S3-Guideline on Diagnostics, Therapy and Follow-up of Malignant Ovarian Tumours

Short version 1.0 – AWMF registration number: 032/035OL, June 2013

S3-Leitlinie Diagnostik, Therapie und Nachsorge maligner Ovarialtumoren

Kurzversion 1.0 – AWMF-Registernummer: 032/035OL, Juni 2013

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1 Information about this Short Version

1.1 Editors

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1.2 Leading professional society

Germany Society for Gynaecology and Obstetrics (DGGG).

1.3 Funding

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1.5 Citation

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1.6 Note

Medicine is continually subject to a process of development and change so that all information, particularly all information on diagnostic and therapeutic treatments, can only reproduce the state of knowledge at the time of printing of this guideline on care. The greatest possible care was taken when compiling these recommendations on therapy and the choice and dosage of medications. Users are requested to consult the package leaflets and check the summary of product characteristics provided by manufacturers and, when in doubt, to consult a specialist. In the interests of all concerned, please contact the OL editorial office if you find discrepancies or controversial issues.

Users are responsible for all diagnostic and therapeutic applications, medications and dosages.

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1.7 Additional guideline documents

The contents of this short version refer to the long version of the S3-Guideline on Diagnostics, Therapy and Follow-up of Malignant Ovarian Tumours available in German on the following websites

- AWMF (http://www.awmf.org/leitlinien/aktuelle-leitlinien.html)
- German Guideline Programme in Oncology http://www.leitlinienprogramm-onkologie.de/OL/leitlinien.html
- German Cancer Society http://www.krebsgesellschaft.de/wub_llevidenzbasiert,120884.html
- German Cancer Aid (http://www.krebshilfe.de/)
- Guidelines International Network (www.g–i-n.net)
- Contributing German scientific medical societies (e.g. http://www.dggg.de/leitlinien/)

In addition to the short version, a number of other, supplementary documents are also available:

- Guideline report on the compilation of the guideline
- Long version
- Patient guideline

All of these documents will also be available on the websites listed above.

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2 Introduction

2.1 Target audience

The guideline was compiled with the aim of providing high-risk groups with advice on diagnostics, surgical and systemic therapy in early and advanced stages of disease together with the treatment of rare histological subtypes. A lot of emphasis has been placed on follow-up care, rehabilitation, palliative therapy and psycho-oncological counselling. The recommendations are for physicians working both in hospitals and outpatient clinics, nursing staff and other medical partners involved in treating patients with malignant ovarian tumours. As it also covers the topics 'Screening' and 'Follow-up', registered physicians working in their own practice are also an important target audience of this guideline. It is additionally intended to offer guidance to affected patients and persons seeking more information as well as providing a basis for the gynaecological cancer centres currently being set up in Germany.

For the first time, scientific medical societies in Switzerland and Austria were also consulted, expanding the scope of this guideline.

2.2 Methodology

The methodological approach used to compile the guideline has been described in the guideline report. The guideline report is freely available online (in German), for example on the website of the German Guideline Programme in Oncology (http://leitlinienprogramm-onkologie.de/Leitlinien.7.0.html) and the pages of the AWMF (http://www.awmf.org/).

2.2.1 SIGN level of evidence system

To classify the risk of bias or confounding in the identified studies, this guideline has used the level of evidence system of the Scottish Intercollegiate Guidelines Network (SIGN, Version 2009) (http://www.sign.ac.uk/pdf/sign50.pdf) as described in **Table 1** below.

2.2.2 System of grading recommendations

The OL methodology uses the grades of recommendation awarded by the authors of the guideline. The level of recommendation is decided on in a formal consensus process, using a multistep nominal group technique moderated by the AWMF.

The guideline includes the level of evidence (SIGN, see 2.2.1) of the studies on which they are based as well as the strength of the recommendation (grade of recommendation) for all evidence-based statements (see chapter 2.2.3) and recommendations. This guideline has three different 'strength of recommendation' ratings (see **Table 2** below), which are also reflected in the formulation of the recommendation.

Table 1 SIGN system for level of evidence grading (Version 2009).

