 patients had only superficial myometrial invasion histologically. In all 16 patients, in whom the junctional zone was interrupted in MRI findings, myometrial invasion was confirmed pathologically.	3
41. Vasconcelos C, Felix A, Cunha TM. Preoperative assessment of deep myometrial and cervical invasion in endometrial carcinoma: comparison of magnetic resonance imaging and histopathologic evaluation. <i>J Obstet Gynaecol</i> 2007; 27(1):65-70.	Observational-Dx	101 patients	To evaluate the accuracy of MRI in the detection of deep myometrial invasion and cervical extension by endometrial carcinoma.	From 101 cases studied by pelvic MRI, 43 were classified as deep myometrial invasion ($\geq 50\%$ of myometrium), where the pathological evaluation confirmed as having deep myometrial invasion. Cervical extension in the MRI study was found in 19 cases. Pathologic study found cervical extension and/or invasion in 31 cases including all cases identified by MRI. The accuracy, sensitivity and specificity of MRI were 95%, 89%, 100%, detecting deep myometrial invasion and 88%, 61%, 100%, detecting cervical invasion, respectively.	3

**Pretreatment Evaluation and Follow-Up of Endometrial Cancer
EVIDENCE TABLE**

Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
42. Rechichi G, Galimberti S, Signorelli M, Perego P, Valsecchi MG, Sironi S. Myometrial invasion in endometrial cancer: diagnostic performance of diffusion-weighted MR imaging at 1.5-T. <i>Eur Radiol</i> 2010; 20(3):754-762.	Observational-Dx	47 patients	To determine the diagnostic accuracy of DWI MRI in the preoperative assessment of myometrial invasion by endometrial cancer.	At histopathological examination, superficial myometrial invasion was found in 34 patients and deep myometrial invasion in 13. In the assessment of tumor invasion, sensitivity, specificity, PPV and NPV of T2-weighted images were 92.3%, 76.5%, 60.0% and 96.3%, respectively. The corresponding values for dynamic images were 69.2%, 61.8%, 40.9% and 84.0%, and for DWI 84.6%, 70.6%, 52.4% and 92.3%. T2-weighted and DWI proved to be the most accurate techniques for tumor spread determination.	1
43. Shen SH, Chiou YY, Wang JH, et al. Diffusion-weighted single-shot echo-planar imaging with parallel technique in assessment of endometrial cancer. <i>AJR</i> 2008; 190(2):481-488.	Observational-Dx	31 patients	To determine the feasibility of DWI with a single-shot echo-planar sequence and parallel technique for depicting endometrial cancer and to examine the role of this technique in preoperative assessment.	The mean ADC of endometrial cancer was 0.864×10^{-3} mm ² /s and that of benign endometrial lesions was 1.277×10^{-3} mm ² /s. The difference between the two groups was significant (P=0.0058). The diagnostic accuracy for myometrial invasion was 61.9% for DWI and 71.4% for gadolinium-enhanced T1-weighted 3D fat-suppressed spoiled gradient-recalled echo images. In 5 cases, DWI provided information about tumor extent and depicted the tumor focus, findings that changed preoperative staging.	3
44. Takeuchi M, Matsuzaki K, Nishitani H. Diffusion-weighted magnetic resonance imaging of endometrial cancer: differentiation from benign endometrial lesions and preoperative assessment of myometrial invasion. <i>Acta Radiol</i> 2009; 50(8):947-953.	Observational-Dx	33 patients 67 endometrial lesions (45 cancers and 22 benign lesions)	To verify the feasibility of DWI MRI to distinguish benign and malignant endometrial lesions, and to evaluate myometrial invasion of endometrial cancer.	The ADC values ($\times 10^{-3}$) mm ² /s) in cancer and benign lesions were 0.84 ± 0.19 and 1.58 ± 0.36 , respectively (P<0.01). The staging accuracy (superficial or deep myometrial invasion) was 94% for DWI and 88% for gadolinium-enhanced T1-weighted images. Coexisting adenomyosis and infiltrative myometrial invasion caused staging errors on gadolinium-enhanced T1-weighted images, whereas DWI could demonstrate the tumor extent correctly.	3

