Chapter 2 □ Initial Treatment

Overview

In 1988, the International Federation of Gynecology and Obstetrics (FIGO) adopted a new surgical staging classification system for uterine body cancer, necessitating the selection of surgical procedures that included retroperitoneal lymph node examination for stage determination. Uterine body cancer is known to have lower radiosensitivity than cervical cancer. In addition, the establishment of a standard treatment using anticancer drugs has taken longer for uterine body cancer as compared to ovarian cancer. Therefore, the first choice treatment for uterine body cancer is surgery. Radiotherapy is suitable for inoperable patients, including patients with serious medical conditions and the elderly.

Hysterectomy

In 2005, the Japan Gynecologic Oncology Group (JGOG) conducted a questionnaire survey\(^1\) on uterine body cancer. For the standard surgical procedure for uterine body cancer, one third of institutions replied that they use total hysterectomy, another third replied that they use radical hysterectomy, and the remaining third replied that they modify the procedure according to the stage as estimated preoperatively. Approximately 70% of institutions answered that they do not perform radical hysterectomy for uterine body cancer.

The differences in surgical techniques themselves among institutions are one of the reasons for difficulty in obtaining a consensus on surgical techniques. We can presume that radical hysterectomy is performed using a similar technique throughout Japan. However, differences between institutions are thought to exist in procedures such as extended total hysterectomy and modified radical hysterectomy. Similarly, an Italian report indicated that there were large differences in surgical techniques between institutions.\(^2\) It is also necessary to consider the differences in techniques between Japan and Western countries. In Western countries, hysterectomy is often classified as type I to type IV. Type II corresponds to extended total hysterectomy in Japan, and type III corresponds to radical hysterectomy in Japan.\(^3\) Even if the surgery is nominally the same, techniques used in Japan may differ from those in Western countries. Therefore, it is of dubious value to apply overseas data without modification to Japanese surgical techniques.

In Japan, the rate of vaginal recurrence for stages I and II is 2%, and no significant difference in recurrence rates was reported between total hysterectomy, modified radical hysterectomy, and radical hysterectomy groups.\(^4\) Some institutions advocate the use of modified radical surgery and radical surgery.\(^3\)

Lymphadenectomy

There is no consensus on the best techniques for retroperitoneal lymph node biopsy and lymphadenectomy for uterine body cancer. According to the abovementioned 2005JGOG survey,\(^1\) almost all institutions stated that they performed pelvic lymphadenectomy for uterine body cancer. A minority of 13% of institutions stated that they performed para-aortic lymph node dissection or biopsy in all cases. The majority of institutions performed lymph node dissection or biopsy only under certain conditions.
According to a U.S. questionnaire survey conducted with gynecological oncologists, pelvic lymphadenectomy was performed by an estimated 69% of surgeons. Among the surgeons who did not perform lymphadenectomy in all cases, 89% incorporated rapid pathological diagnosis using frozen sections in their determination of the surgical technique. In addition, 65% of those surveyed felt that lymph node resection was of clinical significance; 45% considered their technique to be total lymphadenectomy, whereas 31% did not perform para-aortic lymph node biopsy at the time of pelvic lymphadenectomy. In another U.S. survey with 9954 subjects, including general gynecologists, 30% of those surveyed resected lymph nodes for pathological examination. This suggests the possibility that general gynecologists, who generally treat more than half of all patients, are not performing sufficient lymph node evaluations to determine the postoperative stage.

In European reports, in many patients lymph nodes were examined by palpation and visual examination. A report from Scotland speculated that one factor associated with a poor prognosis was inadequate evaluation of postoperative stages including lymphadenectomy.

It is difficult to obtain a global consensus on the significance, method, and extent of lymph node dissection and biopsy for uterine body cancer. Readers of these guidelines should be aware that there is ongoing discussion on this matter in Japan as well.

In Western countries, there is a high level of awareness of vaginal recurrence. Therefore, if retroperitoneal lymphadenectomy is not performed, physicians tend to frequently use postoperative radiotherapy. In Japan, more consideration is given to distant metastasis, and radical surgery including retroperitoneal lymphadenectomy is performed. In addition, there is a tendency to perform adjuvant chemotherapy for patients with risk factors for recurrence.

**Staging used in our guidelines**

When the terms “staging” or “surgical staging” are used, this refers to “surgical staging (Acta Obstetrica et Gynaecologica Japonica 1995, FIGO 1988)” in the General Rules for Clinical and Pathological Management of Uterine Body Cancer of the Japan Society of Obstetrics and Gynecology. For preoperative staging (Acta Obstetrica et Gynaecologica Japonica 1983, FIGO 1982), we use the term “clinical staging”. The clinical staging is used in determining the initial treatment strategy.

Definition and explanation of hysterectomy

In our guidelines, all total hysterectomies are abdominal. Below are various surgical techniques.

(1) **Total hysterectomy**: Uterine support structures and the vaginal canal are severed near the uterine attachment site. This is an extrafascial technique that removes some vaginal wall so that there is no residual cervical area.

**Extended simple total hysterectomy**: A surgical technique in which 1-2 cm of the vaginal wall is removed in addition to performing a total hysterectomy.

(2) **Modified radical hysterectomy**: The anterior layer of the vesicouterine ligament is separated and resected. The ureters are avoided and displaced laterally, and the uterus is resected by dividing as much as possible the anterior uterine support and vaginal wall from the cervix. However, the posterior layer of the vesicouterine ligament is not separated or severed. An extra 1.5-2 cm of vaginal wall can therefore be removed.
Another characteristic of this technique is that more of the cardinal ligament is resected than in a total hysterectomy.

(3) **Extended total hysterectomy:** This term is used synonymously with modified radical hysterectomy.

(4) **Radical hysterectomy:** The paravesical space and pararectal space are expanded, and each of the anterior, middle, and posterior uterine supports is separated and severed. Portions of the vaginal wall and pelvic connective tissue are widely excised, and a regional pelvic lymph node dissection is performed. That is, the cardinal ligament is severed near the pelvic wall, and the anterior layer of the vesicouterine ligament is separated and severed. The ureters are detached and displaced laterally, and the posterior layer is separated and severed. The rectovaginal ligament and ligament in the rectal space are severed. The paravaginal connective tissue and a portion of the vaginal wall (at least 3 cm) are then excised.

**References**

6. Naumann RW, Higgins RV, Hall JB. The use of adjuvant radiation therapy by members of the society of gynecologic oncologists. Gynecol Oncol 1999; 75: 4-9 (Level IV)
CQ01

Which surgical techniques of hysterectomy are recommended for clinical stage I?

**Recommendations**

1. Abdominal total hysterectomy (extrafascial technique) is recommended (Grade C).
2. Modified radical (extended) hysterectomy is also an option, but its therapeutic benefits have not been confirmed (Grade C).

**Background and Objectives**

We examined the usefulness of abdominal total hysterectomy for clinical stage I.

