# Évolutions récentes de la prise en charge des cancers de l'endomètre

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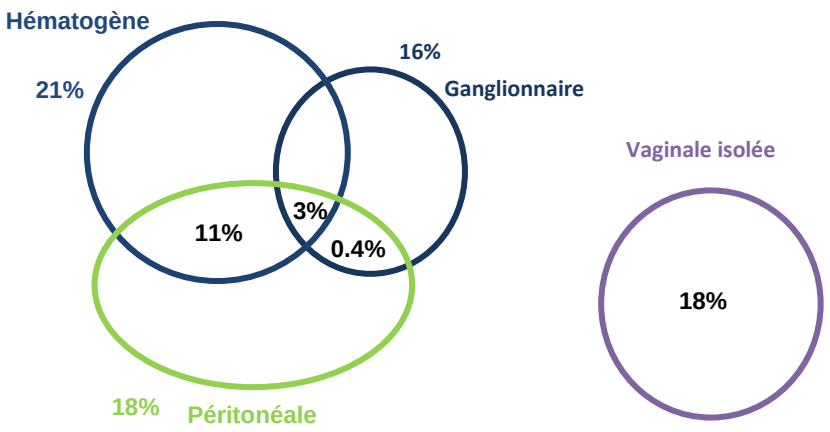
Table 1: Clinical and pathological features of endometrial carcinoma.

| | Type I (EEC) | Type II (NEEC) |
|---|---|---|
| Age | Pre- and perimenopausal | Postmenopausal |
| Behavior | Stable | Progressive |
| Grade | Low | High |
| Hyperplasia-precursor | Present | Absent |
| Unopposed estrogen | Present | Absent |
| Myometrial invasion | Minimal | Deep |
| Specific Subtypes | Endometrioid carcinoma | Non-endometrioid carcinoma |
| Prevalence | 70–80% | 10–20% |
| Risk factors | Obesity, anovulation, nulliparity and exogenous estrogen exposure | In atropic endometrium |

Table 2: Genetics features of endometrial carcinoma.

| | EEC | NEEC |
|---|---|---|
| Gain-of Function | | |
| *K-ras* | 15–30% | 0–5% |
| *Her2/neu* | 10–20% | 9–30% |
| *β-Catenin* | 31–47% | 0–3% |
| Loss-of Function | | |
| *PTEN* | 35–50% | 10% |
| *P53* | 10–20% | 90% |
| Genomic instability (microsatellite) | 20–40% | 0-5% |

*Okuda T & al 2010*




*Mariani A et al 2004*

# Sites de récidive

TABLE 3. Initial site of recurrence

| Initial Site of Recurrence | n (%) | Outcome | |
|---|---|---|---|
| | | Alive (%) | Dead (%) |
| Distant | 12 (37.5) | 3 (25.0) | 9 (75.0) |
| Vaginal stump | 8 (25.0) | 3 (37.5) | 5 (62.5) |
| Peritoneum | 7 (21.9) | 2 (28.6) | 5 (71.4) |
| Pelvic sidewall | 3 (9.4) | 0 (0.0) | 3 (100.0) |
| Lymph node | 2 (6.2) | 0 (0.0) | 2 (100.0) |
| Total | 32 (100.0) | 8 (25.0) | 24 (75.0) |

Bas et inter : 6% récidive, jms GG

Haut : 30% distant, 30% vag, 24% périt, 9% GG

IIIc : 4/11 distant, 3/11 périt, 3/11 vag, 1/11 GG

Grade, pfdeur, ELV, col, GG : distance

Col, GG : vag

*Watari H et al. 2009*

# Supériorité de la coelioscopie

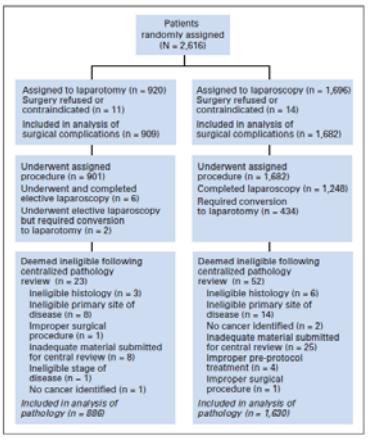


Fig 1. CONSORT diagram.

