






Ovarian cancer metastases in the liver area: proposal of a standardized anatomico-surgical classification

Andrea Rosati ¹, Agostino Maria De Rose,² Evis Sala,³ Felice Giuliani,^{2,4} Giovanni Scambia ^{1,4}, Anna Fagotti ^{1,4}



Andrea Rosati

¹Department of Woman and Child Health and Public Health, Fondazione Policlinico Universitario A. Gemelli, IRCCS, Rome, Italy

Biography: Dr. Andrea Rosati is a gynecologist oncologist of Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, in Rome. He is particularly involved in clinical research and surgical anatomy. He is currently a fellow in the 2nd Level International Master in Gynecologic Oncology accredited by ESGO society.

For numbered affiliations see end of article.

Correspondence to

Professor Giovanni Scambia, Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Rome 00168, Italy; giovanni.scambia@policlinicogemelli.it

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SUMMARY

The combination of emerging targeted therapies and technological advancement in surgical procedures supports the trend towards a prolonged survival in advanced ovarian cancer patients. Tumor localization in the liver area has become more frequent and more challenging to manage during the natural course of the disease.^{1,2}

We developed an anatomico-surgical classification for ovarian cancer metastases in the liver area³

aiming to provide a standardized nomenclature during pre-operative plan and surgical report.

We identified five conceptually distinct anatomical areas using the three-dimensional anatomical model⁴ and surgical videos (Figure 1).

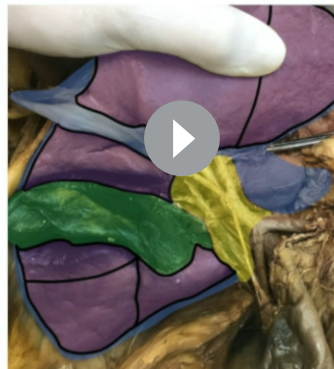
Our anatomico-surgical classification consists of five distinct categories:

- ▶ Type 1 or Glisson's capsule: superficial metastases involving the Glisson's sheet with no parenchymal infiltration.

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OVARIAN CANCER METASTASES IN THE LIVER AREA: PROPOSAL OF A STANDARDIZED ANATOMO-SURGICAL CLASSIFICATION

Rosati A¹, De Rose AM¹, Sala E², Giuliani F^{1,3}, Scambia G^{1,3}, Fagotti A^{1,3}



1. Fondazione Policlinico Universitario A. Gemelli, IRCCS, Rome, Italy
2. University of Cambridge and CRUK Cambridge Centre, Cambridge, UK
3. Università Cattolica del Sacro Cuore, Rome Italy

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Video 1 Anatomico-surgical classification of ovarian cancer metastases in the liver area



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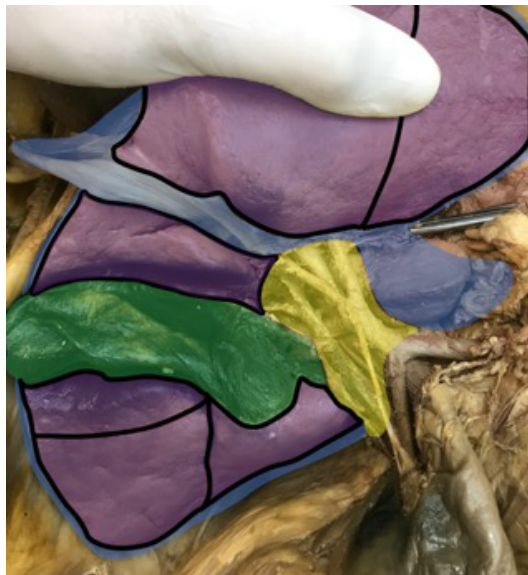


Figure 1 Anatomico-surgical classification of ovarian cancer metastases in the liver area. Purple area: type 1 or Glisson's capsule. Blue area: type 2 or ligamentous. Green area: type 3 or gallbladder. Yellow area: type 4 or hepatic hilum. Black lines: type 5 or parenchymal (subdivided by liver segment).

- ▶ Type 2 or ligamentous: this is a heterogeneous group including carcinomatosis along the lines of reflection between the liver and surrounding organs (falciform ligament, round ligament, coronary and triangular ligament, Arantii and hepato-gastric ligament).
- ▶ Type 3 or gallbladder: neoplastic nodules located along the gallbladder surface and fossa.
- ▶ Type 4 or hepatic hilum: porta hepatis is considered as a single entity due to the potential neoplastic involvement from the peritoneal site (hepato-duodenal ligament and Rouviere's sulcus) and lymphatic site (portal triad lymph nodes).
- ▶ Type 5 or parenchymal: divided into 'superficial', infiltrating <1 cm in depth, and 'intra-parenchymal', traditionally classified according to the liver segment.

Our classification represents a useful guide while planning the surgical strategy for advanced ovarian cancer metastases in the liver area, assigning the specific procedure within a multidisciplinary team, based on surgical competence. Especially in types 3, 4,

and 5 metastases a requirement for hepatobiliary surgeon should be anticipated.

The standardization of nomenclature allows an easy exchange of surgical information for education and scientific purposes, which are otherwise difficult to interpret and compare.

The identification of specific risks and strategies related to each anatomical localization provides a didactic and effective tool.

Author affiliations

¹Department of Woman and Child Health and Public Health, Fondazione Policlinico Universitario A. Gemelli, IRCCS, Rome, Italy

²Hepatobiliary Surgery Unit, Fondazione Policlinico Universitario A. Gemelli, IRCCS, Rome, Italy

³Department of Radiology, Cambridge University, Cambridge, UK

⁴Università Cattolica del Sacro Cuore Facoltà di Medicina e Chirurgia, Rome, Italy

Twitter Anna Fagotti @annafagottimd

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ORCID iDs

Andrea Rosati <http://orcid.org/0000-0003-3126-9400>

Giovanni Scambia <http://orcid.org/0000-0003-2758-1063>

Anna Fagotti <http://orcid.org/0000-0001-5579-335X>

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