**Explanations**

The focus of papers on surgical techniques for patients at clinical stage I has been on the significance of lymphadenectomy and the significance of concomitant radiotherapy. The standard method has been abdominal total hysterectomy.

Sato et al.\(^1\) conducted a study of patients who underwent radical hysterectomy and modified radical hysterectomy. They found parametrial metastases in 2 of 131 cases (1.5%) at clinical stage I. They stated that parametrial metastasis was a significant prognostic factor. However, they did not recommend any particular surgical technique for clinical stage I patients. Yura et al.\(^2\) reported similar results. Rutledge\(^3\) reviewed the significance of radical hysterectomy in the treatment of uterine body cancer. They concluded that the prognosis after total hysterectomy was good and that radical hysterectomy, with its greater risk, was unnecessary. It has been reported that the 5 year survival rate for clinical stage I after total hysterectomy/bilateral salpingo-oophorectomy exceeded 90%.\(^4-7\) In the GOG study\(^8\) of a large number of cases, clinical stage I and II patients had good survival rates after abdominal total hysterectomy, if there were no risk factors such as cervical stromal invasion, positive peritoneal cytology, or metastases to lymph nodes and adnexae. Cassia et al.\(^7\) reported a recurrence rate of 20% after total hysterectomy in the high risk group (G2 or G3, $\geq 1/3$ myometrial invasion). This recurrence rate was higher than that of 6% in the low risk group. In contrast, Carey et al.\(^4\) reported a 5 year disease-free survival rate of 81% after total hysterectomy in the high risk group (patients with at least one of the following: G3, $\geq 1/2$ myometrial invasion, cervical invasion, or adenosquamous cell carcinoma). Paterson et al.\(^6\) stated that they resected 1 cm of vagina, when possible, even for total hysterectomy, although they did not report its significance.

There have been no studies on surgical techniques according to subclassifications of clinical stage I. However, Cassia et al.\(^7\) found no difference in survival rates between clinical stages Ia and Ib after total hysterectomy. For the subclassifications of surgical stage I, there has been a report examining the significance of postoperative radiotherapy in patients with myometrial invasion of $\geq 1/2$, and another report for patients with myometrial invasion of $\geq 1/3$.\(^4,5\) However, neither discussed modifications in hysterectomy techniques.
As discussed above, we should evaluate concomitant lymphadenectomy according to risk factors, and individualize the postoperative treatment (mainly radiotherapy) for each patient. However, hysterectomy techniques have not been examined in detail, and abdominal total hysterectomy is used most often.

In total hysterectomy, an extracervical technique is used, and it is necessary to resect some vaginal wall so that there is no residual cervical area. In Japan, there are institutions which perform modified radical hysterectomy for stage I, and radical hysterectomy for stage II or stage I with deep myometrial invasion. Low recurrence rates in the vaginal stump may be associated with the removal of a portion of the paravaginal connective tissue and vaginal wall. Although there are institutions that perform vaginal total hysterectomy, it is not common.

[References]
3. Rutledge F. The role of radical hysterectomy in adenocarcinoma of the endometrium. Gynecol Oncol 1974; 2 : 331-47 (Level □)
CQ02

Which surgical techniques of hysterectomy are recommended for clinical stage II?

**Recommendations**

If cervical stromal invasion is evident, radical hysterectomy is advised (Grade E).

**Background Objectives**

We examined the significance of radical hysterectomy and its indications for clinical stage II.

**Explanations**

The 5 year survival rate for clinical stage II is poor compared to that for stage I.\(^\text{1-3}\) However, most results from Western countries involve concomitant radiotherapy in some form. It is therefore difficult to evaluate surgical techniques in isolation. As in stage I, the standard technique is total hysterectomy. However, some studies reported that the use of several techniques ranging from total hysterectomy to radical hysterectomy. They did not indicate the selection criteria for these surgical techniques.

Mannel et al.\(^\text{4}\) studied 70 patients with suspected cervical invasion who underwent individualized postoperative treatment based on the pathological findings in the resected specimens. They recommended total hysterectomy for patients with no evidence of cervical stromal invasion and normal macroscopic findings in the cervix. They recommended radical hysterectomy for patients with evidence of stromal invasion in cervical curettage, or with macroscopically obvious cervical invasion. Similarly, a study of 202 patients at clinical stage II showed prognostic improvement with radical hysterectomy in patients with a bulky cervical lesion.\(^\text{2}\) In contrast, Leminen et al.\(^\text{1}\) performed total hysterectomy or radical hysterectomy for stage II patients after preoperative internal irradiation. They reported no difference in the 10 year survival rate (65% and 77%) between the two surgical methods, and concluded that total hysterectomy is adequate even for stage II disease. In the selection of a surgical technique for clinical stage II, parametrial metastases present a problem. Sato et al.\(^\text{5}\) found metastases in 13 of 132 cases (9.8%). However, they concluded that there may not be any great difference in therapeutic outcomes between patients who undergo excision of the parametrium and patients with adjuvant radiotherapy following total hysterectomy.

Studies of surgical stage II patients indicate that radical hysterectomy yields a better prognosis than total hysterectomy.\(^\text{6-8}\) In particular, the recurrence rate in the vaginal stump was reported to be lower in patients who underwent radical hysterectomy.\(^\text{6}\) Although many reports used concomitant radiotherapy, Mariani et al.\(^\text{7}\) and Eltabbakh et al.\(^\text{9}\) stated that radical hysterectomy alone was sufficient without adding radiotherapy for surgical stage II without pelvic lymph node metastases. They emphasized the significance of radical hysterectomy. In contrast, despite a poor prognosis regardless of the extent of cervical invasion in surgical stage II, it has been reported that prognostic improvement could not be obtained by radical hysterectomy.\(^\text{10}\) In a GOG report,\(^\text{3}\) the prognosis was also poor for patients with cervical stromal invasion. However, there have not been any studies of the effect that hysterectomy has on the prognosis of such patients.
In stage II, discrepancies between clinical stages and surgical stages are also a great problem. Creasman et al.\(^1\) reported that only 35 patients were surgical stage II out of 148 patients who were clinical stage II, and 31 patients had extrauterine lesions (total hysterectomy was performed in all patients, and therefore, the rate of parametrial metastases was unknown). Although the prognosis of patients with extrauterine lesions was worse than those with surgical stage II disease, no recommendations regarding surgical techniques were given. When cervical invasion was observed in the excised uterus, there was a higher rate of parametrial metastasis.\(^5,12,13\) However, there is no evidence of prognostic improvement due to radical hysterectomy in patients with parametrial metastases.

In Japan, some institutions perform extended simple total hysterectomy for clinical stage II patients with suspected stromal invasion or without obvious cervical stromal invasion. Extended simple total hysterectomy involves resection of a portion of the vagina in addition to a total hysterectomy or modified radical hysterectomy.