GOG LAP2

Stades I & IIa
GOG PS <4
HTNC
CP
CLA (min AMI)

*Walker J 2009*

**Table 2.** Pathology Findings

| Pathology | Laparotomy No. of Patients | Laparotomy % | Laparoscopy No. of Patients | Laparoscopy % | *P* |
|---|---|---|---|---|---|
| Surgical stage | | | | | .841* |
| IA | 310 | 35 | 609 | 37 | |
| IB | 266 | 30 | 451 | 28 | |
| IC | 104 | 12 | 193 | 12 | |
| IIA | 20 | 2 | 37 | 2 | |
| IIB | 32 | 4 | 61 | 4 | |
| IIIA | 42 | 5 | 96 | 6 | |
| IIIC | 84 | 9 | 143 | 9 | |
| IVB | 28 | 3 | 39 | 2 | |
| Unstaged† | 0 | 0 | 1 | < 1 | |
| Tumor type | | | | | .415 |
| Endometrioid adenocarcinoma | 727 | 82 | 1,297 | 80 | |
| Anaplastic/other carcinoma | 1 | < 1 | 0 | 0.0 | |
| Clear cell carcinoma | 11 | 1 | 31 | 2 | |
| Mixed epithelial carcinoma | 24 | 3 | 49 | 3 | |
| Serous carcinoma | 94 | 11 | 195 | 12 | |
| Sarcoma | 29 | 3 | 58 | 4 | |
| Peritoneal cytology | 866 | 98 | 1,569 | 96 | .052 |

**Table 2.** Pathology Findings

| Pathology | Laparotomy No. of Patients | Laparotomy % | Laparoscopy No. of Patients | Laparoscopy % | *P* |
|---|---|---|---|---|---|
| Type of nodes | | | | | .0009‡ |
| No nodes | 6 | 0.7 | 22 | 1.4 | .124 |
| Para-aortic nodes only | 3 | 0.3 | 6 | 0.4 | .905 |
| Pelvic nodes only | 28 | 3.2 | 109 | 6.8 | .0002§ |
| Both pelvic and para-aortic nodes | 840 | 95.8 | 1,476 | 91.5 | < .0001§ |
| Any pelvic nodes | 868 | 99 | 1,585 | 98 | .183 |
| Median, No. of nodes | 18 | | 17 | | |
| IQR, No. of nodes | 12-24 | | 12-23 | | |
| Any para-aortic nodes | 843 | 97 | 1,482 | 94 | .002§ |
| Median, No. of nodes | 7 | | 7 | | |
| IQR, No. of nodes | 4-11 | | 4-11 | | |

Abbreviation: IQR, interquartile range.
*Stage I and II *v* stage III and IV.
†Unstaged as a result of surgical complications.
‡Overall comparison between randomized groups on type of nodes.
§Statistically significant at adjusted significance level of $P = .01$.

