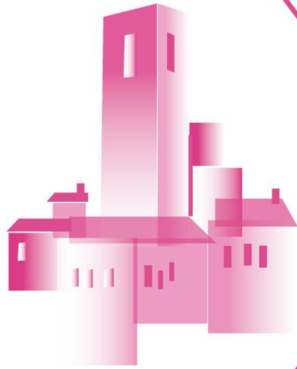
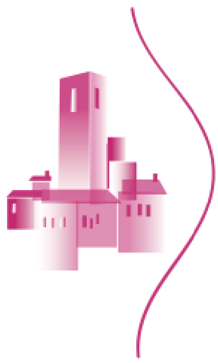


Ovarian cancer

Surgical management and neoadjuvant chemotherapy for stage III-IV ovarian cancer

JM. Classe, R. Rouzier, O.Glehen, P.Meeus, L.Gladieff, JM. Bereder, F Lécuru



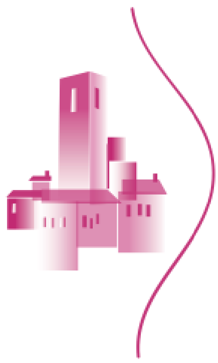
Suitable candidates for neo-adjuvant chemotherapy

- Primary surgery is the standard treatment for stages I-II
- The potential indications of neo-adjuvant chemotherapy are confined to stages III-IV

Principles of surgery

- **Whether performed primary or as an interval debulking procedure, cytoreductive surgery must be complete** (leaving no gross macroscopic residual disease),
- **Suboptimal cytoreductive surgery must be avoided**

Level 1 Grade A



Pre-treatment workup

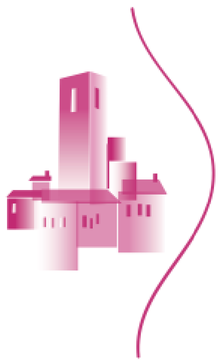
A pre-treatment assessment of resectability is recommended (1)

- **Clinical evaluation taking into account the general condition** (ECOG score or Karnofsky index) and **nutritional status** (weight, albumin and pre-albumin tests) **of the patient**

- **Anaesthesiology workup** (ASA score**)**

- **Laboratory test workup: CA 125, CA 19-9 if mucinous tumor**

Expert opinion



A pre-treatment assessment of resectability is recommended (2)

- **Radiological workup:**
  - Chest-abdominal-pelvic CT scan
  - MRI is not recommended as part of the standard workup
  - PET scan is not recommended as part of the standard workup for stages III but is optional for some cases of stage IV disease

Expert opinion

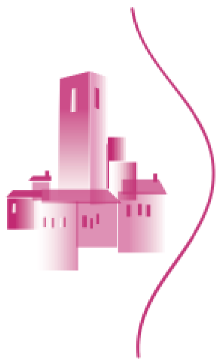
- **Laparoscopy is the best way of assessing initial resectability**
  - Findings complete the information provided by imaging and laboratory tests
  - Also provides the **histological diagnosis** (biopsy) indispensable for therapeutic decision-making

Level 2
Grade A

Evaluation of Peritoneal Extent by Surgery (quality criterion)

- **Use of a carcinomatosis extent evaluation score is recommended**
  - Laparoscopic evaluation: **Fagotti score**
  - Median laparotomy with a view to complete cytoreduction: **Sugarbaker's Peritoneal Cancer Index (PCI)**

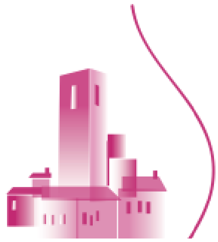
Level 2
Grade A



Extent and Resectability by Faggoti laparoscopic score

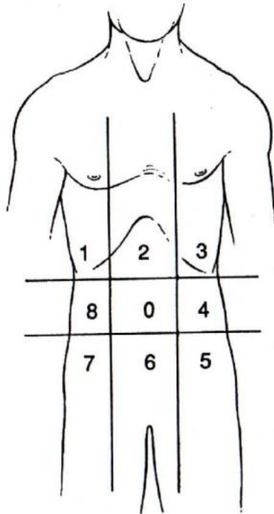
- **<u>Fagotti laparoscopic score (2008)</u>**
  - Omental cake
  - Peritoneal carcinomatosis
  - Diaphragmatic carcinomatosis
  - Mesenteric retraction
  - Stomach infiltration
  - Liver metastases