When surgical techniques are considered for clinical stage II patients, first there is the question of the accuracy of the diagnosis. There is little evidence of high quality from studies of surgical techniques. In Japan, each institution tends to favor either total hysterectomy, modified radical hysterectomy, or radical hysterectomy. We can also assume that there is no uniformity among institutions in preoperative methods of diagnosing cervical invasion, or standards for selecting surgical methods. A consensus meeting was held in creating these guidelines. The most heated discussion was on this CQ, and a consensus could not be obtained for recommendations that provided direct answers for this CQ. Further discussion therefore pertained only to “cases with obvious cervical stromal invasion” in which consensus was thought to be relatively easy to obtain. The recommendation given here corresponds to the view of the majority of the participants. In this case, ‘obvious cervical invasion’ indicates invasion evident macroscopically or through diagnostic imaging such as MRI. We cannot say, however, that these recommendations were agreed upon by all participants. At the present time, we can only say that they represent the most commonly accepted opinions. This CQ represents one of the greatest unresolved issues in the treatment of uterine body cancer. More high quality evidence needs to be gathered in both Japan and overseas.

**References**


CQ03

What are the benefits of pelvic lymphadenectomy?

**Recommendations**
1. Pelvic lymphadenectomy is significant in enabling determination of accurate staging (Grade A).
2. No therapeutic benefits have been demonstrated for pelvic lymphadenectomy (Grade C).

**Background and Objectives**
Pelvic and para-aortic lymph node dissections (or biopsies) are required procedures for determination of FIGO surgical staging. In the NCCN Clinical Practice Guidelines, both pelvic and para-aortic lymphadenectomies were recommended, irrespective of whether myometrial invasion was present. In the PDQ and NCI, pelvic and para-aortic lymph node biopsies were recommended under certain conditions. We examined the use of pelvic lymphadenectomy in terms of diagnostic staging, its therapeutic benefits, and its indications.

**Explanations**
A number of studies of the therapeutic benefits of pelvic lymphadenectomy have found that good survival rates were obtained through excision of a large number of lymph nodes.\(^1\)\(^-\)\(^5\) None of these studies were randomized controlled trials. The GOG examined the benefits of pelvic lymphadenectomy in 9,185 surgical stage I patients and 881 stage II patients. Lymphadenectomy was reported to significantly improve the 5 year survival rate in stage I, G3 patients.\(^6\) This suggests that the decision of whether to perform pelvic lymphadenectomy should be made intraoperatively by the surgeon and pathologist based on pathological examination of the excised uterus. In patients at clinical stage I or with microscopic cervical invasion, survival rates and progression-free survival rates were significantly improved when 12 or more pelvic lymph nodes were excised.\(^5\) In particular, excision of 12 or more pelvic lymph nodes greatly affected the 5 year survival rate and the disease-free survival rate in the high risk group (G3; >1/2 myometrial invasion; serous or clear cell adenocarcinoma). These results emphasize the significance of pelvic lymphadenectomy. On the other hand, there are reports that pelvic lymphadenectomy does not improve the prognosis for stage I\(^7\)\(^,\)\(^8\) or stage II cases,\(^9\) failing to demonstrate any therapeutic benefit.

Many reports have indicated that pelvic lymphadenectomy is necessary in the accurate determination of staging and selection of postoperative treatment, but did not state any therapeutic benefits of pelvic lymphadenectomy.\(^10\)\(^-\)\(^12\) For instance, one study was conducted in which systematic pelvic lymphadenectomy and para-aortic lymphadenectomy were performed in addition to postoperative chemotherapy and radiotherapy, which were performed if lymph node metastases were detected. Their results indicated improved survival rates for cases with metastatic disease.\(^13\)

There have also been a number of studies with patients in whom pelvic lymphadenectomy was unnecessary.\(^14\)\(^-\)\(^16\) Patients not requiring pelvic lymphadenectomy were those with myometrial invasion of \(\leq 1/2\), G1 or G2 with \(\leq 2\) cm diameter, no obvious extrauterine disease,\(^14\) no clinical findings that raised suspicion of metastases,\(^15\) surgical stage
Ia or Ib, G1 or G2, and diploid DNA index.\textsuperscript{16} Even if there were no independent risk factors for pelvic lymph node metastases, metastases were detected in 3.6% of cases. It was therefore suggested that caution should be exercised in omitting pelvic lymphadenectomy.\textsuperscript{17} Pelvic lymph node metastases were present in 4% of cases with no myometrial invasion. Some would assert that pelvic lymphadenectomy should be performed in all cases, unless its risks outweigh the possible therapeutic benefits.\textsuperscript{3} In actuality, there is no method which unfailingly predicts pelvic lymph node metastases.\textsuperscript{17,18} One school of thought holds that it is sufficient to sample only the internal, external and common iliac lymph nodes, which have the highest frequency of metastasis among the pelvic lymph nodes.\textsuperscript{8} Presently, pelvic lymphadenectomy can be omitted in cases of G1 endometrioid adenocarcinoma with no macroscopic myometrial invasion and no intraoperative evidence of extrauterine disease.

**References**


CQ04

What are the benefits of para-aortic lymphadenectomy in addition to pelvic lymphadenectomy?

**Recommendations**
(1) It aids determination of accurate staging (Grade A).
(2) No therapeutic benefits have been established for para-aortic lymphadenectomy (Grade C).

**Background and Objectives**
Pelvic and para-aortic lymph node dissections (or biopsies) are required procedures for determination of FIGO surgical staging. In the NCCN Clinical Practice Guidelines, both pelvic and para-aortic lymphadenectomies were recommended, irrespective of whether myometrial invasion was present. In the PDQ and NCI, pelvic and para-aortic lymph node biopsies were recommended under certain conditions. We examined the use of para-aortic lymphadenectomy in terms of diagnostic staging, its therapeutic benefits, and its indications.

**Explanations**
Para-aortic lymph node metastasis has been reported to be an important prognostic factor.\(^1\,^2\) There have also been reports of the therapeutic benefits of para-aortic lymphadenectomy.\(^3\,^5\)