*Walker J 2009*

**Table 4.** Complications and Adverse Events

| Complications and Adverse Events | Laparotomy No. of Patients | Laparotomy % | Laparoscopy No. of Patients | Laparoscopy % | P |
|---|---|---|---|---|---|
| Intraoperative complications | | | | | |
| Any | 69 | 8 | 160 | 10 | .106 |
| Bowel | 16 | 2 | 37 | 2 | |
| Vein | 23 | 3 | 45 | 3 | |
| Artery | 6 | 1 | 30 | 2 | |
| Bladder | 7 | 1 | 21 | 1 | |
| Ureter | 6 | 1 | 14 | 1 | |
| Other | 13 | 1 | 26 | 2 | |
| Postoperative adverse events (grade ≥ 2) | | | | | |
| Any | 191 | 21 | 240 | 14 | < .001 |
| Urinary tract infection | 27 | 3 | 35 | 2 | |
| Fever | 33 | 4 | 55 | 3 | |
| Pelvic cellulitis | 8 | 1 | 14 | 1 | |
| Abscess | 6 | 1 | 17 | 1 | |
| Venous thrombophlebitis | 12 | 1 | 14 | 1 | |
| Pulmonary embolus | 12 | 1 | 20 | 1 | |
| Bowel obstruction | 12 | 1 | 14 | 1 | |
| Ileus* | 68 | 8 | 66 | 4 | |
| Pneumonia | 19 | 2 | 15 | 1 | |
| Wound infection | 33 | 4 | 53 | 3 | |
| Urinary fistula | 1 | < 1 | 6 | < 1 | |
| Bowel fistula | 2 | < 1 | 6 | < 1 | |
| Congestive heart failure | 11 | 1 | 12 | 1 | |
| Arrhythmia* | 22 | 2 | 15 | 1 | |
| Perioperative and postoperative period | | | | | |
| Blood transfusion | 66 | 7 | 143 | 9 | .280 |
| Antibiotics | 211 | 23 | 274 | 16 | < .001 |
| Readmission | 59 | 7 | 96 | 6 | .413 |
| Reoperation | 22 | 2 | 48 | 3 | .523 |
| Treatment-related deaths | 8 | 1 | 10 | < 1 | .404 |
| Hospital stay > 2 days | 845 | 94 | 867 | 52 | < .001 |

*Significantly different at adjusted significance level of $P = .005$.

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**Table 3.** BMI and Conversion Rates by Institution Enrollment

| No. of Patients Enrolled | BMI (kg/m²) Mean | BMI (kg/m²) Median | Conversion Rate (%) |
|---|---|---|---|
| 1-50 | 29.6 | 28.1 | 27.0 |
| 51-100 | 29.8 | 28.6 | 28.3 |
| 101-150 | 30.5 | 29.7 | 23.5 |
| 151-200 | 29.1 | 27.7 | 14.9 |
| 201-250 | 29.4 | 27.9 | 25.3 |
| 251-300 | 28.7 | 27.2 | 22.5 |
| 300+ | 31.9 | 30.3 | 34.7 |

Abbreviation: BMI, body mass index.

Taux de conversion : 25,8%

Pb exposition : 56,7%
Extension K : 15,9%
Saignt : 11,3%

FDR : âge, IMC, stade

*Walker J 2009*

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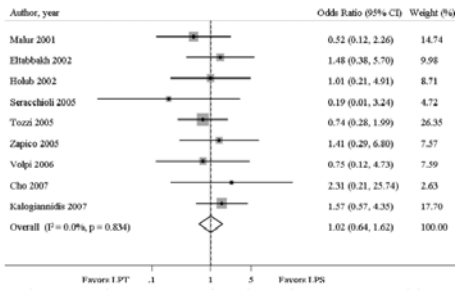
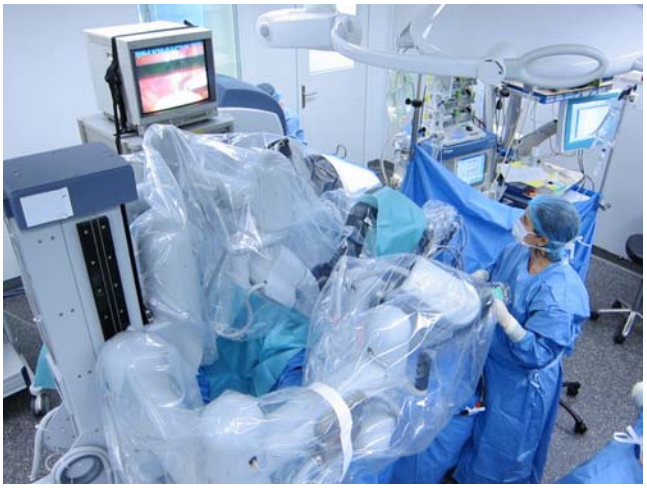
**Table 1.** Patient Demographics and Clinical Characteristics