Level	Description
1++	High quality meta-analyses, systematic reviews of randomised controlled trials (RCTs), or RCTs with a very low risk of bias
1+	Well conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias
1−	Meta-analyses, systematic reviews of RCTs, or RCTs with a high risk of bias
2++	High quality systematic reviews of case-control or cohort studies, or high quality case control or cohort studies with a very low risk of confounding or bias ("chance") and a high probability that the relationship is causal
2+	Well conducted case-control or cohort studies with a low risk of of confounding or bias ("chance") and a moderate probability that the relationship is causal
2−	Case-control or cohort studies with a high risk of confounding or bias ("chance") and a significant risk that the relationship is not causal
3	Non-analytic studies, e.g. case reports, case series
4	Expert opinion

Table 2 Grades of recommendations.

Grade of recommendation	Description	Syntax
A	strongly recommended/ or not recommended	must/necessary
B	recommended/ or not recommended	should
0	neither recommended nor not recommended	can

2.2.3 Statements

Statements are expositions or explanations of specific facts or issues which do not constitute a call for action. They are approved in a similar manner to that used for recommendations in a formal consensus process and may be based either on study results or expert opinions.

2.2.4 Clinical consensus (CC)

Statements/recommendations which were drawn up on the basis of a consensus of experts from the guideline group are identified by the term "clinical consensus". No symbols were used to grade the clinical consensus; the strength of the consensus is indicated by the formulations used (must, necessary/should/can) as described for the gradations in **Table 2**.

2.2.5 Independence and disclosure of possible conflicts of interest

German Cancer Aid provided the funding through the German Guideline Programme in Oncology (OL). Funds were used for staffing costs, office materials, literature and consensus conferences (costs of venue, the media technology required at conferences, catering, moderator's fees, travelling expenses of participants). Travelling expenses were reimbursed in accordance with the German law on travel expenses when on company business or according to standard practice for the DKG [German Hospital Federation]. Editorial decisions and the compilation of the guideline were carried out entirely independent of the funding organisation. During the guideline process, all members provided a written disclosure of possible conflicts of interest. The conflicts

of interest disclosed are included in the guideline report to this guideline (http://leitlinienprogramm-onkologie.de/Leitlinien.7.0.html). We would like to take this opportunity of thanking all contributors for their contribution to the project, which was entirely voluntary and unsalaried.

2.2.6 Period of validity and update process

This S3-guideline will remain valid until it is next updated; its estimated period of validity is 3 years. Regular updates are planned; if an urgent need for changes to the guideline occurs in between update times, these changes will be published separately. Comments and advice for the update process are expressly requested and should be sent to the following address:

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2.3 List of abbreviations

Abbreviation	Meaning
AUC	Area under the Curve
GR	Grade of Recommendation, A = strongly recommended, B = recommended, 0 = neither recommended nor not recommended
HIPEC	Hyperthermal Intraperitoneal Chemotherapy
HT	Hormone Therapy
CC	Clinical Consensus
GL	Guideline
LoE	Level of Evidence
OL	German Guideline Programme in Oncology
OP	Operation
ST	Statement
TVS	Transvaginal sonography
WHO	World Health Organisation

3 Epidemiology, Screening and Diagnostics

3.1 Screening

No.	Recommendations/Statements	GR	LoE	Sources
3.1.	Screening with CA-125 and TVS has not resulted in any drop in mortality to date.	ST	1++	Guidelines: [1, 2] Primary studies: [3–9]
3.2.	General screening is not necessary.	A	1++	Guidelines: [1, 2] Primary studies: [3–9]
3.3.	Multidisciplinary consultation (gynaecologist and human geneticist) and genetic testing must be offered if a patient is in the at-risk population.	CC		
3.4.	Screening with CA-125 and TVS was not proven to reduce mortality in risk groups.	ST	3	Guidelines: [1] Primary studies: [10–13]
3.5.	Screening of groups at risk is not necessary.	A	3	Guidelines: [1] Primary studies: [10–13]

3.2 Diagnostics

No.	Statements	GR	LoE	Sources
3.6.	Further examinations should be initiated if the following symptoms occur repeatedly and persistently, particularly in women above the age of 50: ▸ Bloatedness ▸ Flatulence ▸ Vague abdominal pain or discomfort ▸ Increased frequency of micturition	CC		
3.7.	If there is a suspicion of an ovarian mass, pelvic examination (palpation, speculum) must be carried out, followed by transvaginal sonography.	CC		
3.8.	No diagnostic examination exists which can take the place of operative staging for ovarian cancer and give a reliable assessment of the tumour's operability.	CC		