Mariani et al.\(^5\) stated that para-aortic lymphadenectomy was a predictive factor for the 5 year survival rate and the 5 year progression-free rate. However, no evidence has been forthcoming from randomized controlled trials, and the therapeutic benefits of this procedure have not been confirmed. As for pelvic lymphadenectomy, individualization of postoperative treatment is made possible by accurate staging including para-aortic lymphadenectomy. This process has resulted in improved outcomes. Some studies therefore indicate that para-aortic lymphadenectomy should be performed.\(^1\,^6\,^7\) Onda et al.\(^6\) reported that good survival rates were obtained in cases with para-aortic lymph node metastases using postoperative chemotherapy followed by radiotherapy. As previously mentioned in CQ03, some reports concluded that pelvic lymphadenectomy was unnecessary. These reports also stated that para-aortic lymphadenectomy was unnecessary. However, another report indicated that if there was no pelvic lymph node metastasis after performing pelvic lymphadenectomy and if peritoneal cytology was negative, para-aortic lymphadenectomy was unnecessary.\(^8\) Presently, para-aortic lymphadenectomy can be omitted if it is endometrioid adenocarcinoma G1 or G2, has myometrial invasion of $\leq 1/2$, and has no extrauterine lesion intraoperatively. Cragun et al.\(^9\) stated that excision of 12 or more pelvic lymph nodes improved the prognosis of early uterine body cancer, but they also reported that prognosis was not associated with the performance of para-aortic lymphadenectomy. Many reports stated that the frequency of single metastasis to para-aortic lymph node was a few percent.\(^2\,^7\,^10\,^11\) However, there is still no consensus on the omission of para-aortic lymphadenectomy if there is no pelvic lymph node metastasis in the light of the abovementioned frequency.
For the risk factors of para-aortic lymph node metastasis, the following are considered important: deep myometrial invasion, \(^1,7,8,12\) cervical invasion, \(^13\) positive peritoneal cytology, pelvic lymph node metastasis, \(^8,12\) degree of histological differentiation, \(^1,7\) lymphatic vessel invasion, \(^12\) serum CA 125 level, \(^9,13\) and volume index. \(^13\) Toda et al. \(^13\) indicated that serum CA 125 level and volume index were independent risk factors for pelvic lymph node metastasis and that para-aortic lymphadenectomy was unnecessary in cases without a risk factor. Yokoyama et al. \(^1\) reported that para-aortic lymphadenectomy was necessary for all cases other than stage Ia G1 and stage IV.

[References]
3. Fanning J. Long-term survival of intermediate risk endometrial cancer (Stage IG3, IC, □) treated with full lymphadenectomy and brachytherapy without teletherapy. Gynecol Oncol 2001 ; 82 : 371-4(Level □ )
CQ05

Does partial vaginectomy reduce the rate of vaginal stump recurrence?

**Recommendations**
Partial vaginectomy has not been shown wall to reduce the vaginal stump recurrence rate (Grade C).

**Background and Objectives**
We examined whether the vaginal stump recurrence rate can be reduced by partial vaginectomy.

**Explanations**
Studies have comparing total hysterectomy and radical hysterectomy for surgical stage II disease found that the 5 and 10 year survival rates were significantly better for radical hysterectomy. \(^1\,^2\) Sartori et al.\(^1\) reported no vaginal stump recurrence in patients who underwent radial hysterectomy, indicating that partial vaginectomy reduces vaginal stump recurrence. Mariani et al.\(^2\) compared patients who underwent total hysterectomy with resection of 2 cm of vaginal wall with those who underwent radical hysterectomy with resection of \(\geq 2\) cm of vaginal wall. They reported significantly less vaginal stump recurrence in the latter group, but did not discuss the therapeutic benefits of vaginectomy.

Another study compared total hysterectomy and radical hysterectomy for clinical stage II disease, reporting no difference in survival rates between procedures. They accordingly recommended total hysterectomy.\(^3\)

We found two studies of partial vaginectomy performed for clinical stage I disease,\(^4,^5\) neither of which discussed its therapeutic benefits. In Japan, some institutions perform modified radical hysterectomy with partial vaginectomy for stage I, and radical hysterectomy for stage II disease.\(^6,^7\) No evidence has been forthcoming, however, concerning the therapeutic benefits of partial vaginectomy. At present, partial vaginectomy is performed in conjunction with extended simple total hysterectomy, modified radical hysterectomy, and radical hysterectomy, although there are differences between institutions in Japan. For the high risk group for recurrence, we need to further investigate the benefits of extended simple total hysterectomy with resection of 1-2 cm of the vaginal wall. Vaginal stump recurrence is relatively uncommon in Japan. As indicated in a study (JGOG 2023) conducted by the Japanese Gynecologic Oncology Group, this low recurrence rate may be due to the widespread use of extended surgery in which portions of the parametrium and vaginal wall are resected.

Since the majority of foreign papers deal with the concurrent use of radiotherapy, it is difficult to confirm the benefits of partial vaginectomy and to make comparisons.

**References**


Is ovarian preservation possible in young patients?

**Recommendations**

Even in young patients, ovarian preservation should only be performed with caution (Grade C).

**Background and Objectives**

We examined the indications for and problems with ovarian preservation in young patients with uterine body cancer.

**Explanations**

The problems of ovarian preservation are metastases to the ovaries and of the increased risk of ovarian cancer. Today uterine body cancer is on the increase, even in young people, and ovarian preservation is a major issue in young patients with this condition.

Reported ovarian metastatic rates for clinical stage I and II disease are approximately 5% to 10% respectively. The rate of uterine body cancer metastasizing to ovaries is therefore not clinically negligible, so bilateral salpingo-oophorectomy is generally performed regardless of the stage. Our search of the literature failed to yield any prospective studies examining the therapeutic benefits of bilateral salpingo-oophorectomy in the early stages of uterine body cancer. The rate of ovarian metastasis is high for clinical stage II disease, and bilateral salpingo-oophorectomy should be performed. However, there is a dearth of high level evidence regarding this matter. In studies of young patients in whom ovarian preservation becomes an issue, there was no difference in the rate of ovarian metastasis between a group of patients ≤45 years old and a group ≥46 years old.

A number of studies have reported that the incidence of synchronous uterine body and ovarian cancers is high in younger patients. Gitsch et al. reported that synchronous ovarian cancer was seen in 5 out of 17 body patients with cancer of the uterine body (29.4%) who were ≤45 years old. In Sweden, a large-scale study examined almost all cases of uterine body cancer (19,128 patients) and ovarian cancer (19,440 patients) registered between 1961 and 1998. It demonstrated a strong correlation between uterine body cancer and ovarian cancer. In ≤40 year old patients, the frequency of ovarian cancer occurring synchronously with endometrioid adenocarcinoma of the uterine body was very high. In Japan, the reported incidence of body cancer and synchronous ovarian cancer is 2.2% to 6.6%, although these studies did not examine the association with age.

Based on the above results, one cannot avoid the conclusion that the safety of ovarian preservation is low. Evans-Metcalf et al. suggested that ovarian preservation may be feasible for younger patients with well-differentiated stage Ia cancer, but further studies are needed.

No studies have demonstrated any benefits for ovarian wedge resection, sometimes performed to confirm the presence of ovarian metastases.

**References**


In surgical staging, inguinal lymph node metastases are often mentioned. Should inguinal lymph nodes be biopsied?

**Recommendations**

1. If inguinal lymphadenopathy is detected in preoperative imaging such as CT scanning, biopsy should be performed to determine the surgical stage (Grade C).
2. If inguinal lymphadenopathy is not detected, the benefits of biopsy are not yet clear (Grade D).

**Background and Objectives**

From FIGO staging (1988) and the General Rules for Clinical and Pathological Management of Uterine Body Cancer (1994) of Japan, inguinal lymph nodes (Figure 1b, (9)) are not considered to be regional lymph nodes for uterine body cancer, and inguinal metastases are regarded as distant metastases. We examined the indications and therapeutic benefits of inguinal lymph node biopsy.

