










# European Society of Gynaecological Oncology expanded quality indicators and accreditation for cervical cancer management

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Although the incidence of cervical cancer in Europe is declining it remains a major public health problem, particularly in limited-resourced countries, with wide variations in regional and national management. Cervical cancer is still the leading cause of cancer-related death in women in eastern, western, middle, and southern Africa.<sup>1</sup> In East Europe it is the most frequent cause of cancer death in women aged less than 44 years.<sup>2</sup> The WHO recently launched a cervical cancer elimination initiative, aiming to reduce its global incidence, from currently 13/100 000/year to less than 4/100 000 by the end of the century.<sup>1,3,4</sup>

As part of its mission to improve the quality of care for women with gynecological cancers across Europe, the European Society of Gynaecological Oncology (ESGO) aims to notably establish multidisciplinary standards for training and care, to develop a set of quality indicators for the management of gynecological cancers, and to act as the European authority in the field of gynecological oncology. The ESGO quality indicators facilitate the documentation of quality of care, the comparison of performance structures, and the establishment of organizational priorities as a basis for accreditation in European countries.

ESGO has previously launched a hospital accreditation program based on ESGO quality indicators to assess adherence to European standards of care as established by ESGO through its evidence-based clinical practice guidelines. This accreditation program aims to evaluate the quality of surgery and to play an essential political role in the centralization of care for women with gynecological cancers. ESGO accreditation is awarded to institutions that offer patients the specific skills, experience, organization, and dedication required to achieve optimal levels of surgical care. The intention is incentive, not punitive. Certified centers can make the award known to doctors, patients, patient advocacy groups, and lay persons.

ESGO hospital accreditation programs in advanced ovarian and endometrial cancer surgery have already been launched and centers interested in being accredited can start the accreditation process online

using the following link: <https://esgo.org/explore/esgo-accreditation/>. Centers receiving ESGO accreditation are entitled to:

- ▶ Use the subtitle 'ESGO accredited center in Endometrial and/or Ovarian cancer surgery' (depending on the accreditation process followed/completed)
- ▶ Use the ESGO Accredited Center logo in its endometrial and/or ovarian cancer-related communication
- ▶ Be listed on the ESGO website as an ESGO accredited center.

As a continuation of this effort to improve overall quality of care for gynecological cancer patients, an ESGO accreditation program has been initiated in cervical cancer.

ESGO has defined and established a list of quality indicators for optimizing and ensuring the quality of surgical care essential to improving the management and outcomes of patients with cervical cancer.<sup>5</sup> With regard to the major role of radiotherapy in the management of this disease, ESGO and the European Society for Radiotherapy and Oncology (ESTRO) collaborated to extend the quality indicators to include aspects of radiation therapy management. This was done to give practitioners and administrators a quantitative basis to improve care and organizational processes notably for recognition of the increased complexity of modern external radiotherapy and brachytherapy techniques. The extended quality indicators aim to homogenize treatment across Europe and beyond, to minimize treatment related morbidity and complications, and to develop an accreditation program for cervical cancer management.<sup>6,7</sup>

A list of 29 quality indicators has been defined, including 11 general indicators (Table 1), 11 indicators for radiation therapy (Table 2), and seven indicators dedicated to surgical management (Table 3). Quality indicators 1 to 11 are related to center case load, training, experience of the surgeon, time to treatment, and the overall management including active participation in clinical trials, the decision-making process within a structured multidisciplinary