| Characteristic | Laparoscopy Arm (n = 1,696) No. | Laparoscopy Arm (n = 1,696) % | Laparotomy Arm (n = 920) No. | Laparotomy Arm (n = 920) % |
|---|---|---|---|---|
| Site of first recurrence | | | | |
| Vagina | 27 | 1.6 | 14 | 1.5 |
| Pelvis | 22 | 1.3 | 9 | 1.0 |
| Abdomen | 23 | 1.4 | 11 | 1.2 |
| Liver | 11 | 0.7 | 5 | 0.5 |
| Lung | 34 | 2.0 | 14 | 1.5 |
| Bone | 1 | 0.1 | 4 | 0.4 |
| Nodal | 22 | 1.3 | 9 | 1.0 |
| Multiple | 30 | 1.8 | 16 | 1.7 |
| Unknown | 40 | 2.4 | 17 | 1.9 |
| No recurrence | 1,486 | 87.6 | 821 | 89.2 |




*Woong J & al. 2009*
*Walker J 2009*





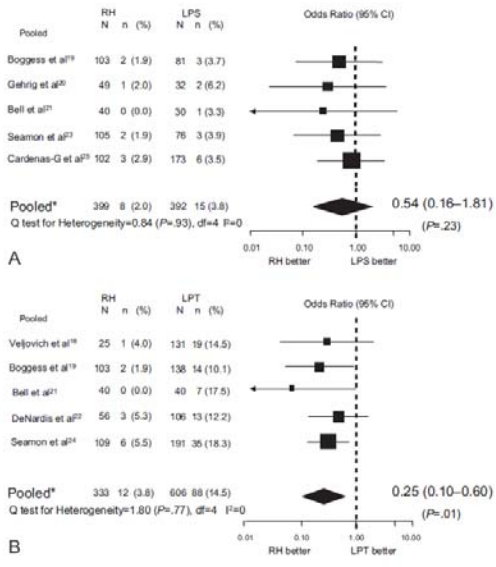



**Fig. 3.** Forest plots for other complications (stroke, ileus, lymphedema, nerve palsy, acute renal failure, lymphocyst, urinary retention). **A.** Comparison of robotic hysterectomy (RH) and laparoscopic hysterectomy (LPS). **B.** Comparison of robotic hysterectomy and laparotomy (LPT). Horizontal lines, 95% confidence interval (CI); black squares, point estimates of the odds ratio (OR); size of the squares, weight of the study in the meta-analysis inversely related to the variance of the OR; diamond and lateral tips, pooled OR plus 95% CI; vertical dashed line, "no difference" line between compared approaches; area to the left of the vertical dashed line indicates lower postoperative complication for robotic-assisted surgery. *Mixed-effect model: estimates adjusted for heterogeneity between studies.

*Gaia. Robotic Surgery in Endometrial Cancer Staging. Obstet Gynecol 2010.*

**TABLE 4.** Perioperative complications

| | Normal (n = 52) | Obese (n = 33) | Morbid Obese (n = 23) | *P* |
|---|---|---|---|---|
| Intraoperative complications | | | | |
| Vessel injury | 0 | 0 | 0 | — |
| Bowel injury | 0 | 1 | 0 | 0.5 |
| Nerve injury | 0 | 0 | 0 | — |
| Postoperative complications | | | | |
| Wound complications (total) | 3 | 5 | 2 | 0.2 |
| Requiring surgical intervention | 0 | 0 | 0 | |
| Requiring oral antibiotics | 0 | 3 | 1 | |
| Noninfected discharge | 2 | 2 | 1 | |
| Hematoma | 1 | 0 | 0 | |
| Urinary tract infection | 1 | 1 | 1 | 0.3 |
| Need for transfusion | 1 | 2 | 0 | 0.4 |
| Cardiovascular morbidity | 0 | 0 | 0 | — |
| Thromboembolic morbidity | 0 | 1 | 0 | 0.5 |
| Ileus | 0 | 2 | 0 | 0.1 |
| Rehospitalization | 0 | 3 | 0 | 0.04 |
| Delirium/ascites | 1 | 2 | 0 | — |
| Major complications | 0 | 1 | 0 | 0.5 |
| Mortality | 0 | 0 | 0 | — |