**Explanations**

There are three routes for lymphogenous metastasis from the uterus. The first route travels from the uterine cervix via the cardinal ligament to the pelvic lymph nodes and then to the para-aortic lymph nodes. The second route travels along the infundibulopelvic ligament, via the ovarian vessels, to the para-aortic lymph nodes. The third route travels along the round ligament of the uterus to the inguinal lymph nodes. The main routes from the uterine fundus are via the infundibulopelvic ligament, round ligament, and cardinal ligament pathways. The main route from the lower portion of the uterine corpus is via the cardinal ligament pathway. Takeshima et al. examined the lymph node metastasis predilection sites in 393 cases of clinical stage II uterine body cancer. These were the internal iliac nodes in 5.6%, external iliac nodes in 7.1%, and obturator nodes in 6.9% of cases. The frequency of metastasis to the suprainguinal nodes is 3.1% (unknown for inguinal nodes). The main routes for lymphogenous metastasis are therefore the infundibulopelvic ligament and cardinal ligament pathways. The frequency of metastasis via the round ligament pathway is low. Most cases positive for inguinal lymph node metastases also have pelvic lymph node metastases.

A case report presented a case of inguinal lymph node metastases without pelvic lymph node metastasis in a patient with clear cell adenocarcinoma confined to the endometrium. It is therefore important to confirm whether inguinal lymphadenopathy is present.

Several case reports have discussed therapeutic outcomes in cases with inguinal lymph node metastases. There have not been any studies with large subject numbers examining the benefits of inguinal lymph node biopsy. If inguinal lymphadenopathy is detected in preoperative imaging such as CT scanning, biopsy should be performed to determine the surgical stage.
【References】


10. Alders JG, Abeler V, Kolstad P. Stage IV endometrial carcinoma: a clinical and histopathological study of 83 patients. Gynecol Oncol 1984; 17:75-84 (Level III)
### Table 4 Comparison of Terminologies

<table>
<thead>
<tr>
<th>Japan Society of Obstetrics and Gynecology</th>
<th>Japan Society of Clinical Oncology</th>
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<tr>
<td><strong>(1) Para-aortic lymph nodes</strong></td>
<td><strong>Para-abdominal aortic lymph nodes</strong></td>
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<td>(inferior border of the left renal vein to the root of the inferior mesenteric artery)</td>
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<tr>
<td><strong>(1) Para-aortic lymph nodes</strong></td>
<td><strong>Para-abdominal aortic lymph nodes</strong></td>
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<td>(root of the inferior mesenteric artery to the aortic bifurcation)</td>
<td>(root of the inferior mesenteric artery to the aortic bifurcation)</td>
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<td><strong>Lymph nodes at the aortic bifurcation</strong></td>
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<td><strong>(7) Sacral lymph nodes (#412)</strong></td>
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<td><strong>Lateral sacral lymph nodes</strong></td>
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<td><strong>(2) Common iliac lymph nodes (#413)</strong></td>
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<td><strong>(3) External iliac lymph nodes (#403)</strong></td>
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<td><strong>(4) Suprainguinal lymph nodes (#401)</strong></td>
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<td><strong>(8) Parametrial lymph nodes (#405)</strong></td>
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<td><strong>(9) Inguinal lymph nodes (#401a)</strong></td>
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The names of structures established in the “General Rules for Clinical and Pathological Management of Uterine Body Cancer; revised, 2nd ed.” (Japan Society of Obstetrics and Gynecology, Japanese Society of Pathology, and Japan Radiological Society, editors; 1996) are considered the names commonly proposed for various organs and established in the “General Rules and Statements on Cancer: Japan Society of Clinical Oncology” (Japan Society of Clinical Oncology: Joint Committee on Cancer Treatment, editors; 1991). The use of numbers for lymph nodes was eliminated in the “Japan Society of Clinical Oncology: Classification of Regional Lymph Nodes in Japan” (Japan Society Clinical Oncology, editor; 2002).

Figure 1 “General Rules for Clinical and Pathological Management of Uterine Body Cancer; revised, 2nd edition” (1996, Kanehara & Co.)

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<th>Ureter</th>
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<tr>
<td>Obturator nerve</td>
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<td>Structures (1)-(9) are described in Table 4.</td>
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</table>

a. Classification of para-aortic lymph nodes and their names  
b. Lymph nodes related to uterine body cancer treatment and their names
Figure 2 “Japan Society of Clinical Oncology: Classification of Regional Lymph Nodes in Japan” (2002, Kanehara & Co.)

<table>
<thead>
<tr>
<th>腹部大動脈周囲リンパ節</th>
<th>Para-abdominal aortic lymph nodes</th>
<th>胸管</th>
<th>Thoracic duct</th>
</tr>
</thead>
<tbody>
<tr>
<td>b2群 大脈前リンパ節</td>
<td>b2 group Precaval lymph nodes</td>
<td>上腸間膜動脈</td>
<td>Superior mesenteric artery</td>
</tr>
<tr>
<td>大脈外側リンパ節</td>
<td>Laterocaval lymph nodes</td>
<td>腹部大動脈周囲リンパ節</td>
<td>Para-abdominal aortic lymph nodes</td>
</tr>
<tr>
<td>大動脈分岐部リンパ節</td>
<td>Lymph nodes at the aortic bifurcation</td>
<td>a2群 大動脈後リンパ節</td>
<td>a2 group Retroaortic lymph nodes</td>
</tr>
<tr>
<td>正中仙骨リンパ節</td>
<td>Median sacral lymph nodes</td>
<td>大動脈外側リンパ節</td>
<td>Lateroaortic lymph nodes</td>
</tr>
<tr>
<td>総腸骨リンパ節</td>
<td>Common iliac lymph nodes</td>
<td>b1群 大動脈後リンパ節</td>
<td>b1 group Retrocaval lymph nodes</td>
</tr>
<tr>
<td>外腸骨リンパ節</td>
<td>External iliac lymph nodes</td>
<td>大動脈外側リンパ節</td>
<td>Lateroaortic lymph node</td>
</tr>
<tr>
<td>閉鎖神経</td>
<td>Obturator nerve</td>
<td>腹部大動脈周囲リンパ節</td>
<td>Para-abdominal aortic lymph nodes</td>
</tr>
<tr>
<td>閉鎖リンパ節</td>
<td>Obturator lymph nodes</td>
<td>大動脈前リンパ節</td>
<td>Interaortococavallymph node</td>
</tr>
<tr>
<td>子宮円索</td>
<td>Round ligament of the uterus</td>
<td>大動脈前リンパ節</td>
<td>Preaortic lymph node</td>
</tr>
<tr>
<td>基靭帯リンパ節</td>
<td>Parametrial lymph nodes</td>
<td>下腸間膜動脈</td>
<td>Inferior mesenteric artery</td>
</tr>
<tr>
<td></td>
<td>卵巣動脈</td>
<td>Ovarian artery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>閉鎖リンパ節</td>
<td>Obturator lymph nodes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>大腿上リンパ節</td>
<td>Suprafemoral lymph nodes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>鼠径靭帯</td>
<td>Inguinal ligament</td>
<td></td>
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<td></td>
<td>深鼠径リンパ節</td>
<td>Deep inguinal lymph nodes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>浅鼠径リンパ節</td>
<td>Superficial inguinal lymph nodes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>腋動脈索</td>
<td>Medial umbilical ligament</td>
<td></td>
</tr>
</tbody>
</table>
Is omentectomy necessary?

