## APPENDIX 1. IDENTIFICATION OF SCIENTIFIC EVIDENCE

#### Literature search in MEDLINE

Research period

2014/01/01 - 2019/10/01\*

Indexing terms

Advanced disease, advanced stage, adverse effect, adverse event, bilateral salpingo-oophorectomy, biopsy, cervical cytology, clinical competence, clinical examination, clinical manifestation, clinical staging, clinical studies, clinical trials, complete resection, complications, comprehensive surgical staging, comprehensive staging, conservative surgery, conservative treatment, curettage, cytoreduction, cytoreductive surgery, debulking, decision making, delayed cytoreduction, delayed cytoreductive surgery, dilatation and curettage, early disease, early stage, endometrial biopsy, endometrial cancer, endometrial carcinoma, endometrial sampling, endometrioid endometrial cancer, extra-fascial hysterectomy, fertility, fertility outcome, fertility preservation, fertility sparing, fertility sparing management, fertility sparing surgery, fertility-preserving treatment, follow-up, follow-up protocols, frozen section, frozen section analysis, frozen section, gross examination, health-related quality of life, hospital teaching, hospital mortality, hospital stay, hospital volume, hospital university, hysterectomy, hysteroscopy, hysteroscopic biopsy, hysteroscopic resection, in-hospital death, intensive care, intensive care unit, intervall debulking surgery, intraoperative frozen section, laparoendoscopic single-site approach, laparoscopic staging, laparoscopy, laparotomy, late recurrence, length of stay, locally advanced cancer, lymphadenectomy, lymph node, lymph node assessment, lymph node dissection, lymph node involvement, lymph node staging, management, medical audit, medical records, medical standards, mini-laparoscopic approach, mini-laparoscopic surgery, mini-laparoscopy, minimally invasive approach, minimally invasive surgery, mortality rate, mortality analysis, multidisciplinary team, multidisciplinary team approach, multivariate analysis, nodal involvement, omentectomy, operation operative report, operative report documentation, optimal cytoreduction, ovarian preservation, para-aortic lymph node, para-aortic lymphadenectomy, pathology, pathology report, pathology report adequacy, pelvic exenteration, pelvic lymph node, pelvic lymphadenectomy, percutaneous surgery, percutaneous surgical system, perioperative care, perioperative complications, peritoneal cytology, physician's role, physician specialty, postoperative care, postoperative complications, postoperative recurrence, preoperative care, preoperative staging, preoperative work-up, primary cytoreduction, primary cytoreductive surgery, prognosis, prognostic factor, prognostic value, prophylactic hysterectomy, prophylactic surgery, quality of health care, quality of life, radical hysterectomy, recurrence, recurrent disease, relapse, reoperation, repeat surgery, reporting system, residual disease, residual tumour, restaging, risk factor, robot-assisted surgery, robotic laparoendoscopic single-site approach, robotic approach, robotic surgery, salpingectomy, salvage surgery, salvage treatment, sentinel lymph node, sentinel lymph node dissection, sentinel lymph node mapping, specialization, staging, staging procedures, suboptimal care, suboptimal cytoreduction, suboptimal surgery, surgeon, surgeon volume, surgery, surgical management, surgical outcome, surgical outcome criteria, surgical procedures, surgical resection, surveillance, survival, survival rate, survival analysis, systematic lymphadenectomy, treatment outcome, ultra minimally invasive approach, ultra minimally invasive surgery, unilateral salpingo-oophorectomy.

Language

English

Study design

Priority was given to high-quality systematic reviews, meta-analyses, and randomised controlled trials but lower levels of evidence were also evaluated. The search strategy excluded editorials, letters, case reports and *in vitro* studies. The reference list of each identified article was reviewed for other potentially relevant papers.