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Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
45. Wang J, Yu T, Bai R, Sun H, Zhao X, Li Y. The value of the apparent diffusion coefficient in differentiating stage IA endometrial carcinoma from normal endometrium and benign diseases of the endometrium: initial study at 3-T magnetic resonance scanner. <i>J Comput Assist Tomogr</i> 2010; 34(3):332-337.	Observational-Dx	28 women with stage IA endometrial carcinoma, 30 women with stage IA cervical cancer and 19 women with proven benign diseases of the endometrium with dilation and curettage	To retrospectively assess the feasibility of DWI MRI of stage IA endometrial carcinoma and to investigate whether the ADC values of stage IA endometrial carcinoma differ from those of normal endometrium and benign diseases of the endometrium.	All endometrial carcinomas and normal endometria exhibited a high signal intensity on DWI, whereas endometrial hyperplasia and polyp showed a low or intermediate signal intensity compared with normal outer myometrium. The mean (SD) ADC of stage IA endometrial carcinoma was $0.878 (0.185) \times 10^{-3} \text{ mm}^2/\text{s}$, which was significantly lower ($P < 0.01$) than that of normal endometrium ($1.446 [0.246] \times 10^{-3} \text{ mm}^2/\text{s}$) and that of benign endometrial lesions ($1.637 [0.178] \times 10^{-3} \text{ mm}^2/\text{s}$) without any overlap.	3
46. Fujii S, Matsusue E, Kigawa J, et al. Diagnostic accuracy of the apparent diffusion coefficient in differentiating benign from malignant uterine endometrial cavity lesions: initial results. <i>Eur Radiol</i> 2008; 18(2):384-389.	Observational-Dx	25 uterine endometrial cavity lesions in 25 female patients	To evaluate the diagnostic accuracy of ADC measurement in differentiating malignant from benign uterine endometrial cavity lesions.	The mean and SD of ADC values ($\times 10^{-3} \text{ mm}^2/\text{s}$) were as follows: endometrial carcinoma, 0.98 ± 0.21 ; carcinosarcoma, 0.97 ± 0.02 ; submucosal leiomyoma, 1.37 ± 0.28 ; and endometrial polyp, 1.58 ± 0.45 . The ADC values differed significantly between malignant (0.98 ± 0.19) and benign lesions (1.44 ± 0.34) ($P < 0.01$). We defined malignant tumors as cases with an ADC value $< 1.15 \times 10^{-3} \text{ mm}^2/\text{s}$ for obtaining the highest accuracy. Sensitivity, specificity, and accuracy were 84.6%, 100%, and 92%, respectively. ADC measurement can provide useful information in differentiating malignant from benign uterine endometrial cavity lesions.	3