*Lau S & al. 2012*

| | | Cœlioscopie (n=106) | Robot (n=40) | P |
|---|---|---|---|---|
| Complications n (%) | Per-opératoires | 12 (11,3%) | 0 | 0,03 |
| | Post-opératoires immédiates | 12 (11,3%) | 4 (10%) | 1 |
| | Post-opératoires à distance | 12 (11,3%) | 6 (15%) | 0,577 |
| Classification des complications post-opératoires selon Clavien-Dindo n (%) | II | 16 (61,5%) | 7 (77,8%) | 0,118 |
| | IIIA | 2 (7,6%) | 9 (22,2%) | |
| | IIIB | 8 (30,7%) | 0 | |
| | IVA | 0 | 0 | - |
| | IVB | 0 | 0 | - |
| | V | 0 | 0 | - |

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% malades

| | G1 | G2 | G3 |
|---|---|---|---|
| ≤50% | 62% | | |
| >50% | 30% | | 8% |

pN1

| | G1 | G2 | G3 |
|---|---|---|---|
| ≤50% | 5% | | |
| >50% | 10% | | 28% |

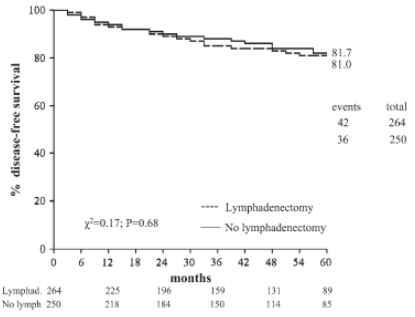
Données de D Chi, classées selon ESMO 2008

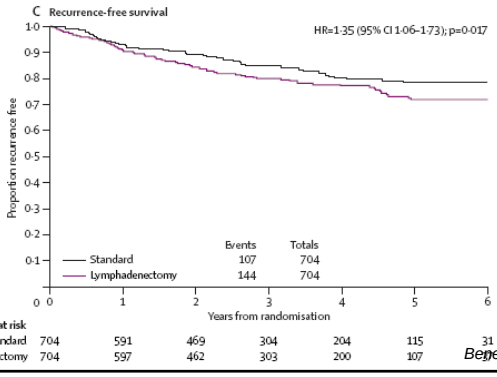
*Chi D et al. 2008*

**Table 5.** Site of disease recurrence by treatment arm*

| Recurrence site | Lymphadenectomy arm (n = 264) | No-lymphadenectomy arm (n = 250) |
|---|---|---|
| No recurrence, No. (%) | 231 (87.5) | 217 (86.8) |
| Recurrence, No. (%) | 34 (12.9) | 33 (13.2) |
| Lung | 8 (3) | 8 (3.2) |
| Intraperitoneum | 8 (3) | 7 (2.8) |
| Vagina | 7 (2.6) | 6 (2.4) |
| Lymph node | 4 (1.5) | 4 (1.6) |
| Bone | 4 (1.5) | 3 (1.2) |
| Liver | 2 (0.7) | 3 (1.2) |
| Missing data | 3 (1.1) | 3 (1.2) |

* Sum of the recurrences does not equal 100% because some patients suffered from concurrent multiple-site recurrences.