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## Society statement

| <b>Table 1</b> General indicators  |   |
|--|---|
| <b>Quality indicator 1:</b> Treatment decisions discussed at a multidisciplinary team meeting  |   |
| Type   | Process indicator   |
| Description  | The decision for any therapeutic intervention (excluding any diagnostic procedure, that is, biopsies or conization performed with a diagnostic intent) has been taken by a multidisciplinary team including at least a gynecologic oncologist or a trained surgeon specifically dedicated to gynecological cancer (see quality indicator 2), a radiologist, a radiation oncologist, a medical or clinical oncologist, and a pathologist |
| Specifications   | <i>Numerator:</i> number of patients with cervical cancer for whom the decision for any therapeutic intervention has been made by a multidisciplinary team<br><i>Denominator:</i> all patients presenting with cervical cancer  |
| Target   | ≥95%*   |
| <b>Quality indicator 2:</b> Surgery performed or supervised by a certified gynecologic oncologist or a trained surgeon dedicated to gynecological cancer |   |
| Type   | Process indicator   |
| Description  | Surgery is performed or supervised by a certified gynecologic oncologist or by a trained surgeon dedicated to gynecological cancer (accounting for over 80% of his or her practice) or having completed an ESGO-accredited fellowship   |
| Specifications   | <i>Numerator:</i> number of patients with cervical cancer operated by a surgical specialist (as defined above)<br><i>Denominator:</i> number of patients undergoing surgery for cervical cancer   |
| Target   | 100%  |
| <b>Quality indicator 3:</b> Number of hysterectomies and trachelectomies for invasive cervical cancer performed per center per year                      |   |
| Type   | Structural indicator  |
| Description  | These procedures include radical hysterectomies and radical trachelectomies where eligible and simple hysterectomies/trachelectomies where eligible   |
| Specifications   | <i>Numerator:</i> number of hysterectomies (radical and simple) and trachelectomies (radical and simple) performed per center per year<br><i>Denominator:</i> not applicable  |
| Targets  | Optimal target: ≥30<br>Minimum required target: ≥15   |
| <b>Quality indicator 4:</b> Time to primary radiotherapy less than 6 weeks from the date the patient is referred for the first time to the center        |   |
| Type   | Outcome indicator   |
| Description  | Time between referral to the center and initiation of primary radiotherapy treatment  |
| Specifications   | <i>Numerator:</i> number of cervical cancer patients who start their primary radiotherapy treatment within 6 weeks from the date the patient is referred for the first time to the center<br><i>Denominator:</i> all patients with cervical cancer treated with primary radiotherapy treatment  |
| Targets  | Optimal target: ≥90%<br>Minimum required target: ≥75%   |
| <b>Quality indicator 5:</b> Number of patients treated with external beam radiotherapy plus brachytherapy per center per year                            |   |
| Type   | Structural indicator  |
| Description  | A minimum number of patients treated per year per center with external beam radiotherapy (and/or concurrent chemotherapy) plus brachytherapy.   |
| Specifications   | <i>Numerator:</i> number of patients treated with external beam radiotherapy (and/or concurrent chemotherapy) plus brachytherapy for cervical cancer per center per year<br><i>Denominator:</i> not applicable  |
| Targets  | Optimal target: n ≥20<br>Minimum required target: n ≥10   |
| <b>Quality indicator 6:</b> Center participating in clinical trials in cervical cancers  |   |
| Type   | Structural indicator  |
| Description  | The center actively participates in clinical trials (not restricted to surgery) in cervical cancer  |
| Specifications   | <i>Numerator:</i> number of clinical trials in cervical cancer not restricted to surgery only (ongoing or conducted in the past 5 years)<br><i>Denominator:</i> not applicable  |
| Targets  | Optimal target: n ≥3<br>Minimum required target: n ≥1   |
| <b>Quality indicator 7:</b> Required pre-treatment work-up   |   |
| Type   | Outcome indicator   |
| Description  | The required pre-treatment work-up is defined according to the ESGO-ESTRO-ESP guidelines  |
| Specifications   | <i>Numerator:</i> number of patients with cervical cancer who receive a pre-treatment work-up (excluding palliative cases) according to the ESGO-ESTRO-ESP guidelines<br><i>Denominator:</i> all patients with cervical cancer for whom a treatment with curative intent is planned   |
| Target   | 100%  |
| <b>Quality indicator 8:</b> A structured follow-up program of patient outcome is available   |   |
| Type   | Outcome indicator   |
| Description  | All disease related events (including local failures) and grade ≥3 genitourinary and/or gastrointestinal and/or vaginal complications occurring after treatment are monitored in a structured follow-up program available either locally or nationally with central reporting   |