**Pretreatment Evaluation and Follow-Up of Endometrial Cancer
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Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
47. Kilickesmez O, Bayramoglu S, Inci E, Cimilli T, Kayhan A. Quantitative diffusion-weighted magnetic resonance imaging of normal and diseased uterine zones. <i>Acta Radiol</i> 2009; 50(3):340-347.	Observational-Dx	87 patients with 107 benign and malignant uterine pathologies and 50 healthy controls	To calculate the ADC values of normal uterine zones as well as benign and malignant uterine diseases, and to determine a cut-off ADC value for the quantitative detection of uterine malignancies with DWI.	The ADC values of benign and malignant lesions were compared using Student's t test. The mean and the SD of the ADC values of the control group were as follows: myometrium 1.76+/-0.19 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s, junctional zone 0.99+/-0.18 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s, endometrium 1.65+/-0.33 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s, and cervix 1.71+/-0.17 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s. There was a statistically significant difference among the ADC values of normal myometrium and leiomyomas (1.47+/-0.36 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s; P<0.009), endometrium and endometrial carcinomas (0.86+/-0.13 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s; P<0.001), myometrium-junctional zone and adenomyosis (1.24+/-0.20 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s; P<0.001), and cervix and cervical carcinomas (0.91+/-0.14 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s; P<0.001). The ADC values differed significantly between malignant (0.88+/-0.11) and benign lesions (1.55+/-0.33; P<0.01). A cut-off value for malignant lesions of 1.05 x 10 ⁽⁻³⁾ mm ⁽²⁾ /s yielded a sensitivity, specificity, and accuracy of 95.83%, 94.55%, and 94.94%, respectively.	4
48. Hori M, Kim T, Murakami T, et al. MR imaging of endometrial carcinoma for preoperative staging at 3.0 T: comparison with imaging at 1.5 T. <i>J Magn Reson Imaging</i> 2009; 30(3):621-630.	Observational-Dx	30 patients	To prospectively compare MRI at 3.0 T and 1.5 T in the same patients for preoperative evaluation of endometrial carcinoma.	Image homogeneity of T2-weighted images at 3.0 T was significantly inferior to that at 1.5 T (P=0.007). The scores of image homogeneity and susceptibility artifacts were not significantly different between 3.0 T gadolinium-enhanced imaging and 1.5 T imaging (P=0.09 and 0.36). Kappa statistics showed good interobserver agreement between the two radiologists for local-regional staging on T2-weighted images (kappa>0.6). The area under the receiver operating characteristic curve (Az) values for T2-weighted imaging in terms of myometrial invasion, cervical invasion, and lymph node metastases were 0.88 (3.0 T) vs 0.91 (1.5 T), 0.84 vs 0.83, and 0.94 vs 0.95 for reader 1, respectively. There were no significant differences between imaging at 3.0 T and at 1.5 T in Az values for either reader (P>0.35).	2

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Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
49. Torricelli P, Ferraresi S, Fiocchi F, et al. 3-T MRI in the preoperative evaluation of depth of myometrial infiltration in endometrial cancer. <i>AJR</i> 2008; 190(2):489-495.	Observational-Dx	52 patients (43 postmenopausal)	To evaluate the diagnostic accuracy of 3.0 T MRI in determining the depth of myometrial infiltration in patients with endometrial cancer.	MRI performed on a 3.0 T unit was in agreement with histopathology in assessing the depth of invasion in 86.4% (44/52) of the patients with a mean sensitivity, specificity, PPV, NPV, and accuracy of 83.5%, 93.9%, 77.8%, 92.2%, and 89.7%, respectively. Performance values were also assessed for single stages of myometrial infiltration. For the detection of an intramucosal lesion (MRI, 12/52; histopathology, 6/52), sensitivity was 100%; specificity, 86.9%; PPV, 50%; NPV, 100%; and accuracy, 88.5%. For the detection of myometrial infiltration that was <50% (MRI, 12/52; histopathology, 16/52), sensitivity was 62.5%; specificity, 94.4%; PPV, 83.3%; NPV, 85%; and accuracy, 84.6%. For the detection of myometrial infiltration that was >50% (MRI, 28/52; histopathology, 30/52), sensitivity was 93.3%; specificity, 100%; PPV, 100%; NPV, 91.7%; and accuracy, 96.2%. The following artifacts were found: abdominal wall movement, 9 patients (not affecting image quality); peristalsis, 16 patients (2 deeply affecting, 1 affecting, and 13 scarcely affecting); magnetic susceptibility artifact, 4 patients (not affecting); chemical shift, 20 patients (four scarcely affecting and 16 not affecting); and dielectric effect, six patients (4 deeply affecting and 2 affecting).	3
50. Galakhoff C, Masselot J, Dam N, Pejovic MH, Prade P, Duvillard P. Lymphography in the initial evaluation of endometrial carcinoma. <i>Gynecol Oncol</i> 1988; 31(2):276-284.	Observational-Dx	288 patients	To determine whether lymphography is of any value in the choice of therapy and to evaluate its diagnostic and prognostic contributions. Lymphangiograms performed as part of the initial diagnostic work-up of endometrium cancer were reviewed.	A histological examination of the lymph nodes was carried out for 138 patients. Lymphography is not very sensitive but is highly specific, detecting only 50% of metastases with a high false positive rate. Its diagnostic and prognostic value for operable patients is minimal, but is useful for the follow-up of lymph nodes of patients treated by radiation therapy.	4