<sup>\*</sup> for the retained QIs, the systematic literature search has been extended until May 1, 2021 in order to update the documentation for the 2<sup>nd</sup> meeting

## APPENDIX 2. LIST OF THE 143 EXTERNAL REVIEWERS

Patriciu Achimas-Cadariu, gynecologic oncologist (Romania); Kasimu Adoke, pathologist (Nigeria); Cherif Akladios, obstetrician & gynecologist (France); Roberto Altamirano, gynecologis oncologist (Chile); Frederic Amant, gynecologic oncologist (The Netherlands); Maarit Anita Anttila, gynecologic oncologist (Finland); Sarivalasis Apostolos, medical oncologist (Switzerland); Octavio Arencibia Sanchez, gynecologic oncologist (Spain); Marco Arones, gynecologic oncologist (Spain); David Atallah, gynecologic oncologist (Lebanon); Elena Bakhidze, gynecologic oncologist (Russia); Manel Barahona Orpinell, gynecologic oncologist (Spain); Martin Belen, obstetrician & gynecologist (Spain); Margarida Bernardino, gynecologic oncologist (Portugal); Eva Bettens, patient (Belgium); Rasiah Bharathan, gynecologic oncologist (United Kingdom); Andreas du Bois, gynecologic oncologist (Germany); Eduard-Alexandru Bonci, general surgeon (Romania); Christine Brambs, gynecologic oncologist (Switzerland); Katharina Buser, medical oncologist (Switzerland); Caetano Cardial, gynecologic oncologist (Brazil); Vlad Catalin, gynecologic oncologist (Romania); Giuseppe Comerci, gynecologist (Italy); Larry Copeland, gynecologic oncologist (United States of America); Pluvio Coronado, gynecologic oncologist (Spain); Ovidiu Florin Coza, radiation oncologist (Romania); Nagindra Das, gynecologic oncologist (United Kingdom); Diederick de Jonk, gynecologic oncologist (United Kingdom); Corde Kroon, gynecologic oncologist (The Netherlands); Gustavo Antonio de Souza, gynecologic oncologist (Brazil); Philippe de Sutter, gynecologic oncologist (Belgium); Berta Diaz-Feijoo, gynecologic oncologist (Spain); Maria Dolores Diestro Tejeda, gynecologic oncologist (Spain); Javier Diez, gynecologic oncologist (Spain); Johannes Dimopoulos, radiation oncologist (Greece); Santiago Domingo, gynecologist (Spain); Günter Emons, gynecologic oncologist (Germany); Ane Gerda Eriksson, gynecologic oncologist (Norway); Serkan Erkanli, gynecologic oncologist (Turkey); Henrik Falconer, gynecologic oncologist (Sweden); Francesco Fanfani, gynecologic oncologist (Italy); Anne Floquet, medical oncologist (France); Anamaria Ferrero, gynecologist (Italy); Luca Fuso, gynecologic oncologist (Italy); Khadra Galaal, gynecologic oncologist (United Kingdom); Isabella Maria Giovanna Garassino, medical oncologist (Italy); Prafull Ghatage, gynecologic oncologist (Canada); Maria Josep Gibert Castanyer, gynecologist (Spain); Antonio Gil-Moreno, gynecologic oncologist (Spain); Ronny Goethals, gynecologic oncologist (Belgium); Frederic Goffin, gynecologic oncologist (Belgium); Mikel Gorostidi, gynecologic oncologist (Spain); Radha Graham, gynecologic oncologist (United Kingdom); Esther Guerra Fernandez, pathologist (Spain); Murat Gultekin, gynecologic oncologist (Turkey); Herman Haller, gynecologic oncologist (Croatia); David Hardisson, pathologist (Spain); Annette Hasenburg, gynecologic oncologist (Germany); Limor Helpman, gynecologic oncologist (Israel); Fernando Heredia, gynecologic oncologist (Chile); Gines Hernandez Cortes, obstetrician & gynecologist (Spain); Peter Hillermanns, gynecologic oncologist (Germany); Cathrine Holland, gynecologic oncologist (United Kingdom); Christos Iavazzo, gynecologic oncologist (Greece); Lete Inaki, gynecologic oncologist (Spain); Ibon Jaunarena, gynecologic oncologist (Spain); Kirsten Jochumsen, gynecologist (Denmark); Ioannis Kalogiannidis, gynecologic oncologist (Greece); Dionyssios Katsaros, gynecologic oncologist (Italy); Vesna Kesic, gynecologic oncologist (Serbia); Gurkan Kiran, gynecologic oncologist (Turkey); Dagmara Klasa-Mazurkieweicz, gynecologic oncologist (Poland) ; Jaroslav Klat, gynecologic oncologist (Czech Republic) ; Jan Kotarski, gynecologic oncologist (Poland) ; Zoárd Tibor Krasznai, gynecologic oncologist (Hungary) ; Joel Laufer, gynecologic oncologist (Uruguay); Eric Leblanc, gynecologic oncologist (France); Tally Levy, gynecologic oncologist (Israel); Ioan Cosmin Lisencu, gynecologic oncologist (Romania); Domenica Lorusso, gynecologic oncologist (Italy); Mathieu Luyckx, gynecologist (Belgium); Claudio Maanon Di Leo, gynecologic oncologist (Spain); Victor Martin Gonzalez, gynecologic oncologist (Spain); Santosh Menon, pathologist (India); Mehmet Mutlu Meydanli, gynecologic oncologist (Turkey); Nadav Michaan, gynecologic oncologist (Israel); Milos Mlyncek, gynecologic oncologist (Slovakia); Sabina Murshudova, gynecologic oncologist (Azerbaijan); Alexander Mustea, gynecologic oncologist (Germany); Eva Myriokefalitaki, gynecologic oncologist (United Kingdom); Henrique Nabais, gynecologic oncologist (Portugal); Raj Naik, gynecologic oncologist (United Kingdom); Gregg Nelson, gynecologic oncologist (Canada); Eva-Maria Niine-Roolaht, gynecologic oncologist (Estonia); Natalia Niziaeva, gynecologist (Russia); Ines Nobre-