3.3 Diagnosis of recurrence

No.	Recommendations	GR	LoE	Sources
3.9.	Asymptomatic patients: If, contrary to the recommendations of the guideline, there is a suspicion of recurrence based on increased CA-125 levels, the further procedure should be discussed with the individual patient. An early, pre-symptomatic start of treatment for recurrence is not associated with improved survival rates.	B	1+	Primary studies: [14]
3.10.	Symptomatic patients: If symptoms are present, additional diagnostic investigations can be initiated. We were unable to identify evidence which would indicate improved survival for any of the available procedures.	0	2+	Primary studies: [15–23]

4 Patient Consent and Information

No.	Statements	GR	LoE	Sources
4.1.	The information provided by the physician to the patient must include information on the disease, the results of the examination(s), the course of treatment to date, the diagnostic and therapeutic options including expected side-effects as well as the assessment of the associated prognosis and the impact on the patient's life plans and quality of life. Written materials and other suitable media can be used to help explain all of this to the patient and as aids in decision-making.	CC		
4.2.	Conveying this information and explaining it to the patient must be done based on the following principles of patient-centred communication: ▶ The physician must show empathy and use active listening ▶ Difficult topics must be touched upon directly and sensitively ▶ Avoid using specialised medical vocabulary; explain specialist terminology where necessary ▶ Use strategies to improve the patient's comprehension (repetition, summarising of important information, use of diagrams and graphs) ▶ Encourage the patient to ask questions ▶ Permit and encourage the patient to express her feelings, particularly her worries and fears ▶ Offer further help	CC		
4.3.	The patient's wishes about being involved in the process of medical decision-making must be taken into account.	CC		

5 Genetics, Prevention and Risk Factors

No.	Recommendations/Statements	GR	LoE	Sources
5.1.	Bilateral salpingo-oophorectomy is the most effective method to reduce the risk of developing the disease and to reduce mortality in patients with hereditary ovarian cancer.	ST	2+	Guidelines: [1, 2] Primary studies: [11, 24–39]
5.2.	Patients with BRCA1/2 mutation should be offered prophylactic bilateral salpingo-oophorectomy; surgery should be done once the patient plans to have no more children, after the patient has either turned 40 years of age or 5 years prior to the youngest age at which a member of the patient's family developed ovarian cancer.	B	2+	Guidelines: [2] Primary studies: [11, 24–39]

6 Pathological Diagnosis and Prognostic Factors

No.	Recommendations/Statements	GR	LoE	Sources
6.1.	To date, the evidence for an association between detected biochemical parameters and prediction/prognosis has been insufficient.	ST	2+	Primary studies: [40–50]
6.2.	The established prognostic factors for ovarian cancer listed below must be used: ▶ Tumour stage ▶ Postoperative residual tumour ▶ Age ▶ General condition ▶ Histological type ▶ Tumour grading ▶ Guideline-based therapy	CC		

7 Surgical Treatment

7.1 Surgical treatment of early ovarian cancer

No.	Recommendations	GR	LoE	Sources
7.1.	Optimal staging must include the following surgical steps: ▶ Longitudinal laparotomy ▶ Inspection and palpation of the entire abdominal cavity ▶ Peritoneal cytology ▶ Biopsies from all abnormal sites ▶ Peritoneal biopsies from unremarkable regions ▶ Bilateral excision of adnexa of uterus ▶ Hysterectomy, using an extraperitoneal approach where necessary ▶ Infracolic omentectomy ▶ Appendectomy (for mucinous/unclear tumour types) ▶ Bilateral pelvic and paraaortal lymphonodectomy	CC		
7.2.	If ovarian cancer is unexpectedly diagnosed, this must be confirmed histologically and the extent of spread described. The definitive treatment must then be carried out by a gynaecological oncologist.	CC		
7.3.	In patients with unilateral FIGO I stage tumours, fertility-preserving surgery can be done if staging was adequate.	0	4	Primary studies: [51–65]
7.4.	Patients with early stage ovarian cancer must be informed about the increased risk associated with fertility-preserving treatment, a risk which also depends on additional prognostic factors.	CC		
7.5.	Laparoscopic staging must not be done outside of studies.	A	3	Guidelines: [2] Primary studies: [66–72]