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Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
51. Horowitz NS, Dehdashti F, Herzog TJ, et al. Prospective evaluation of FDG-PET for detecting pelvic and para-aortic lymph node metastasis in uterine corpus cancer. <i>Gynecol Oncol</i> 2004; 95(3):546-551.	Observational-Dx	19 patients: 74 nodes	Prospectively evaluate the sensitivity and specificity of FDG-PET for detecting pelvic and PAN metastasis in patients with uterine corpus carcinoma before surgical staging.	FDG-PET had 60% sensitivity and 98% specificity when analyzed by lymph node regions. Sensitivity and specificity by individual patient were 67% and 94%, respectively. FDG-PET is only moderately sensitive in predicting lymph node metastasis preoperatively. This imaging modality should not replace lymphadenectomy, but may be helpful for patients in whom lymphadenectomy cannot be, or was not, performed.	2
52. Suzuki R, Miyagi E, Takahashi N, et al. Validity of positron emission tomography using fluoro-2-deoxyglucose for the preoperative evaluation of endometrial cancer. <i>Int J Gynecol Cancer</i> 2007; 17(4):890-896.	Observational-Dx	30 patients	To determine the validity of PET using FDG for the preoperative evaluation of endometrial cancer. FDG-PET images were compared to CT and/or MRI and the results of postoperative pathologic findings.	For primary lesions, FDG-PET could easily identify the cancer, and sensitivity was 96.7%, which was higher than that of 83.3% by CT/MRI. For evaluation of retroperitoneal lymph node metastasis, FDG-PET could detect none of 5 cases of lymph node metastatic lesions of up to 0.6 cm in diameter but had higher specificity (100%) compared with CT/MRI (85.7%). Sensitivity of FDG-PET for detection of extrauterine lesions excluding retroperitoneal lymph nodes was 83.3% and was superior to that of CT/MRI (66.7%), although there was no difference in the specificity between the modalities (100%).	3
53. Kitajima K, Murakami K, Yamasaki E, et al. Accuracy of 18F-FDG PET/CT in detecting pelvic and paraaortic lymph node metastasis in patients with endometrial cancer. <i>AJR</i> 2008; 190(6):1652-1658.	Observational-Dx	40 consecutive patients; 2 reviewers	To evaluate the accuracy of integrated PET and CT (PET/CT) using FDG in detecting pelvic and PAN metastasis in patients with endometrial cancer, using surgical and histopathologic findings as the reference standard. PET/CT images were prospectively pre operatively interpreted in consensus by 2 experienced radiologists.	Overall node-based sensitivity, specificity, and accuracy of PET/CT for detecting nodal metastases were 53.3% (32/60), 99.6% (1,419/1,424), and 97.8% (1,451/1,484), respectively. Sensitivity for detecting metastatic lesions ≤4 mm was 16.7% (4/24), that for lesions between 5 and 9 mm was 66.7% (14/21), and that for lesions ≥10 mm was 93.3% (14/15). Overall patient-based sensitivity, specificity, and accuracy were 50% (5/10), 86.7% (26/30), and 77.5% (31/40), respectively. Integrated FDG-PET/CT is superior to conventional imaging techniques, but is only moderately sensitive in predicting lymph node metastasis preoperatively in patients with endometrial cancer. Even PET/CT should not replace lymphadenectomy.	2