Recommendations
If macroscopic intrapelvic or peritoneal dissemination is observed, or if the tissue diagnosis is serous adenocarcinoma or clear cell adenocarcinoma, it is diagnostically preferable to perform omentectomy and examine the resected specimen for dissemination (Grade C)

Background and Objectives
If omental metastases are detected pathologically, the case is surgical stage IVb, and the information obtained by omentectomy is important in determining postoperative treatment. We examined the indications and diagnostic and therapeutic benefits of omentectomy.

Explanations
The omentum contains many blood vessels including capillaries. Omental milky spots, found throughout the omentum, are omentum-specific lymphoid tissues that are involved in the intraperitoneal host defense mechanism. The omentum itself can be considered as a collection of lymph nodes bordered by a space, the peritoneal cavity. Omentectomy can therefore be regarded as a type of lymphadenectomy.

In the National Comprehensive Cancer Network (NCCN) Guidelines (version 1, 2005), even if the tumor is thought to be confined to the uterus, the following are considered necessary: detailed examination and palpation of the intraperitoneal structures (peritoneal surface, liver, omentum, diaphragm, and intestinal tract). If the CA-125 level is high or extraterine spread is indicated in MRI/CT scans, omentectomy is a useful part of the search for intraperitoneal dissemination, along with ascitic cytology and peritoneal biopsy (diaphragmatic biopsy).

Studies have examined the correlations between various pathological factors and omental metastases in clinical stage I patients who underwent surgery. Saygili et al. retrospectively examined 97 cases with clinical stage I disease and found omental metastases in 6% of patients (of whom 2/3 had microscopic metastases). Omental metastases were seen in 20% of patients with myometrial invasion of >1/2, 22% of G3 patients, 40% of patients with clear cell adenocarcinoma, 33% of patients with adnexal metastases, 45% of patients with positive ascitic cytology, and 30% of patients with pelvic lymph node metastases. Chen et al. prospectively examined 84 patients with clinical stage I disease. Omental metastases were seen in 8.3% of all patients (of whom 5/7 had microscopic metastases), in 39% of patients with clear cell adenocarcinoma, 38% of patients with lymph node metastases, and 75% of patients with adnexal metastases.

From the above evidence, omental biopsy is possibly useful in staging. In particular for the following cases, omentectomy and histopathological determination of dissemination status are considered to be of diagnostic significance: myometrial invasion of >1/2, histological type of endometrioid adenocarcinoma G3, serous adenocarcinoma or clear cell adenocarcinoma, macroscopic adnexal metastases, and macroscopic pelvic or peritoneal dissemination. If dissemination is not macroscopically evident, and the primary is not
histologically highly malignant, the benefits of omentectomy have not been established. In this text, omentectomy refers to incision biopsy of the omentum (partial resection).

【References】
Is rapid intraoperative pathological diagnosis useful for the determination of histological type and degree of differentiation?

Recommendations
In cases where it is difficult preoperatively to determine the histological type and degree of differentiation, rapid intraoperative pathological diagnosis can confirm the necessity of pelvic lymphadenectomy, para-aortic lymphadenectomy, or omentectomy (Grade C).

Background and Objectives
Some are questioning the necessity of cytoreductive surgery is becoming the subject of discussion tofrom the viewpoint of avoiding surgical complications, such as lower limb lymphedema following lymphadenectomy. We therefore examined the benefits of rapid intraoperative pathological diagnosis and the indications for surgical techniques, in particular lymphadenectomy.

Explanations
With endometrial biopsy, the histological type and degree of differentiation can be diagnosed to some extent preoperatively. However, since heterogeneity can exist within a tumor, rapid intraoperative pathological diagnosis from the resected uterus can help in obtaining a more accurate diagnosis.

The NCCN Guidelines (version 1, 2005) indicated that 15-20% of tumors graded by preoperative endometrial biopsy were upgraded after examination of fixed specimens of the resected uterus. They stated that lymphadenectomy can be omitted if the patient has G1 disease and is negative for myometrial invasion in preoperative investigations. They also stated that, ideally, rapid pathological diagnosis should be used to determine the degree of differentiation and whether there is myometrial invasion. In addition, they recommend pelvic lymphadenectomy and para-aortic lymphadenectomy for all patients with G2/G3 disease, myometrial invasion of ≥1/3, cervical invasion, or positive lymph node metastasis.

Some studies have examined the diagnostic accuracy for the degree of differentiation with rapid intraoperative pathological diagnosis. The overall accuracy was 84-92%; 93-97% for G1, 66-92% for G2, and 40-86% for G3. Lower diagnostic accuracies were achieved with the less differentiated cases. Rapid intraoperative pathological diagnosis was unable to diagnose 71% of histological types with poor prognosis. These studies concluded that preoperative endometrial curettage and biopsy need to be used in conjunction with intraoperative pathological diagnosis to increase the diagnostic accuracy of the histological type.

A number of studies have indicated that the indications for lymphadenectomy are determined by the intraoperative degree of differentiation and extent of myometrial invasion. However, there are no standardized criteria. Cases in which lymphadenectomy could be omitted were reported to be: G1 with <1/3 myometrial invasion, G2 with <1/3 myometrial
invasion, G1 with <1/2 myometrial invasion, and G1/G2 with less than inner 1/3 myometrial invasion.

The above discussion includes the use of rapid pathological diagnosis to determine the histological type and degree of differentiation. However, a consensus has yet to be reached on how this method can be used to determine the indications for lymphadenectomy and omentectomy. In addition, there have not been any prospective studies on whether outcomes are improved using rapid pathological diagnosis.

**References**


CQ10

How should the degree of myometrial invasion be determined intraoperatively?

**Recommendations**
An incision is made in the uterine wall at the site of the deepest invasion according to the preoperative MRI findings and the macroscopic findings of the resected uterus. The depth of myometrial invasion should be confirmed by macroscopic examination of the sectioned surface (Grade C).

**Background and Objectives**
We examined methods of intraoperatively determining the depth of myometrial invasion, including the accuracy of rapid intraoperative pathological diagnosis. We examined the indications for the surgical techniques, in particular lymphadenectomy.