Gois, radiation oncologist (Portugal); Nuno Nogueria Martins, gynecologic oncologist (Portugal); Felipe Ojeda, gynecologic oncologist (Spain); Adeola Olaitan, gynecologic oncologist (United Kingdom); Firat Ortac, gynecologic oncologist (Turkey); Gitte Ørtoft, gynecologic oncologist (Denmark); Maja Pakiz, gynecologic oncologist (Slovenia); Theo Panoskaltsis, gynecologic oncologist (Greece); Maria Papageorgiou, patient (Greece); Alexis Papanikolaou, gynecologic oncologist (Greece); Anna Myriam Perrone, gynecologist (Italy); Suzana Pessini, gynecologic oncologist (Brazil); Johanna Pijnenborg, gynecologic oncologist (The Netherlands); Kazimierz Pitynski, gynecologic oncologist (Poland); Natalia Povolotskaya, gynecologic oncologist (United Kingdom); Mario Preti, gynecologic oncologist (Italy); Nicholas Reed, clinical oncologist (United Kingdom); Alexander Reinthaller, gynecologic oncologist (Austria); Alexandros Rodolakis, gynecologic oncologist (Greece); Cesare Romagnolo, gynecologic oncologist (Italy); Freydun Ronaghi, gynecologic oncologist (Austria); Ramon Rovira Negre, gynecologic oncologist (Spain); Angeles Rovirosa, radiation oncologist (Spain); Andres Sacristan, gynecologist (Spain); Giovanni Scambia, gynecologic oncologist (Italy); Dietmar Schmidt, pathologist (Germany); Yakir Segev, gynecologic oncologist (Israel); Muhieddine Seoud, gynecologic oncologist (Lebanon); Shalini Singh, radiation oncologist (India); Vasileios Sioulas, gynecologic oncologist (Greece); Erik Soegaard-Andersen, gynecologic oncologist (Denmark); Simona Stolnicu, pathologist (Romania); Alina Sturdza, radiation oncologist (Austria); Karl Tamussino, gynecologic oncologist (Austria); Ai Ling Tan, gynecologic oncologist (New Zealand); Li Tee Tan, radiation oncologist (United Kingdom); Rafal Tarkowski, gynecologic oncologist (Poland); Simsek Tayup, gynecologic oncologist (Turkey); Maria Topalidou, radiation oncologist (Greece); Tayfun Toptas, gynecologic oncologist (Turkey); Koen Traen, gynecologist (Belgium); Koen van de Vijver, pathologist (Belgium); Jacobus van der Velden, gynecologic oncologist (The Netherlands); August Vidal Bel, pathologist (Spain); Nicola Weidner, radiation oncologist (Germany); Jolanda Wellen, patient (The Netherlands); Jacek Wilczynski, gynecologic oncologist (Poland); Paolo Zola, gynecologic oncologist (Italy).