Continued

| <b>Table 1</b> Continued  |  |
|---|--|
| Specifications  | <i>Numerator:</i> not applicable<br><i>Denominator:</i> not applicable   |
| Target  | Availability of a structured follow-up program monitoring all disease-related events and severe complications, as defined above  |
| <b>Quality indicator 9:</b> Patients are offered a survivorship program   |  |
| Type  | Outcome indicator  |
| Description   | A structured program is necessary to report and review late gastrointestinal, urinary, and gynecological complications, including patient reported outcomes and quality of life, and to evaluate the true impact of treatments in terms of severe complications, but also mild to moderate morbidity<br>A structured global program for functional rehabilitation and holistic care should be available. Such programs rely on the identification of healthcare professionals specialized in the treatment of radiation induced side effects, including gynecologists, gastroenterologists, urologists, and psychological support, either in the healthcare structure itself or through well identified referral networks<br>Sexual health should be addressed, and any dysfunction should be documented in the medical record. Access to sexual rehabilitation programs should be available in the healthcare structure. Such rehabilitation programs involve medical and/or paramedical staff familiar with the prevention and palliation of long-term radiation-induced gynecological sequelae (eg, vaginal dilators, hormone replacement therapy, vaginal topicals, and psychological support) |
| Specifications  | <i>Numerator:</i> not applicable<br><i>Denominator:</i> not applicable   |
| Target  | A structured survivorship program is offered to the patients after treatment   |
| <b>Quality indicator 10:</b> Recurrence rate at 2 years in patients with a stage pT1b1 and pT1b2 confirmed N0 after primary surgical treatment for common histotypes                              |  |
| Type  | Outcome indicator  |
| Description   | This quality indicator applies to the common tumor types (squamous cell and usual types of adenocarcinoma) and both local and distant recurrences, after any eligible treatment, irrespective of adjuvant treatment strategy   |
| Specifications  | <i>Numerator:</i> lymph node-negative pT1b1 and pT1b2 patients whose disease recurs within 2 years after primary surgical treatment, irrespective of adjuvant treatment strategy, with a minimum of 2 years' follow-up<br><i>Denominator:</i> All lymph node-negative pT1b1 and pT1b2 patients after primary surgical treatment, irrespective of adjuvant treatment strategy, with a minimum of 2 years' follow-up   |
| Target  | <15%   |
| <b>Quality indicator 11:</b> Counseling about the option of fertility-sparing treatment where eligible  |  |
| Type  | Structural indicator   |
| Description   | Counseling of patients with stage T1b1 $\leq$ 2 cm disease, potential candidates for fertility-sparing treatment, is described in the ESGO-ESTRO-ESP guidelines. All eligible patients should be appropriately counseled about a possibility of fertility-sparing treatment. Fertility-sparing treatment should be undertaken exclusively in centers with comprehensive expertise in this management   |
| Specifications  | <i>Numerator:</i> number of patients with stage T1b1 $\leq$ 2 cm disease, potential candidates for fertility-sparing treatment, counseled according to the ESGO-ESTRO-ESP guidelines<br><i>Denominator:</i> all patients with stage T1b1 $\leq$ 2 cm disease, potential candidates for fertility-sparing treatment   |
| Target  | 100%   |
| *Exception: only emergency cases (eg, bleeding).<br>ESGO, European Society of Gynaecological Oncology; ESP, European Society of Pathology; ESTRO, European Society for Radiotherapy and Oncology. |  |

team, adequate pre-operative investigations, and patient outcomes. Quality indicators 12 to 22 address the indications of radiation therapy including brachytherapy boost, intensity modulated radiotherapy techniques, individualized image-guided radiotherapy

protocol with daily imaging based on on-board three-dimensional imaging, image-guided adaptive brachytherapy, combined intracavitary/interstitial brachytherapy and curative intent radiotherapy, and concurrent chemotherapy. The recommended radiation therapy

| <b>Table 2</b> Indicators for radiation therapy  |   |
|--|---|
| <b>Quality indicator 12:</b> Patients are treated with brachytherapy boost if indicated            |   |
| Type   | Outcome indicator   |
| Description  | Patients treated with external beam radiotherapy (with curative intent) for cervical cancer are treated with a brachytherapy boost  |
| Specifications   | <i>Numerator:</i> number of patients treated with external beam radiotherapy (with curative intent) for cervical cancer treated with a brachytherapy boost<br><i>Denominator:</i> total number of patients treated with external beam radiotherapy (with curative intent) for cervical cancer |
| Target   | $\geq$ 95%  |
| <b>Quality indicator 13:</b> Patients are treated with intensity-modulated radiotherapy techniques |   |
| Type   | Outcome indicator   |
| Description  | Patients receiving pelvic and/or para-aortic radiotherapy are treated with intensity-modulated radiotherapy-like techniques to decrease treatment related toxicity  |