Each parameter was attributed a score of 0 to 2
Cytoreduction is incomplete in 100% of patients with a score $\geq$ 8



Sugarbaker's extension score at laparotomy

Sugarbaker's Peritoneal Cancer Index (PCI)

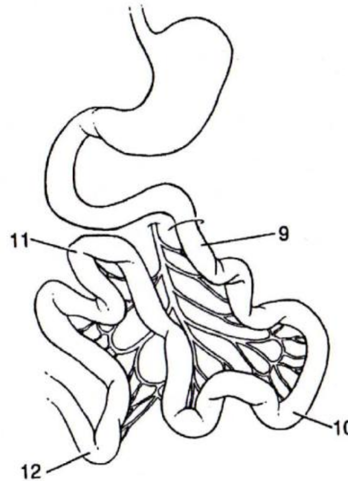


Regions	Lesion Size
0 Central	___
1 Right Upper	___
2 Epigastrium	___
3 Left Upper	___
4 Left Flank	___
5 Left Lower	___
6 Pelvis	___
7 Right Lower	___
8 Right Flank	___
9 Upper Jejunum	___
10 Lower Jejunum	___
11 Upper Ileum	___
12 Lower Ileum	___

PCI ☐

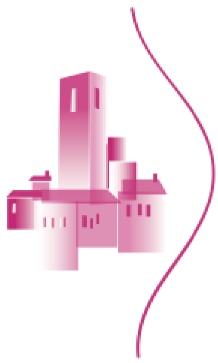
Lesion Size Score

LS 0 No tumor seen
LS 1 Tumor up to 0.5 cm
LS 2 Tumor up to 5.0 cm
LS 3 Tumor > 5.0 cm or confluence



Milan Consensus Conference 2006

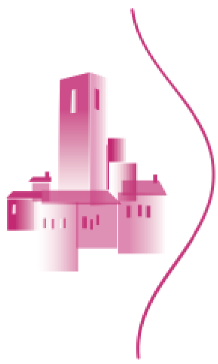
PCI from 0 to 39



Cytoreductive surgery

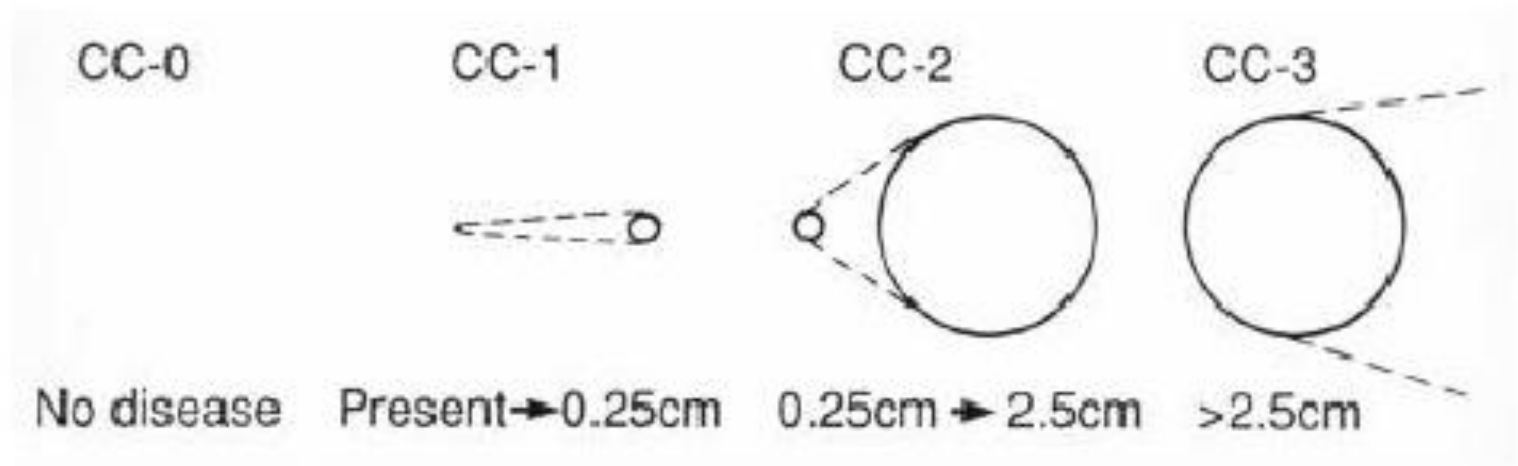
- **Surgery must include at least:**
  - Complete hysterectomy with oophorectomy
  - Infragastric total omentectomy
  - Appendicectomy
  - Dissection of pelvic and lumboaortic lymph nodes (in the case of otherwise complete cytoreductive surgery)