# **APPENDIX 3. DEFINITION OF RISK GROUPS**

Risk Group	Molecular Classification Unknown	Molecular Classification Known⁴,*		
Low	Stage IA endometrioid + low-grade** + LVSI negative or focal	Stage I-II <i>POLE</i> mutendometrialcarcinoma, no residual disease     Stage IA MMRd/NSMP endometrioid carcinoma + low-grade** + LVSI negative or focal		
Intermediate  High-	Stage IB endometrioid + low-grade** + LVSI negative or focal  Stage IA endometrioid + high-grade** + LVSI negative or focal  Stage IA non-endometrioid (serous, clear cell, undifferentiared carcinoma, carcinosarcoma, mixed) without myometrial invasion  Stage I endometrioid + substantial LVSI, regardless	Stage IB MMRd/NSMP endometrioid carcinoma + low-grade** + LVSI negative or focal  Stage IA MMRd/NSMP endometrioid carcinoma + high-grade** + LVSI negative or focal  Stage IA p53abn and/or non-endometrioid (serous, clear cell, undifferentiated carcinoma, carcinosarcoma, mixed) without myometrial invasion  MRd/NSMP endometrioid carcinoma +		
intermediate	of grade and depth of invasion  • Stage IB endometrioid high-grade**, regardless of LVSI status  • Stage II	substantial LVSI, regardless of grade and depth of invasion  • Stage IB MMRd/NSMP endometrioid carcinoma high-grade**, regardless of LVSI status  • Stage II MMRd/NSMP endometrioid carcinoma		
High	Stage III-IVA with no residual disease     Stage I-IVA non-endometrioid (serous, clear cell, undifferentiated carcinoma, carcinosarcoma, mixed) with myometrial invasion, and with no residual disease	Stage III-IVA MMRd/NSMP endometrioid carcinom with no residual disease  Stage I-IVA p53abnendometrial carcinoma wit myometrial invasion, with no residual disease  Stage I-IVA NSMP/MMRd serous, undifferentiate carcinoma, carcinosarcoma with myometria invasion, with no residual disease		
Advanced Metastatic	Stage III-IVA with residual disease     Stage IVB	Stage III-IVA with residual disease of any molecular type     Stage IVB of any molecular type		

<sup>4</sup>For stage III-IVA **POLEmut** endometrial carcinoma, and stage I-IVA MMRd or NSMP clear cell carcinoma with myometrial invasion, insufficient data are available to allocate these patients to a prognostic risk-group in the molecular classification. Prospective registries are recommended

 $p53 abnormal, MMRd: Mismatch \ Repair \ Deficient, NSMP: nonspecific \ molecular \ profile, \textit{POLE} mut: polymerase \ \mathcal{E} \ mutated$ 

<sup>\*</sup> see text on how to assign double classifiers (e.g. patients with both POLEmut and p53abn should be managed as POLEmut)

<sup>\*\*</sup> according to the binary FIGO grading, grade 1 and grade 2 carcinomas are considered as low-grade, and grade 3 carcinomas are considered as high-grade.