7.2 Surgical treatment of advanced ovarian cancer

No.	Recommendations/Statements	GR	LoE	Sources
7.6.	The goal of primary surgery to treat advanced ovarian cancer must be macroscopically complete resection.	CC		
7.7.	Multivisceral resection must be carried out if complete resection (free of residual macroscopic tumour) can be achieved or if it can be used to remove an obstruction and is not contraindicated in this patient.	CC		
7.8.	If advanced ovarian cancer is unexpectedly diagnosed, this must be confirmed histologically and the extent of spread described. The definitive treatment must then be carried out by a gynaecological oncologist in a suitable facility.	A	4	Guidelines: [2] Primary studies: [73–89]
7.9.	Patients obtain no benefit from primary chemotherapy followed by interval operation.	ST	1+	Guidelines: [1] Primary studies: [90–95]
7.10.	The sequence of therapy must consist first of primary surgery followed by chemotherapy.	A	1+	Guidelines: [1] Primary studies: [90–95]
7.11.	Second-look operations must not be carried out.	CC		

8 Systemic Primary Therapy

8.1 Systemic primary therapy for early ovarian cancer

No.	Recommendations	GR	LoE	Sources
8.1.	Patients with stage IA grade 1 ovarian cancer after complete operative staging must not receive adjuvant chemotherapy.	A	1+	Primary studies: [96–104]
8.2.	Patients with stage IC or IA/B, grade 3 ovarian cancer must receive platinum-based chemotherapy (6 cycles).	A	1+	Primary studies: [96–104]
8.3.	Patients with stage IAG2, IB G1/2 ovarian cancer can be offered platinum-based chemotherapy.	0	1+	Primary studies: [96–104]
8.4.	The therapy should include carboplatin and consist of 6 cycles.	B	1+	Guidelines: [1, 2] Primary studies: [67, 99, 105–117]

8.2 Systemic primary therapy for advanced ovarian cancer

No.	Recommendations	GR	LoE	Sources
8.5.	The first-line chemotherapy for patients with advanced ovarian cancer (II b-IV) must consist of carboplatin AUC5 and paclitaxel 175 mg/m² for 3 h i. v. over a total of 6 cycles, with one cycle every 3 weeks.	A	1++	Guidelines: [118, 119] Primary studies: [120–131]
8.6.	Additional therapy with bevacizumab can be considered in patients with advanced ovarian cancer (IIIB-IV).	0	1+	Primary studies: [132, 133]
8.7.	Changes in dose density or intensity should only be done as part of a clinical trial.	B	1+	Guidelines: [2] Primary studies: [134–146]
8.8.	No maintenance or consolidation therapies must be carried out after primary therapy has been completed.*	A	1+	Primary studies: [132, 133, 147–154]
8.9.	Systematic recording of the patient's quality of life can be helpful to identify difficulties during treatment.	CC		

* Data on the effectiveness of consolidation or maintenance therapy to increase progression-free survival (PFS) is only available for bevacizumab (see 8.6.)

9 Treatment for Recurrence

9.1 Populations with recurrence

No.	Statement	GR	LoE	Sources
9.1.	**Platinum-sensitive ovarian cancer:** Disease responds primarily to platinum-based first-line chemotherapy with recurrence occurring at the earliest 6 months after conclusion of platinum-based chemotherapy. This also includes the subgroup of **partially platinum-sensitive recurrences of ovarian cancer**. In this subgroup, disease also responds primarily to platinum-based first-line chemotherapy but recurrence occurs between 6 and 12 months after concluding platinum-based chemotherapy. **Platinum-resistant ovarian cancer:** Disease recurs within the first 6 months after concluding initial platinum-based chemotherapy. This also includes the subgroup with **platinum-refractory recurrence of ovarian cancer**. In this subgroup, disease does not respond to platinum-based chemotherapy or disease progresses within 4 weeks after therapy has been concluded.	ST	1+	Guidelines: [1, 119] Primary studies: [14, 155–163]

9.2 Systemic therapy for recurrence

9.2.1 Platinum-resistant recurrence

No.	Recommendations/Statements	GR	LoE	Sources
9.2.	Combination therapy offers no advantages compared to monotherapy.	ST	1+	Guidelines: [119] Primary studies: [155, 156, 158, 164–171]
9.3.	Endocrine therapies are inferior to a monochemotherapy.	ST	1+	Guidelines: [119] Primary studies: [155, 156, 158, 164–171]
9.4.	Patients with platinum-resistant and/or refractory recurrence of ovarian cancer must not receive platinum-based monotherapy, if chemotherapy is indicated. The following cytostatic drugs can be used: ▸ pegylated liposomal doxorubicin ▸ topotecan ▸ gemcitabine ▸ paclitaxel weekly	A	1+	Guidelines: [119] Primary studies: [155, 156, 158, 164–171]