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## Society statement

| Table 2 Continued  |  |
|--|--|
| Specifications   | <i>Numerator</i> : number of cervical cancer patients treated with curative intent with pelvic and/or para-aortic intensity-modulated radiotherapy per center<br><i>Denominator</i> : total number of cervical cancer patients treated with curative intent with pelvic and/or para-aortic external irradiation per center   |
| Targets  | Optimal target: 100%<br>Minimum required target: ≥90%  |
| <b>Quality indicator 14:</b> Daily on-board image-guided radiotherapy to ensure target volume coverage                     |  |
| Type   | Outcome indicator  |
| Description  | Patients are treated following an image-guided radiotherapy protocol with daily imaging based on on-board three-dimensional imaging (cone beam CT, MRI, or CT), with individual margins to compensate for internal target motion, daily verification modalities, and couch correction strategies. Replanning is performed when target motion has an impact on dosimetric coverage  |
| Specifications   | <i>Numerator</i> : number of cervical cancer patients treated following an individualized image-guided radiotherapy protocol with daily on-board three-dimensional imaging<br><i>Denominator</i> : total number of cervical cancer patients receiving curative intent external beam radiotherapy   |
| Target   | ≥95%   |
| <b>Quality indicator 15:</b> Prescribed pelvic dose is 45 Gy in 1.8 Gy per fraction  |  |
| Type   | Outcome indicator  |
| Description  | Prescribed dose for pelvic and/or para-aortic external beam radiotherapy is 45 Gy delivered in fractions of 1.8 Gy   |
| Specifications   | <i>Numerator</i> : number of patients treated with curative intent for cervical cancer and being prescribed a total dose of 45 Gy external beam radiotherapy<br><i>Denominator</i> : total number of patients treated with curative intent external beam radiotherapy for cervical cancer  |
| Target   | ≥95%   |
| <b>Quality indicator 16:</b> Lymph node boosts are delivered in patients with macroscopic lymph node spread                |  |
| Type   | Outcome indicator  |
| Description  | Suspicious macroscopic lymph nodes are boosted, preferentially through simultaneous integrated boost   |
| Specifications   | Lymph node boosts:<br>▶ <i>Numerator</i> : number of patients with pelvic and/or para-aortic macroscopic lymph nodes treated with lymph node boost, excluding palliative cases<br>▶ <i>Denominator</i> : total number of patients with pelvic and/or para-aortic macroscopic lymph nodes treated with external beam radiotherapy, excluding palliative cases<br>Simultaneous integrated boost use:<br>▶ <i>Numerator</i> : number of patients with pelvic and/or para-aortic macroscopic lymph nodes treated with simultaneous integrated boost<br>▶ <i>Denominator</i> : total number of patients with pelvic and/or para-aortic macroscopic lymph nodes receiving lymph node boost |
| Targets  | Lymph node boosts: ≥95%<br>Simultaneous integrated boosts use: ≥90%  |
| <b>Quality indicator 17:</b> Patients treated with curative intent radiotherapy and concurrent chemotherapy (if indicated) |  |
| Type   | Outcome indicator  |
| Description  | Patients with cervical tumor are treated with radiotherapy and concurrent chemotherapy (curative intent only, regardless of the number of cycles)  |
| Specifications   | <i>Numerator</i> : number of patients treated with curative intent external beam radiotherapy for cervical cancer receiving concurrent chemotherapy<br><i>Denominator</i> : total number of patients treated with curative intent external beam radiotherapy for cervical cancer who are fit for concurrent chemotherapy without contraindications, such as renal insufficiency, hematological comorbidities, etc  |
| Target   | ≥95%   |
| <b>Quality indicator 18:</b> Imaging for image-guided brachytherapy  |  |
| Type   | Outcome indicator  |
| Description  | Patients are treated with image-guided adaptive brachytherapy and at least the first brachytherapy fraction is planned based on MRI with applicator <i>in situ</i>   |
| Specifications   | Image-guided adaptive brachytherapy use:<br>▶ <i>Numerator</i> : number of patients treated with uterovaginal brachytherapy having three-dimensional imaging (CT or MRI) with applicator <i>in situ</i> performed at each implant<br>▶ <i>Denominator</i> : total number of patients treated with uterovaginal brachytherapy<br>MRI at least at the first fraction:<br>▶ <i>Numerator</i> : number of patients treated with uterovaginal brachytherapy having an MRI with applicator <i>in situ</i> performed at least at the first fraction<br>▶ <i>Denominator</i> : total number of patients treated with uterovaginal brachytherapy without contraindications for MRI            |
| Targets  | Image-guided adaptive brachytherapy (MRI or CT): 100%<br>MRI at least at the first fraction: 100%  |