# **APPENDIX 4. SELF-ASSESSMENT FORM**

QIs		TARGETS (tick if applicable)	Scoring points
Gener	ral indicators		
1.	Number of newly diagnosed endometrial carcinoma cases treated per centre per year	Optimal target: ≥90	8*
		Minimum required target: ≥ 50	5**
2.	Number of endometrial carcinoma primary surgeries (including early and advanced	Optimal target: ≥80	8*
	stages) performed per centre per year	Minimum required target: ≥ 50	5**
3.	Surgery performed by a gynecologic oncologist or a trained surgeon specifically dedicated to gynaecological cancer management $$	≥ 95%	5*
4.	Treatment and/or follow-up plan discussed at a multi-disciplinary team meeting	Primary treatment: 90%	3: both targets are met
		Relapse treatment: 99%	0: all other situations
5.	Centre participating in ongoing prospective studies in gynaecological oncology	Optimal target: participation in ongoing prospective studies in endometrial carcinoma	5*
		Minimum required target: participation in ongoing prospective studies in gynaecological oncology	3
Preop	erative work-up		
6.	Proportion of patients with a preoperative work-up according to the ESGO-ESTRO-ESP guidelines	90%	3
7.	Proportion of presumed FIGO stage I-II upstaged to IVB disease	<5%	4
Comp	liance of the intraoperative management with the standards of c	are	
8.	Proportion of early stage endometrial carcinoma cases with non ruptured uterus after hysterectomy $% \left( 1\right) =\left\{ 1\right\} =$	99%	8
9.	Proportion of patients with early stage endometrial carcinoma who underwent	Optimal target: ≥80%	7
	successful minimally invasive surgery	Minimum required target: 60%	4
10.	Proportion of patients with $\mbox{BMI} > 35 \mbox{ kg/m}^2$ who underwent successful minimally invasive surgery	>60%	5*
11.	Proportion of conversions from minimally invasive surgery to open surgery	<10%	3
12.	Proportion of patients with intraoperative injuries	<2%	5
13.	Proportion of infracolic omentectomy in endometrial carcinoma patients with presumed early stage serous, undifferentiated carcinoma or carcinosarcoma	≥90%	2
14.	Proportion of lymph node staging performed in patients with presumed early stage high-intermediate or high-risk endometrial carcinoma	>85%	5
15.	Proportion of sentinel lymph node procedures in patients undergoing lymph node staging $% \left( 1\right) =\left( 1\right) \left( 1\right) \left$	90%	7*
16.	Number of sentinel lymph node procedures for endometrial carcinoma performed or supervised per surgeon per year $$	≥20	5
17.	Proportion of indocyanine green cervical injection	≥95%	2*
18.	Proportion of high-intermediate/high-risk patients with side-specific systematic pelvic lymphadenectomy in case of failed sentinel lymph node detection	>90%	4
19.	Proportion of patients who underwent ultrastaging of sentinel lymph nodes	≥99%	7
20.	Proportion of bilateral mapping rate of sentinel lymph node procedures	≥75%	5*
21.	Proportion of complete macroscopic resection for curative intent in patients with primary advanced endometrial carcinoma (stage III-IV)	≥75%	6*
22.	Proportion of patients who underwent salvage surgery for locoregional recurrent disease (isolated pelvic or nodal recurrent disease) in whom complete macroscopic resection is achieved	≥85%	5*

QIs (continued)		TARGETS (tick if applicable)		Scoring points					
Mole	Molecular classification and adjuvant treatment								
23.	Proportion of patients undergoing complete molecular classification of their tumour according to the ESGO-ESTRO-ESP guidelines	Optimal target: ≥90% Minimum required target: ≥50%		5* 3					
24.	Compliance with the ESGO-ESTRO-ESP adjuvant treatment guidelines	≥90%		6					
Reco	rding pertinent information to improve quality of care								
25.	Minimum required elements in surgical reports	≥99%		3					
26.	Minimum required elements in pathology reports	≥99%		2					
27.	Structured morbidity and mortality conference per year for quality assurance of surgical care	Optimal target: 4 Minimum required target: 2		5 3					
28.	Proportion of reoperations within 30 days for complications after primary minimally invasive surgery	≤2%		5					
29.	Structured prospective reporting of recurrences/deaths	≥ once a year		5					
• ADI	DITIONAL REQUIREMENT (CENTRE OF EXCELLENCE) •								
	Publication of 3 articles on endometrial carcinoma authored by a gynaecological surgical oncology member of the team over the last 3 years, including at least one article as first or last author			_*					
	⇒ PLEASE INDICATE THE SUM OF YOUR INDIVIDUAL SCORES /143**								
	* Mandatory to be a centre of excellence  ** Maximum score if all optimal targets are met.								

### Entry criteria for standard ESGO certification for endometrial carcinoma surgery

- Sum of the individual scores  $\ge 115$  (>80% of the score) All the following criteria must apply (minimum required targets should be met): 1,

### Requirements for ESGO certification for endometrial carcinoma surgery as a Centre of Excellence

- Sum of the individual scores  $\ge$  115 (> 80% of the score) All the following criteria must apply (optimal targets should be met (if any)): 1, 2, 3, 5, 10, 15, 17, 20, 21, 22, 29
- Publication of 3 articles on endometrial carcinoma authored by a gynaecological surgical oncology member of the team over the last 3 years, including at least one article as first or