*ASTEC 2008*

*Benedetti Panici PL & al 2008*

| Outcome | Radiotherapy (n=354) | | | Control (n=360) | | |
|---|---|---|---|---|---|---|
| | Number | 5-year % | SE | Number | 5-year % | SE |
| **Locoregional relapse** | 11 | 4·2 | 1·3 | 40 | 13·7 | 2·1 |
| Vaginal vault | 5 | 1·6 | 0·7 | 19 | 6·4 | 1·4 |
| Vagina | 2 | 0·7 | 0·5 | 11 | 3·8 | 1·2 |
| Pelvic | 4 | 2·0 | 1·0 | 10 | 3·4 | 1·1 |
| **Distant metastasis** | 24 | 7·9 | 1·7 | 20 | 7·0 | 1·6 |
| **Death** | 57 | 19·3 | 2·7 | 48 | 14·9 | 2·2 |
| Endometrial cancer | 23 | 9·2 | 2·0 | 18 | 6·0 | 1·4 |
| Locoregional relapse | 3 | 2·0 | 1·1 | 4 | 1·1 | 0·6 |
| Distant metastasis | 18 | 6·4 | 1·6 | 13 | 4·5 | 1·3 |
| Complications | 2 | 0·8 | 0·6 | 1 | 0·3 | 0·3 |
| Secondary cancer | 11 | 3·4 | 1·2 | 8 | 1·9 | 0·8 |
| Other causes | 23 | 6·7 | 1·6 | 22 | 7·0 | 1·6 |
| **First failure type** | | | | | | |
| Locoregional relapse | 11 | 3·9 | 1·2 | 40 | 13·1 | 2·0 |
| Distant metastasis | 19 | 5·5 | 1·3 | 11 | 4·1 | 1·3 |
| Death without relapse | 35 | 10·4 | 2·0 | 26 | 7·5 | 1·6 |
| **Secondary cancer** | 22 | 8·2 | 1·9 | 23 | 8·0 | 1·8 |
| GI-tract | 9 | 3·4 | 1·2 | 8 | 2·6 | 1·0 |
| Breast | 5 | 1·5 | 0·8 | 9 | 3·0 | 1·1 |
| Other | 8 | 3·3 | 1·4 | 6 | 2·4 | 1·1 |

GI-gastrointestinal.

Table 2: **Outcome**

| | Locoregional relapse | | Death due to endometrial cancer | |
|---|---|---|---|---|
| | Hazard ratio (95% CI) | p | Hazard ratio (95% CI) | p |
| Age ⩾60 | 3·2 (1·3–7·5) | 0·003 | 3·1 (1·2–8·0) | 0·02 |
| Invasion ⩾50% | 1·8 (0·9–3·8) | 0·11 | 1·9 (0·8–4·4) | 0·16 |
| Grade 1 | 0·77 (0·4–1·6) | 0·50 | 0·45 (0·2–1·3) | 0·15 |
| Grade 3 | 2·2 (0·8–5·8) | 0·11 | 4·9 (1·9–12·5) | 0·0008 |
| No radiotherapy | 3·9 (2·0–7·6) | <0·0001 | 0·76 (0·4–1·4) | 0·37 |

Hazard ratio describes relative hazard of failure per unit time, for age ⩾60 years compared with <60 years; for myometrial invasion ⩾50% compared with <50%; for grade 1 and 3 compared with grade 2; for no radiotherapy compared with postoperative radiotherapy.

Table 3: **Cox-regression analysis**

*Creuzberg C & al 2000*

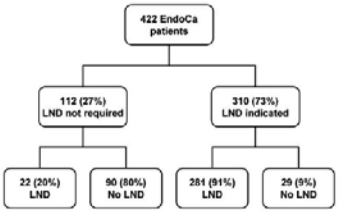



Fig. 1. Treatment distribution by defined surgical guidelines as detailed in Table 1 for patients with endometrial cancer (EndoCa) managed during the 36-month period between 2004 and 2006. LND indicates lymph node dissection (either pelvic, para-aortic, or both).

Table 3
Prevalence of lymphatic dissemination in patients with lymphadenectom stratified by histologic subtype

| Histologic subtype | Number of patients | | |
|---|---|---|---|
| | Total ($n$=281) | Node-positive ($n$=63) | Prevalence,[¶] |
| Endometrioid[a] | 209 | 34 | 16 |
| Nonendometrioid[b] | 72 | 29 | 40 |

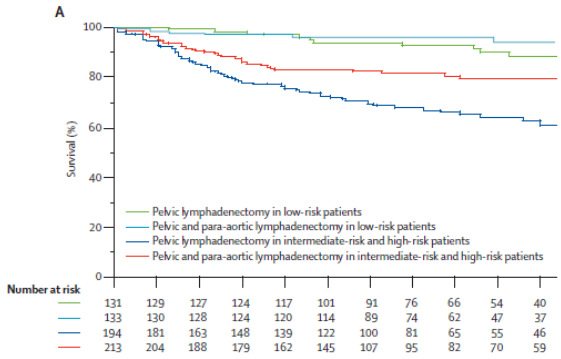
[a] Includes mucinous.
[b] Serous, clear cell, and undifferentiated.