Continued

**Table 2** Continued

| <b>Quality indicator 19:</b> Combined intracavitary/intestinal brachytherapy use  |   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
|---|---|---------------------------------|---|--------------------------------------|----------------------------------|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------------|--------|--------|--------|--------|--|--------|--|--|--|------------------------------|--------|--------|--------|---|-------------|--------------------------|---------------------------|---|--------------------------------------|-------------------------|---------------------------|--|-------------------|-------------------|--|--|-------------------|-------------------|------------------------------|--------|--------|--------|--------|--------|--------|------------------------------|--------|--------|--------|--------|--------|--------|
| Type  | Outcome indicator   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Description   | Combination of intracavitary and interstitial implant technique is recommended in patients with advanced stages, poor response to chemoradiotherapy, and/or or large volume and/or asymmetric tumors. It also helps decreasing doses to organs at risk.   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Specifications  | Use of combined intracavitary/intestinal brachytherapy:<br><ul style="list-style-type: none"> <li>▶ <i>Numerator</i>: not applicable</li> <li>▶ <i>Denominator</i>: not applicable</li> </ul> If yes:<br><ul style="list-style-type: none"> <li>▶ <i>Numerator</i>: number of patients treated with combination of intracavitary uterovaginal and interstitial brachytherapy</li> <li>▶ <i>Denominator</i>: total number of patients treated with uterovaginal brachytherapy</li> </ul>   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Targets   | Use of combined intracavitary/intestinal brachytherapy<br>If yes:<br><ul style="list-style-type: none"> <li>▶ Optimal target: ≥60%</li> <li>▶ Minimum required target: ≥40%</li> </ul>  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| <b>Quality indicator 20:</b> Brachytherapy is delivered after the patient has received a total external beam radiotherapy dose ≥36 Gy |   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Type  | Outcome indicator   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Description   | Brachytherapy is performed after the patient has received a total external beam radiotherapy dose ≥36 Gy  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Specifications  | <i>Numerator</i> : number of patients having uterovaginal brachytherapy performed after a total external beam radiotherapy dose ≥36 Gy<br><i>Denominator</i> : total number of patients treated with uterovaginal brachytherapy   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Target  | ≥95%  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| <b>Quality indicator 21:</b> Overall treatment time does not exceed 50 days   |   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Type  | Outcome indicator   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Description   | Overall treatment time, calculated from the first external beam radiotherapy fraction to the last brachytherapy fraction (for high dose rate treatment) or pulse (for pulsed dose rate treatments), is ≤50 days. Overall treatment time calculation includes the delivery of lymph nodes boosts   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Specifications  | <i>Numerator</i> : number of patients treated with radiotherapy (and/or concurrent chemotherapy) plus brachytherapy boost and having overall treatment time ≤50 days<br><i>Denominator</i> : total number of patients treated with radiotherapy (and/or concurrent chemotherapy) plus brachytherapy boost, excluding those with occasional severe medical complications (eg, neutropenia requiring treatment disruption or concurrent infection)  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Target  | ≥90%  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| <b>Quality indicator 22:</b> Minimum required criteria for brachytherapy treatment planning   |   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Type  | Process indicator   |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Description   | The center follows a protocol including, at minimum, the following criteria for brachytherapy:  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
|   | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><math>D_{90} \text{CTV}_{\text{HR}}</math></th> <th style="text-align: center;"><math>D_{98} \text{CTV}_{\text{HR}}</math></th> <th style="text-align: center;"><math>D_{98} \text{GTV}_{\text{res}}</math></th> <th style="text-align: center;"><math>D_{98} \text{CTV}_{\text{IR}}</math></th> </tr> </thead> <tbody> <tr> <td><b>Target dose</b></td> <td style="text-align: center;">EQD2<sub>10</sub></td> <td style="text-align: center;">EQD2<sub>10</sub></td> <td style="text-align: center;">EQD2<sub>10</sub></td> <td style="text-align: center;">EQD2<sub>10</sub></td> </tr> <tr> <td>Achieved in 70% of patients*</td> <td style="text-align: center;">&gt;90 Gy</td> <td style="text-align: center;">&gt;80 Gy</td> <td style="text-align: center;">&gt;95 Gy</td> <td style="text-align: center;">&gt;60 Gy</td> </tr> <tr> <td></td> <td style="text-align: center;">&lt;95 Gy</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Achieved in 90% of patients*</td> <td