9.2.2 Platinum-sensitive recurrence

No.	Recommendations	GR	LoE	Sources
9.5.	Patients with platinum-sensitive recurrence of ovarian cancer should have platinum-based combination therapy if chemotherapy is indicated. The following combinations can be used: ▸ carboplatin + gemcitabine + bevacizumab* ▸ carboplatin + pegylated liposomal doxorubicin ▸ carboplatin + paclitaxel ▸ carboplatin + gemcitabine	CC		

* to treat patients with primary recurrence who did not have previous VEGF-targeted therapy

9.3 Surgery for recurrence

No.	Recommendations	GR	LoE	Sources
9.6.	The value of surgery to treat ovarian cancer recurrence cannot be verified by data from prospective studies with a high level of evidence, but retrospective data indicate a potential clinical benefit.	A	2+	Guidelines: [1] Primary studies: [172–177]
9.7.	The goal of surgery for recurrence should be macroscopically complete resection.	B	2+	Guidelines: [1] Primary studies: [172–177]

10 Follow-up Care, Rehabiliation, Psycho-oncology, Palliative Medicine

10.1 Follow-up care and rehabilitation

No.	Recommendations/Statements	GR	LoE	Sources
10.1.	Patients with ovarian cancer must be informed about the various options for rehabilitation and offered support from social counselling services; patients must be offered suitable options after their individual need has been assessed.	CC		
10.2.	The goal of follow-up care is to detect and treat therapy-associated side-effects, to offer rehabilitation, psychosocial care and reintegration, to improve the patient's quality of life and to detect any recurrence.	CC		
10.3.	Routine use of the determination of CA-125 does not result in longer survival.	ST	1+	Guidelines: [1] Primary studies: [14, 178, 179]
10.4.	Routine sophisticated diagnostics and determination of markers is not required during follow-up when patients are symptom-free.	A	1+	Leitlinien: [1] Primary studies: [14, 178, 179]
10.5.	Follow-up must include detailed medical history, physical examination including gynaecological examination with speculum and palpation, rectal examination and vaginal sonography.	CC		
10.6.	There is no reliable information about the safety of hormone therapy after treatment for ovarian cancer.	ST	2+	Primary studies: [180–183]
10.7.	Hormone therapy cannot be recommended after treatment for ovarian cancer. It can be considered in individual cases, particularly in patients with considerable limitations in their quality of life.	0	2+	Primary studies: [180–183]

10.2 Psycho-oncology

No.	Recommendations	GR	LoE	Sources
10.8.	Psychosocial interventions have a positive impact on the patient's quality of life, psychological condition and capacity to cope emotionally with the disease.	CC		
10.9.	Psycho-oncological care of patients with ovarian cancer is an integral part of the oncological diagnosis, therapy and follow-up care and requires an interdisciplinary approach.	CC		
10.10.	Psycho-oncological counselling and support should be offered to all patients and their family members based on their needs.	CC		
10.11.	The topic of sexuality should always be actively explored to identify when further support is required and to provide additional support as required.	CC		

10.3 Palliative medicine

No.	Recommendations	GR	LoE	Sources
10.12.	The right moment to initiate palliative medical care depends first and foremost on the patient's needs and the individual stage of disease.	CC		
10.13.	Patients who primarily require palliative medical care should be included in a programme of specialised palliative care.	CC		
10.14.	Palliative medical care includes the medical control of symptoms, palliative care and psychosocial support till death. It is offered as needed in the form of general or specialised palliative care.	CC		
10.15.	In a palliative setting all necessary measures taken must be geared to the patient's individual therapeutic aims and aims in life.	CC		