**Explanations**
The depth of myometrial invasion is determined by making an incision in the uterine wall at the site of the deepest invasion according to the preoperative MRI findings and the macroscopic findings of the resected uterus. The cut surface is then examined macroscopically. The area of lateral (elevated) growth is excluded. The depth of invasion is compared with the uterine wall thickness. If the tumor is extensive, the original wall thickness may be unclear. For G1 disease, the area of deepest myometrial invasion often shows expansive spread, so the greatest depth of invasion is easily determined. In G3 disease, the tumor does not form large cancer nests at the site of deepest invasion, and the greatest depth of invasion is often difficult to determine macroscopically. This leads to reduced accuracy for macroscopic determinations of the depth of myometrial invasion.¹

The diagnostic accuracy for myometrial invasion (<1/2, >1/2) by macroscopic observation is 88-91%.²³ In particular, macroscopic diagnosis of G2/G3 lesions is reported to be difficult.⁴ The diagnostic accuracy for myometrial invasion by rapid intraoperative pathological diagnosis was reported to be 87-91% in one study (if classified as confined to the endometrium: inner 1/3, middle 1/3, outer 1/3),⁵⁷ and 95% in another study (myometrial invasion: <1/2, >1/2).⁸ Rates of correct diagnosis have been reported to be higher with greater numbers of sections.⁶ When rapid intraoperative pathological diagnosis is combined with macroscopic examination, the diagnostic accuracy rises to 97%.¹⁰ However, the findings in 33% of G3 cases made by rapid intraoperative pathological diagnosis were inconsistent with those determined from fixed specimens.¹¹ There are still problems that need to be addressed in the determination of myometrial invasion for G3 tumors.¹²

The NCCN Guidelines (version 1, 2005)¹ state that lymphadenectomy can be omitted if the preoperative investigations are negative for myometrial invasion, or for G1 disease with myometrial invasion confined to the inner 1/3 of the uterine wall. They also stated that, ideally, rapid pathological diagnosis should be used to determine the degree of differentiation and whether there is myometrial invasion. A number of studies have attempted to determine
the indications for lymphadenectomy based on the intraoperative degree of differentiation and myometrial invasion, although no standardized criteria have been agreed upon.\textsuperscript{2,5,7,9,11}

Omental metastases were detected in 20% of cases with >1/2 myometrial invasion.\textsuperscript{13} Omentectomy and histopathological evaluation of the extent of dissemination are indicated if the degree of myometrial invasion is >1/2.

As mentioned above, there is no consensus on the indications for lymphadenectomy and omentectomy based on rapid intraoperative pathological diagnosis. Our search of the literature yielded no prospective studies examining whether outcomes are improved using rapid pathological diagnosis. In addition, rapid pathological diagnosis cannot be performed in all institutions, and it is therefore unreasonable to use such a diagnostic method as a standard.

**References**

4. Goff BA, Rice LW. Assessment of depth of myometrial invasion in endometrial adenocarcinoma. Gynecol Oncol 1990 ; 38 : 46-8(Level III)
CQ11

Is rapid intraoperative pathological diagnosis useful for the detection of lymph node metastases?

**Recommendations**

We examined the status of lymph node metastases as determined by rapid intraoperative pathological diagnosis. The results indicated that there was insufficient evidence to recommend any change in surgical techniques (Grade C).

**Background and Objectives**

Attempts have been made to reduce intra- and postoperative complications and adverse reactions by the following processes: individualization of uterine body cancer surgery and identification of cases in which pelvic and para-aortic lymphadenectomy can be omitted. In this section, we will review past studies to determine whether accurate diagnosis of lymph node metastases can be made by rapid intraoperative pathology, and whether pelvic and para-aortic lymphadenectomy can be omitted in cases negative for lymph node metastases.

**Explanations**

Our search of the available literature yielded no studies investigating patients with suspected metastases from uterine body cancer and the omission of lymphadenectomy after submitting specimens for rapid intraoperative pathological diagnosis. We did find a study of cervical cancer, regarding frozen sections and fixed specimens of dissected lymph nodes. The specificity in the frozen specimens was 100%, but sensitivity was low at 68%. These results indicated that the wrong diagnosis might be made using frozen specimens of lymph nodes with very small metastatic lesions.\(^1\) Similar studies have been conducted for prostate and breast cancer, but no consensus has been reached.\(^2-4\) To answer this clinical question, the following issues must be addressed: how can a surgeon accurately detect lymph node metastases intraoperatively,\(^5\) and how to achieve diagnostic accuracy with frozen sections. This will require improvements in the accuracy of visual examination and palpation of lymph nodes, standardized methods of removing lymph nodes, and accurate pathological diagnosis. These issues are presently under evaluation in clinical trials. In addition, the benefits of intraoperative sentinel lymph node biopsy have not been established.

**References**

CQ12

Is positive peritoneal cytology an independent factor associated with a poor prognosis?

Recommendations
Positive peritoneal cytology is not an independent factor associated with a poor prognosis if surgery is performed to accurately determine the stage, and if there are no other factors associated with a poor prognosis apart from positive peritoneal cytology, or no findings of extrauterine spread (Grade B).

Background and Objectives
In 1988, FIGO adopted a new staging classification system for uterine body cancer. In this system, patients with positive peritoneal cytology are classified as stage IIIa. Positive peritoneal cytology has been established as a factor associated with a poor prognosis by univariate analysis, although the question of whether it is an independent factor has not yet been resolved.

Explanations
The relationship between positive peritoneal cytology and the prognosis is affected by whether the stage is determined as the clinical or surgical stage. A number of studies have reported that positive peritoneal cytology is an independent prognostic factor in clinical staging,\(^1,2\) and other studies have found that it is not an independent prognostic factor.\(^3,4\) Studies with patients in whom the retroperitoneal lymph nodes were thoroughly examined and surgery was performed to determine the surgical stage found that if the tumor was confined to the uterus, positive peritoneal cytology was not a predictor for a poor prognosis.\(^5,6\) Some studies reported that if the tumor had spread to an extrauterine site, positive peritoneal cytology became a factor associated with a poor prognosis.\(^7,8\) In studies where lymph nodes were not examined in all cases, or where evaluation of surgical stages also included patients who also underwent preoperative radiotherapy, some reported that positive peritoneal cytology was a factor associated with a poor prognosis,\(^9,10\) although others stated that it was not a factor associated with a poor prognosis.\(^11-14\) NCCN (version 1, 2005) recommends monitoring for patients with G1 and G2 uterine body cancer with tumor confined to the endometrium and otherwise positive only for peritoneal cytology.\(^15\) Summarizing the above studies, positive peritoneal peritoneal cytology is often accompanied by other factors associated with a poor prognosis (such as deep myometrial invasion, G3 disease, and findings of extrauterine spread). If there are no findings of extrauterine spread and no other factor associated with a poor prognosis, positive peritoneal cytology is not considered to affect recurrence or survival time. If there are findings of extrauterine spread or other factors associated with a poor prognosis, positive peritoneal cytology is associated with distant metastasis and intra-abdominal recurrence, and therefore with reduced survival time.\(^7\) In other words, positive peritoneal lavage cytology can be said to be a factor that amplifies the effect on survival of other factors associated with a poor prognosis.\(^8\)
[References]


7. Kadar N, Homesley HD, Malfetano JH. Positive peritoneal cytology is an adverse factor in endometrial carcinoma only if there is other evidence of extraterine disease. Gynecol Oncol 1992; 46: 145-9 (Level II)


CQ13

Is rapid intraoperative peritoneal cytology necessary for determination of the surgical technique?