style="text-align: center;">&gt;85 Gy</td> <td style="text-align: center;">&gt;75 Gy</td> <td style="text-align: center;">&gt;90 Gy</td> <td style="text-align: center;">–</td> </tr> <tr> <td><b>OARs</b></td> <td style="text-align: center;">Rectum D2cm<sup>3</sup></td> <td style="text-align: center;">Bladder D2cm<sup>3</sup></td> <td style="text-align: center;">ICRU rectovaginal point EQD2<sub>3</sub></td> <td style="text-align: center;">ICRU bladder point EQD2<sub>3</sub></td> <td style="text-align: center;">Bowel D2cm<sup>3</sup></td> <td style="text-align: center;">Sigmoid D2cm<sup>3</sup></td> </tr> <tr> <td></td> <td style="text-align: center;">EQD2<sub>3</sub></td> <td style="text-align: center;">EQD2<sub>3</sub></td> <td></td> <td></td> <td style="text-align: center;">EQD2<sub>3</sub></td> <td style="text-align: center;">EQD2<sub>3</sub></td> </tr> <tr> <td>Achieved in 70% of patients*</td> <td style="text-align: center;">&lt;65 Gy</td> <td style="text-align: center;">&lt;80 Gy</td> <td style="text-align: center;">&lt;65 Gy</td> <td style="text-align: center;">&lt;75 Gy</td> <td style="text-align: center;">&lt;65 Gy</td> <td style="text-align: center;">&lt;70 Gy</td> </tr> <tr> <td>Achieved in 90% of patients*</td> <td style="text-align: center;">&lt;75 Gy</td> <td style="text-align: center;">&lt;85 Gy</td> <td style="text-align: center;">&lt;75 Gy</td> <td style="text-align: center;">&lt;85 Gy</td> <td style="text-align: center;">&lt;75 Gy</td> <td style="text-align: center;">&lt;75 Gy</td> </tr> </tbody> </table> |                                 | $D_{90} \text{CTV}_{\text{HR}}$           | $D_{98} \text{CTV}_{\text{HR}}$      | $D_{98} \text{GTV}_{\text{res}}$ | $D_{98} \text{CTV}_{\text{IR}}$ | <b>Target dose</b> | EQD2 <sub>10</sub> | EQD2 <sub>10</sub> | EQD2 <sub>10</sub> | EQD2 <sub>10</sub> | Achieved in 70% of patients* | >90 Gy | >80 Gy | >95 Gy | >60 Gy |  | <95 Gy |  |  |  | Achieved in 90% of patients* | >85 Gy | >75 Gy | >90 Gy | – | <b>OARs</b> | Rectum D2cm <sup>3</sup> | Bladder D2cm <sup>3</sup> | ICRU rectovaginal point EQD2 <sub>3</sub> | ICRU bladder point EQD2 <sub>3</sub> | Bowel D2cm <sup>3</sup> | Sigmoid D2cm <sup>3</sup> |  | EQD2 <sub>3</sub> | EQD2 <sub>3</sub> |  |  | EQD2 <sub>3</sub> | EQD2 <sub>3</sub> | Achieved in 70% of patients* | <65 Gy | <80 Gy | <65 Gy | <75 Gy | <65 Gy | <70 Gy | Achieved in 90% of patients* | <75 Gy | <85 Gy | <75 Gy | <85 Gy | <75 Gy | <75 Gy |
|   | $D_{90} \text{CTV}_{\text{HR}}$   | $D_{98} \text{CTV}_{\text{HR}}$ | $D_{98} \text{GTV}_{\text{res}}$          | $D_{98} \text{CTV}_{\text{IR}}$      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| <b>Target dose</b>  | EQD2 <sub>10</sub>  | EQD2 <sub>10</sub>              | EQD2 <sub>10</sub>                        | EQD2 <sub>10</sub>                   |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Achieved in 70% of patients*  | >90 Gy  | >80 Gy                          | >95 Gy                                    | >60 Gy                               |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
|   | <95 Gy  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Achieved in 90% of patients*  | >85 Gy  | >75 Gy                          | >90 Gy                                    | –                                    |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| <b>OARs</b>   | Rectum D2cm <sup>3</sup>  | Bladder D2cm <sup>3</sup>       | ICRU rectovaginal point EQD2 <sub>3</sub> | ICRU bladder point EQD2 <sub>3</sub> | Bowel D2cm <sup>3</sup>          | Sigmoid D2cm <sup>3</sup>       |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
|   | EQD2 <sub>3</sub>   | EQD2 <sub>3</sub>               |   |                                      | EQD2 <sub>3</sub>                | EQD2 <sub>3</sub>               |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Achieved in 70% of patients*  | <65 Gy  | <80 Gy                          | <65 Gy                                    | <75 Gy                               | <65 Gy                           | <70 Gy                          |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Achieved in 90% of patients*  | <75 Gy  | <85 Gy                          | <75 Gy                                    | <85 Gy                               | <75 Gy                           | <75 Gy                          |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Specifications  | <i>Numerator</i> : not applicable<br><i>Denominator</i> : not applicable  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |
| Target  | Brachytherapy treatment planning meets criteria detailed above  |                                 |   |                                      |                                  |                                 |                    |                    |                    |                    |                    |                              |        |        |        |        |  |        |  |  |  |                              |        |        |        |   |             |                          |                           |   |                                      |                         |                           |  |                   |                   |  |  |                   |                   |                              |        |        |        |        |        |        |                              |        |        |        |        |        |        |