* See Last Page for Key

Pretreatment Evaluation and Follow-Up of Endometrial Cancer
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Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
54. Kitajima K, Kita M, Suzuki K, Senda M, Nakamoto Y, Sugimura K. Prognostic significance of SUVmax (maximum standardized uptake value) measured by [(1)(8)F]FDG PET/CT in endometrial cancer. <i>Eur J Nucl Med Mol Imaging</i> 2012; 39(5):840-845.	Observational-Dx	57 patients	To determine if the preoperative SUVmax measured by FDG-PET/CT has prognostic value in patients with endometrial cancer.	The median duration of follow-up was 33.1 months (range 4 to 68 months). SUVmax was significantly higher in patients with a higher FIGO stage (P=0.0015), higher tumor histological grade (P<0.0001), myometrial invasion (P=0.0020), larger tumor size (P=0.0056) and lymph node metastasis (P=0.027). Univariate analysis showed that SUVmax (uncategorized value), FIGO stage, tumor histological grade, lymph node metastasis and lymphovascular space invasion were significantly associated with recurrence. However, multivariate analysis showed that only SUVmax (P=0.045, hazard ratio 1.11, 95% CI, 1.0028-1.231) was significantly associated with recurrence. Based on Receiver-operator characteristic curve analysis and log-rank tests, patients with a high a SUVmax (≥ 12.7) had a significantly lower disease-free survival rate than those with a low SUVmax (< 12.7 ; P=0.00042).	3
55. Belhocine T, De Barse C, Hustinx R, Willems-Foidart J. Usefulness of (18)F-FDG PET in the post-therapy surveillance of endometrial carcinoma. <i>Eur J Nucl Med Mol Imaging</i> 2002; 29(9):1132-1139.	Observational-Dx	34 women	To assess the usefulness of FDG-PET in the post-therapy surveillance of endometrial carcinomas.	Sensitivity, specificity, diagnostic accuracy, PPV and NPV of FDG-PET imaging in the post-therapy surveillance of endometrial carcinomas were 96%, 78%, 90%, 89% and 91%, respectively. Whole-body FDG-PET appears useful in the post-therapy surveillance of endometrial cancers.	3
56. Chung HH, Kang WJ, Kim JW, et al. The clinical impact of [(18)F]FDG PET/CT for the management of recurrent endometrial cancer: correlation with clinical and histological findings. <i>Eur J Nucl Med Mol Imaging</i> 2008; 35(6):1081-1088.	Observational-Dx	31 women	Retrospective study to evaluate the accuracy of integrated PET and CT for the identification of suspected recurrent endometrial cancer after treatment. PET/CT findings were compared with clinical (11 cases) and histological findings (20 cases).	Sensitivity, specificity, accuracy, PPV, NPV, and accuracy of PET/CT were 100%, 94.7%, 92.3%, 100%, and 96.8%, respectively. Integrated PET/CT is very sensitive, specific, and accurate as a post-therapy surveillance modality for endometrial cancer in well-selected patients. PET/CT might be used to improve patient surveillance and prognosis.	3

**Pretreatment Evaluation and Follow-Up of Endometrial Cancer
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Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
57. Kitajima K, Murakami K, Yamasaki E, et al. Performance of FDG-PET/CT in the diagnosis of recurrent endometrial cancer. <i>Ann Nucl Med</i> 2008; 22(2):103-109.	Observational-Dx	30 patients; 2 reviewers	To evaluate the accuracy of integrated PET and CT using FDG compared with PET alone, in the diagnosis of suspected endometrial cancer recurrence.	Patient-based analysis showed: Sensitivity, specificity, and accuracy of PET/CT were 93% (14/15), 93% (14/15), and 93% (28/30), respectively. Sensitivity, specificity, and accuracy of PET were 80% (12/15), 80% (12/15), and 80% (24/30), respectively (P=0.479, 0.479, and 0.134, respectively). Integrated FDG-PET/CT is a useful complementary modality for providing good anatomic and functional localization of sites of recurrence during follow-up of patients with endometrial cancer.	2
58. Park JY, Kim EN, Kim DY, et al. Clinical impact of positron emission tomography or positron emission tomography/computed tomography in the posttherapy surveillance of endometrial carcinoma: evaluation of 88 patients. <i>Int J Gynecol Cancer</i> 2008; 18(6):1332-1338.	Observational	88 patients	To evaluate the validity and clinical impact of PET or PET/CT using FDG in the post-therapy surveillance of patients with endometrial carcinoma. Standard of reference for tumor recurrence consisted of histopathologic confirmation or follow-up information at least 6 months after PET or PET/CT.	24 patients had PET (n=11) and/or PET/CT (n=14) scans due to suspected disease recurrence. Sensitivity, specificity, accuracy, PPV, and NPV of PET and/or PET/CT in detecting recurrence were 100%, 83.3%, 96%, 95%, and 100%, respectively. 64 patients had PET (n=8) and/or PET/CT (n=66) as part of routine post-therapy surveillance; these patients were asymptomatic, with no evidence of disease. The sensitivity, specificity, accuracy, PPV, and NPV of PET and/or PET/CT in detecting recurrence in these patients were all 100%. PET and/or PET/CT were highly effective in discriminating true recurrence in patients with suspected recurrence, highly sensitive in detecting recurrence in asymptomatic patients, and had impacts on clinical decisions in a considerable portion of patients.	4
59. Saga T, Higashi T, Ishimori T, et al. Clinical value of FDG-PET in the follow up of post-operative patients with endometrial cancer. <i>Ann Nucl Med</i> 2003; 17(3):197-203.	Observational-Dx	21 patients	Retrospectively evaluate the clinical usefulness of FDG-PET in the follow-up of postoperative patients with endometrial cancer. FDG-PET findings were compared with their serum levels of tumor markers, CT and/or MRI findings, and the final outcome.	FDG-PET, with CT/MRI: sensitivity 100.0%, specificity 88.2%, accuracy 93.3%. Combined conventional imaging: sensitivity 84.6%, specificity 85.7%, and accuracy 85.0%. Tumor markers: sensitivity 100.0%, specificity 70.6%, accuracy 83.3%. FDG-PET was accurate in detecting recurrence and evaluating therapeutic response, and could afford important information in the management of postoperative patients with endometrial cancer.	3