11 Borderline Tumours (BOT)

No.	Recommendations/Statements	GR	LoE	Sources
11.1.	Borderline tumours must be distinguished according to the WHO classification and categorised into subtypes. This should include the categorisation of any existing implants (invasive – non invasive) as well as information about microinvasion.	CC		[184]
11.2.	Careful surgical staging is necessary and, in addition to complete removal of the tumour (including bilateral salpingo-oophorectomy), should include inspection of the abdomen with peritoneal wash cytology, resection of all abnormal areas, peritoneal biopsies of unremarkable areas and omentectomy. In mucinous borderline tumours, metastasis of extraovarian tumours must be excluded; an appendectomy is necessary to exclude a primary appendiceal neoplasm.	B	2+	Primary studies: [185–189]
11.3.	There are some indications that performing cystectomy instead of ovarectomy and carrying out a fertility-preserving procedure instead of bilateral salpingo-oophorectomy is associated with higher rates of recurrence.	ST	2+	Primary studies: [190]
11.4.	If the patient wishes to have children/wishes to preserve endocrine functions, a fertility-preserving procedure can be carried out. The patient must be informed about the increased risk of recurrence associated with this procedure.	0	2+	Guidelines: [2] Primary studies: [191]
11.5.	There is no persuasive evidence for the effectiveness of adjuvant therapy for the treatment of borderline tumours.	ST	1+	Guidelines: [2] Primary studies: [192]
11.6.	Patients with borderline tumours must not receive adjuvant therapy.	A	1+	Guidelines: [2] Primary studies: [192]

12 Ovarian Germ Cell and Stromal Tumours

No.	Recommendations/Statements	GR	LoE	Sources
12.1.	The diagnosis of germ cell and stromal tumours must done in a similar manner as the diagnosis of ovarian cancer.	CC		

12.2.	Optimal staging must include the following procedures:
	▸ Lower median laparotomy
	▸ Inspection and palpation of the entire abdominal cavity
	▸ Peritoneal cytology
	▸ Removal of the tumour with salpingo-oophorectomy
	▸ For potentially malignant tumours (granulosa cell tumours, Sertoli-Leydig cell tumours G2/G3 or steroid cell tumours NOS):
	  ▸ Definitive operative staging analogous to that for ovarian cancer.
	  ▸ The benefit of systematic lymphonodectomy when lymph nodes are unremarkable has not been proven.
	  ▸ If the uterus is not removed, hysteroscopy and curettage are recommended (to exclude endometrial hyperplasias or endometrial carcinoma).
		A	2+	Primary studies: [193–196]

12.3.	Fertility-preserving procedures should be considered when treating younger patients.	B	2+	Primary studies: [53]
12.4.	The benefit of adjuvant radiotherapy, chemotherapy or endocrine therapy after complete resection has not been proven and is controversially discussed in the literature.	ST	2+	Primary studies: [197, 198]
12.5.	Platinum-based chemotherapy should be considered for tumours which are stage IC or higher or if residual tumour is still present.	B	2+	Primary studies: [199–202]

13 Ovarian Germ Cell Tumours

No.	Recommendations/Statements	GR	LoE	Sources
13.1.	The diagnosis of ovarian germ cell tumours must done in a similar manner as the diagnosis for ovarian cancer.	CC		
13.2.	The goal of surgical treatment is, in addition to histological typification, complete resection of the tumour and adequate staging while preserving fertility if the remaining genital area is unremarkable. The benefit of systematic lymphonodectomy when lymph nodes are unremarkable has not been proven.	ST	2+	Primary studies: [53, 203–212]
13.3.	No adjuvant chemotherapy is required for stage IA tumours.	A	2+	Primary studies: [213]
13.4.	For cancers > FIGO IA, platinum-based risk-adapted chemotherapy must be carried out, consisting of 2–4 cycles of 2 or 3 cytostatic drugs*.	A	2+	Primary studies: [213, 214]
13.5.	In patients with advanced stage tumours, primary chemotherapy can be administered to preserve fertility. Resection of the residual tumour and of residual metastases must be planned after 3 or 4 cycles of chemotherapy have been concluded.	CC		
13.6.	In addition to standard follow-up examinations, follow-up must also include the determination of specific tumour markers.	CC		

* Chemotherapy must always include platinum and etoposide. The 3rd cytostatic drug can be either bleomycin or ifosfamide.