Table 4
Frequency of observed metastases to pelvic or para-aortic or both node-bearing regions[a]

| Node site | Endometrioid, number (%) ($n$=32) | Nonendometrioid, number (%) ($n$=25) | Total, number (%) ($n$=57) |
|---|---|---|---|
| Pelvic only | 12 (37) | 7 (28) | 19 (33) |
| Pelvic plus para-aortic | 14 (44) | 15 (60) | 29 (51) |
| Para-aortic only | 6 (19) | 3 (12) | 9 (16) |

[a]In patients with lymphatic dissemination who underwent systematic pelvic and para-aortic lymphadenopathy.

*Mariani A & al 2008*




*Todo Y et al. 2010*

- Stratégie adaptée au N
  - Désescalade chez les pN0
    - Critères qualité du curage
    - Curiethérapie
  - Radio et chimiothérapie chez les pN1
    - Concomitant ?
    - Champs ?

# Ganglion sentinelle

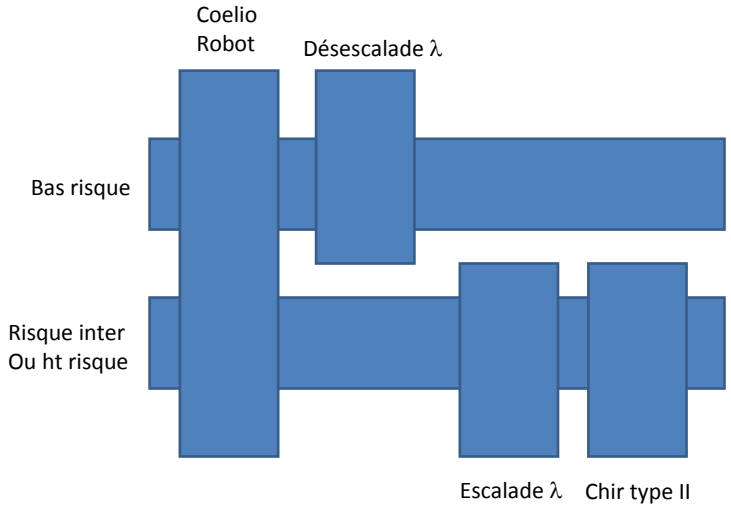
| | No SLN detected, N | SLN detected, N | Positive SLNs, N (%) | Histological type (N) | Histological status of non-SLNs |
|---|---|---|---|---|---|
| **Low-risk** | | | | | |
| IA (grade 1 or 2) | 4 | 57 | 6 (11%) | Endometrioid (6) | Negative |
| **Intermediate-risk** | | | | | |
| IA (grade 3) | 2 | 10 | 2 (20%) | Endometrioid (1), other (1) | Negative |
| IB (grade 1 or 2) | 2 | 23 | 3 (13%) | Endometrioid (3) | Negative |

SLN=sentinel lymph node.

*Table 4:* **Contribution of SLN procedure to detect metastases in patients with low-risk and intermediate-risk endometrial cancer**

Risque Élevé : 8/16 (50%) dont les 3 FN (type2, >50% myomètre)

*Ballester M et al. 2011*



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# En pratique

- OMS, IMC, ATCD
- Type histologique. Re-biopsie. Curetage ?
- Type I
  - IRM abdomino-pelvienne / ex extemporané.
    - HTNC + GS coelio ou robot
    - HTNC + curage pelvien & aortique coelio ou robot
- Type II
  - Coelio si stade I, sinon laparotomie

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# Questions

- Préservation fertilité
- Préservation ovarienne
- Traitement concomitant de l'obésité

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