**Pretreatment Evaluation and Follow-Up of Endometrial Cancer
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Reference	Study Type	Patients/ Events	Study Objective (Purpose of Study)	Study Results	Study Quality
60. American College of Obstetricians and Gynecologists (ACOG). Management of endometrial cancer. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2005 Aug. 13 p. (ACOG practice bulletin; no. 65).	Review/Other-Tx	N/A	To review the risks and benefits of current treatment options to optimize treatment for women with endometrial cancer.	Most women with endometrial cancer should undergo systematic surgical staging, including pelvic washings, bilateral pelvic and para-aortic lymphadenectomy, and complete resection of all disease. Exceptions to this include young or perimenopausal women with grade 1 endometrioid adenocarcinoma associated with atypical endometrial hyperplasia and those at increased risk of mortality secondary to comorbidities. Only a physical examination and a chest radiograph are required for preoperative staging of the usual (type I endometrioid grade 1) histology, clinical stage I patient. All other preoperative testing should be directed toward optimizing the surgical outcome.	4

Evidence Table Key

Study Quality Category Definitions

- *Category 1* The study is well-designed and accounts for common biases.
- *Category 2* The study is moderately well-designed and accounts for most common biases.
- *Category 3* There are important study design limitations.
- *Category 4* The study is not useful as primary evidence. The article may not be a clinical study or the study design is invalid, or conclusions are based on expert consensus. For example:
 - a) the study does not meet the criteria for or is not a hypothesis-based clinical study (e.g., a book chapter or case report or case series description);
 - b) the study may synthesize and draw conclusions about several studies such as a literature review article or book chapter but is not primary evidence;
 - c) the study is an expert opinion or consensus document.

Dx = Diagnostic

Tx = Treatment

Abbreviations Key

ADC = Apparent diffusion coefficient

CE-MRI = Contrast-enhanced magnetic resonance imaging

CI = Confidence interval

CT = Computed tomography

DCE-MRI = Dynamic contrast-enhanced magnetic resonance imaging

DWI = Diffusion-weighted imaging

FDG-PET = Fluorine-18-2-fluoro-2-deoxy-D-glucose-positron emission tomography

GVI = Gross visual inspection

IMA = Inferior mesenteric artery

MDCT = Multidetector computed tomography

MRI = Magnetic resonance imaging

NPV = Negative predictive value

PAN = Para-aortic lymph node

PET = Positron emission tomography

PLN = Pelvic lymph node

PPV = Positive predictive value

SD = Standard deviation

SUVmax = Maximum standardized uptake value

TVUS = Transvaginal ultrasound

US = Ultrasound