14 Care Facilities

No.	Recommendations/Statements	GR	LoE	Sources
14.1.	Patients with ovarian cancer should be treated by a gynaecological oncologist (specialist) in a specialist facility which includes interdisciplinary diagnostic and therapeutic services.	CC		

15 Quality Indicators

Quality indicator	Recommendation reference	Evidence base/additional information
Quality indicator 1: Operative staging of early ovarian cancer		
Z: Number of pts. with operative staging using: ▶ laparotomy ▶ peritoneal cytology ▶ peritoneal biopsies ▶ bilateral excision of adnexa of uterus ▶ hysterectomy, using an extraperitoneal approach where necessary ▶ infracolic omentectomy ▶ bilateral pelvic and paraaortal lymphonodectomy N: All pts. with a primary diagnosis of ovarian cancer FIGO I – IIIA	7.1. Optimal staging must including the following procedures: ▶ longitudinal laparotomy ▶ inspection and palpation of the entire abdominal cavity ▶ peritoneal cytology ▶ biopsies from all abnormal sites ▶ peritoneal biopsies from unremarkable regions ▶ bilateral excision of adnexa of uterus ▶ hysterectomy, using an extraperitoneal approach where necessary ▶ infracolic omentectomy ▶ appendectomy (for mucinous/unclear tumour types) ▶ bilateral pelvic and paraaortal lymphonodectomy	*a) Quality target* Operative staging to be done as often as possible *b) Evidence base* CC Guidelines: NICE 2011 [118] Primary studies: [215–223]
Quality indicator 2: Intraoperative tumour rupture		
Z: Number of pts. with intraoperative tumour rupture N: All pts. with a primary diagnosis of ovarian cancer FIGO IA or IB	Background text to 7.5. "When an unclear ovarian carcinoma is removed laparoscopically, complete removal is important with no tumour rupture."	*a) Quality target* No intraoperative tumour rupture *b) Evidence base* Leitlinien: [1,2] Primärstudien: [139–143]
Quality indicator 3: Macroscopically complete resection of advanced ovarian cancer		
Z: Number of pts. with macroscopically complete resection N: All pts. with a primary diagnosis of ovarian cancer ≥ FIGO IIB and surgical removal of the tumour	7.6. The goal of primary surgery must be to achieve macroscopically complete resection.	*a) Quality target* Macroscopically complete resection to be achieved as often as possible *b) Evidence base* CC Guidelines: [1, 2] Primary studies: [75, 83, 95, 174, 224–236]
Quality indicator 4: Surgery for advanced ovarian cancer		
Z: Number of pts. whose definitive surgery was done by a gynaecological oncologist N: All pts. with a primary diagnosis of ovarian cancer FIGO ≥ IIB after surgical therapy has been completed	7.8. The diagnosis for patients unexpectedly diagnosed with advanced ovarian cancer must be confirmed histologically and the extent of spread described. The definitive treatment must then be carried out by a gynaecological oncologist in a suitable facility.	*a) Quality target* Surgery to be performed as often as possible by a gynaecological oncologist *b) Evidence base* LoE 4, A Guidelines: [2] Primary studies: [73–89]
Note: Gynaecological oncologist = Medical specialist for gynaecology and obstetrics with a special focus on gynaecological oncology		
Quality indicator 5: Postoperative chemotherapy for advanced ovarian cancer		
Z: Number of pts. who received postoperative chemotherapy N: All pts. with a primary diagnosis of ovarian cancer ≥ FIGO IIB and receiving chemotherapy	7.10. The sequence of therapy must consist of primary surgery followed by chemotherapy.	*a) Quality target* Postoperative chemotherapy to be administered as often as possible in patients with advanced stage ovarian cancer *b) Evidence base* LoE 1+, A Guidelines: [1] Primary studies: [90–95]
Quality indicator 6: No adjuvant chemotherapy for early ovarian cancer		
Z: Number of pts. who received adjuvant chemotherapy N: All pts. with a primary diagnosis of ovarian cancer FIGO IA, G 1 und complete operative staging	8.1. Patients with stage IA grade 1 ovarian cancer after complete operative staging must not receive adjuvant chemotherapy.	*a) Quality target* If possible, no adjuvant chemotherapy to be administered to patients with FIGO IA, G 1 ovarian cancer who have had complete operative staging *b) Evidence base* LoE 1+, A Primary studies: [96–104]
Note: Please note that the FIGO classification has been updated! (position as of 12/2012)		