Expert opinion

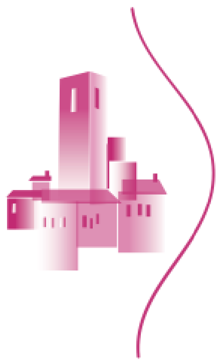


CCR Residual Disease Score

CCR: completeness of cancer resection score



Size of largest node at the end of surgery

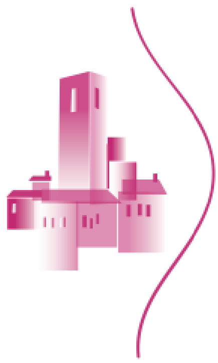


Operative report after laparotomy

The operative report must include
(surgery quality criterion)

- Useful history (e.g. hysterectomy for fibroma)
- Description of treatment strategy (initial surgery or debulking surgery after X courses)
- Sugarbaker's peritoneal carcinomatosis dissemination PCI score
- FIGO stage
- Description of surgical procedures performed
- CCR score describing the size of the residual tumour at the end of the procedure

Expert opinion

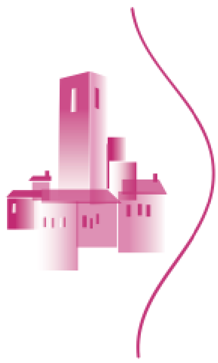


Indication for neoadjuvant chemotherapy

*Use of neoadjuvant chemotherapy must be discussed **in the Pretreatment Multidisciplinary Staff Meeting** before treatment is started*

- **Neoadjuvant chemotherapy can be offered for stage III malignancy (**stage IV disease will be discussed separately) **if:**
  - There are medical and/or anaesthetic contraindications for primary surgery
  - Carcinomatosis extent does not allow a primary complete cytoreduction, this has to be assessed by a trained surgical team

Level 1
Grade A



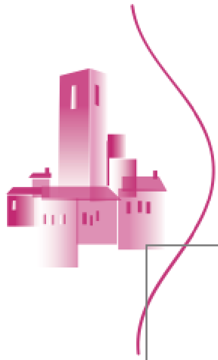
Neoadjuvant chemotherapy

- Chemotherapy is a combination of carboplatin and paclitaxel

Level 1
Grade A

- Anti-angiogenic agents (bevacizumab) must not be given in combination with neoadjuvant chemotherapy before surgery

Expert opinion



Number of courses

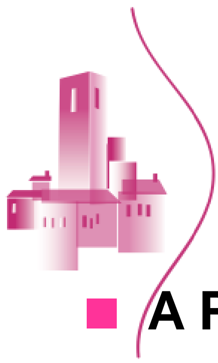
The teams must cooperate closely to ensure the consistency between the different treatments

- **Three courses must be given before surgery is proposed.**

Level 2
Grade B

- **If interval debulking surgery is performed after more than 3 neoadjuvant chemotherapy courses, the procedure must be followed by at least 2 courses of adjuvant chemotherapy**

Expert opinion



Stage IV

- **A PET scan may usefully supplement the staging procedure**
  - In the event of pleural uptake, a pleuroscopy may be appropriate before abdominopelvic surgery
- **In most cases, initial management consists of neoadjuvant chemotherapy**

Expert opinion

- **Surgery must aim to be as complete as possible. Systematic review of the indication on a case by case basis in the pre-treatment MSM**
  - either immediately by an experienced surgical team to achieve complete cytoreduction in suitable candidates for supra-radical surgery
  - or after a response to neoadjuvant chemotherapy has been obtained