**Recommendations**

There is insufficient evidence to support deciding the surgical technique based on the results of rapid intraoperative peritoneal cytology (Grade C).

**Background and Objectives**

In 1988, FIGO adopted a new staging classification system for uterine body cancer. Evaluation by peritoneal cytology became an essential part of staging. In this section, we will review the literature to determine whether the degree of tumor malignancy and metastatic status can be determined by intraoperative evaluation of peritoneal cytology, and whether surgical techniques should be modified according to the results.

**Explanations**

All available studies of peritoneal cytology in patients with uterine body cancer have involved postoperative evaluation. We were unable to find any clinical studies of the use of rapid intraoperative peritoneal cytology in determining the surgical technique. For uterine cervical cancer, some studies have compared exfoliative cytology and frozen specimens in evaluating lymph node metastases and peritoneal dissemination.\(^1\)\(^2\) One study also used imprint cytology with immunostaining of antioncogene p53 to examine the degree of malignancy.\(^3\) These studies are still at the clinical trial level, however. In addition, many studies have concentrated on examination of sentinel lymph nodes to evaluate breast cancer metastasis using imprint cytology. There is insufficient evidence at present to support the use of this method as a standard.\(^4\) Extrauterine spread of cancer is reported to be a factor associated with a poor prognosis in patients with positive peritoneal cytology.\(^5\)\(^-\)\(^8\) For patients with positive rapid intraoperative peritoneal cytology, consideration should be given to modification of the surgical technique from the aspect of cytoreductive surgery.\(^9\)

**References**

5. Kadar N, Homesley HD, Malfetano JH. Positive peritoneal cytology is an adverse factor in endometrial carcinoma only if there is other evidence of extrauterine disease. Gynecol Oncol 1992;46:145-9 (Level II) 
CQ14

Will endoscopic surgery become the standard surgical technique?

**Recommendations**
At present, endoscopic surgery has not been established as the standard surgical technique (Grade D).

**Background and Objectives**
In gynecological surgery, laparoscopic surgery is often performed for reasons of cosmetics, and reducing the duration of hospitalization, medical expenses and patient burden due to surgery. There is a body of thought that advises caution in applying laparoscopic surgery to malignant tumors. In this section, we will examine whether laparoscopy could become a standard technique as in conventional laparotomy for uterine body cancer.

**Explanations**
Although the subject numbers were small, a randomized trial was conducted compared laparotomy and laparoscopy-assisted vaginal total hysterectomy for uterine body cancer. The results indicated that laparoscopy-assisted vaginal total hysterectomy produced few complications in the perioperative stage, and there was no difference in patient outcomes compared to laparotomy.\(^1\) Some retrospective studies have also compared laparotomy and laparoscopy, stating that these procedures produce similar results in terms of patient outcomes and the number of resected lymph nodes.\(^2\)\(^-\)\(^8\) It has been suggested that laparoscopy could become a standard procedure in the early stages of uterine body cancer.\(^4\) Laparoscopic techniques vary between reports, however, and have yet to be standardized. In addition, in laparoscopy-assisted vaginal total hysterectomy, there have been reports of a significantly higher proportion of cases with positive peritoneal cytology, thought to be due to manipulator operation.\(^9\) For this method, there have also been reports of vaginal stump recurrence\(^10\) and recurrence at the trocar puncture site.\(^11\) At the present time, there is insufficient evidence to recommend laparoscopy as the standard technique which will replace laparotomy. More clinical studies with large patient numbers are required.

**References**
2. Eltabbakh GH. Analysis of survival after laparoscopy in women with endometrial carcinoma. Cancer 2002; 95: 1894-901(Level III)


**CQ15**

**Can lymphadenectomy be omitted if sentinel node biopsy is performed?**

**Recommendations**
There is insufficient evidence to support omission of retroperitoneal lymphadenectomy if the sentinel lymph node concept is applied (Grade C).

**Background and Objectives**
As part of the trend to individualization and minimization of surgery for uterine body cancer, attempts are being made to apply the sentinel lymph node concept to uterine body cancer. In this section, we will examine reports of such attempts, and whether the sentinel lymph node concept can be applied to uterine body cancer treatment.

**Explanations**
Methods of identifying sentinel lymph nodes are the dye method, RI method, and a combination of the two methods. There are also different types of tracers.\(^1\)\(^2\) In addition, the injection site can be the cervical region, the uterine body, or both. A standardized method has not been established.\(^4\) Niikura et al. were able to identify an average of 3.1 sentinel lymph nodes in 23 out of 28 patients by infusion of technetium-99m using a hysteroscope.\(^5\) The lymph nodes most often detected are the para-aortic, external iliac lymph, and obturator lymph nodes. At present, the sentinel lymph node concept has not yet been established as applicable for uterine body cancer. Sentinel lymph nodes should therefore be identified, and compared with the lymphadenectomy findings. Clinical trials are required to clarify this question.

**References**
CQ16

Is radiotherapy useful for inoperable patients who are elderly or who have other medical conditions?

**Recommendations**

Radiotherapy is recommended for these patients (Grade B).

**Background and Objectives**

Radiotherapy is performed for patients who are unsuitable for surgery for any reason.

**Explanations**

Surgery is the treatment of first choice for uterine body cancer. However, if patients are unsuitable for surgery because they are elderly or have other medical conditions, then radiotherapy is useful. Generally, the therapeutic outcomes for radiotherapy are inferior to those from surgery. However, since patient backgrounds and methods of staging differ between these treatment modalities, it is difficult to compare their outcomes. According to retrospective studies on mainly clinical stage I patients, the 5 year survival rate for radiotherapy alone was 60-80%.

Definitive radiotherapy is generally performed by a combination of whole-pelvis external-beam and intracavitary irradiation. Intrauterine tandem insertion of various applicators is the usual method overseas. In Japan, there are technical difficulties due to the low proportion of large uteri suitable for this method, limiting its popularity. Unlike the standard treatments for cervical cancer, standardized guidelines have not been established for uterine body cancer. Therefore, there are no clear criteria for which patients should concurrently undergo whole-pelvis external-beam irradiation. In inoperable patients who are elderly or have other medical conditions, radiotherapy should be considered after evaluation of their performance status. The quality of intracavitary irradiation can vary between institutions. Radiation source placement, evaluation method of dose, optimum dose, and fractionation regimen have not been standardized as for cervical cancer.

**References**