Quality indicator	Recommendation reference	Evidence base/additional information
Quality indicator 7: Platinum-based chemotherapy for early ovarian cancer		
Z: Number of pts. who received platinum-based chemotherapy N: All pts. with a primary diagnosis of ovarian cancer FIGO IC or IA/B and grade 3	8.2. Patients with stage IC or IA/B and grade 3 ovarian cancer must receive 6 cycles of platinum-based chemotherapy.	*a) Quality target* Patients with a primary diagnosis of IC or IA/B and grade 3 ovarian cancer to receive platinum-based chemotherapy as often as possible *b) Evidence base* LoE 1+, A Primary studies: [96–104]
Quality indicator 8: First-line chemotherapy for advanced ovarian cancer		
Z: Number of pts. who received 6 cycles of first-line chemotherapy carboplatin AUC5 and paclitaxel 175 mg/m^2 N: All pts. with a primary diagnosis of ovarian cancer ≥ FIGO IIB	8.5. First-line chemotherapy for patients with advanced ovarian cancer (II b-IV) must consist of carboplatin AUC5 and paclitaxel 175 mg/m^2 for 3 h i. v. over a total of 6 cycles, with one cycle every 3 weeks.	*a) Quality target* Patients with a primary diagnosis of ovarian cancer ≥ FIGO IIB to receive 6 cycles of first-line chemotherapy with carboplatin AUC5 and paclitaxel 175 mg/m^2 as often as possible *b) Evidence base* LoE 1++, A Guidelines: NICE 2 011 [118], NHS TA91 [119] Primary studies: [120–131]
Quality indicator 9: Chemotherapy for platinum-resistant and/or refractory primary recurrence		
Z: Number of pts. who received non platinum-based monotherapy with pegylated liposomal doxorubicin, topotecan, gemcitabine or paclitaxel weekly N: All pts. with platinum-resistant and/or refractory primary recurrence of ovarian cancer receiving chemotherapy for primary recurrence outside clinical trials	9.4. Patients with platinum-resistant and/or refractory recurrence of ovarian cancer must receive non platinum-based monotherapy if chemotherapy is indicated: The following cytostatic drugs can be considered: ▸ pegylated liposomal doxorubicin ▸ topotecan ▸ gemcitabine ▸ paclitaxel weekly	*a) Quality target* Non platinum-based monotherapy (s. left) to be administered as often as possible to treat patients with platinum-resistant and/or refractory primary recurrence of ovarian cancer receiving chemotherapy for primary recurrence outside clinical trials *b) Evidence base* LoE 1+, A Guidelines: NHS TA91 [119] Primary studies: [155, 156, 158, 164–171]
Note: Platinum-resistant recurrence: recurrence within 6 months after completing primary therapy		
Quality indicator 10: Combination therapy for platinum-sensitive recurrence		
Z: Number of pts. receiving platinum-based combination therapy N: All pts. with platinum-sensitive recurrence of ovarian cancer receiving chemotherapy for recurrence outside clinical trials	9.5 Patients with platinum-sensitive recurrence of ovarian cancer must receive platinum-based combination therapy, if chemotherapy is indicated. The following combinations of cytostatic drugs can be considered: ▸ carboplatin/gemcitabine/bevacizumab* ▸ carboplatin/pegylated liposomal doxorubicin ▸ carboplatin/paclitaxel ▸ carboplatin/gemcitabine	*a) Quality target* Platinum-based combination therapy to be administered as often as possible to treat patients with platinum-sensitive recurrence receiving chemotherapy for recurrence outside clinical trials *b) Evidence base* CC Guidelines: [1] Primary studies: [155, 157, 171, 237, 238]
Note: Platinum-based combination therapy: carboplatin/gemcitabine/bevacizumab*, carboplatin/pegylated liposomal doxorubicin, carboplatin/paclitaxel, carboplatin/gemcitabine		
Quality indicator 11: Counselling by social services		
Z: Number of pts who received counselling by social services N: All pts. with a primary diagnosis of ovarian cancer being treated in the facility	10.1. Patients with ovarian cancer must receive information about the available rehabilitation and support from social services and must be offered suitable support based on their individual need.	*a) Quality target* Patients with a primary diagnosis of ovarian cancer to receive counselling from social services as often as possible *b) Evidence base* CC Guidelines: [1] Primary studies: [14, 178, 179]
Quality indicator 12: No adjuvant therapy for BOT		
Z: Number of pts. with adjuvant therapy N: All pts. with a primary diagnosis of BOT	11.6. Patients with borderline tumours must not receive adjuvant therapy.	*a) Quality target* No adjuvant therapy to be given to patients with BOT *b) Evidence base* LoE 2+, A Guidelines: [2] Primary studies: [192]

* for patients with primary recurrence who did not previously receive VEGF-targeted therapy

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