\*Achievability is assessed per dose volume histogram parameter

CTV<sub>HR</sub>, high risk clinical target volume; CTV<sub>IR</sub>, intermediate risk clinical target volume; D<sub>90</sub>, minimal dose delivered to 90% of the target volume; D<sub>98</sub>, minimal dose delivered to 98% of the target volume; D2cm<sup>3</sup>, minimal doses delivered to the most irradiated 2 cm<sup>3</sup> parts of the organs; EQD2, equivalent doses per fractions of 2 Gy with alpha/beta value of 3 Gy for late normal tissue reactions (EQD2<sub>3</sub>) and 10 Gy for tumor (EQD2<sub>10</sub>); GTV<sub>res</sub>, residual gross tumor volume at time of brachytherapy; ICRU, International Commission on Radiation Units and Measurements; OARs, organs at risk.

## Society statement

doses, overall treatment time, indications for lymph node boost in patients with macroscopic lymph node spread, and adhering to minimum required criteria for brachytherapy treatment planning are also highlighted. Quality indicators dedicated to the surgical management (23–29) address the quality of surgical procedures, the compliance of management with the ESGO-ESTRO-ESP (European Society of Pathology) guidelines, and the need for a systematic assessment of surgical morbidity and oncologic outcomes as well as standardized and comprehensive documentation of surgical and pathological elements.<sup>8–10</sup>

Tumor stages are indicated following the 2018 Fédération Internationale de Gynécologie Obstétrique (FIGO) classification and the new (version 9) American Joint Committee on Cancer Tumor, Node, Metastasis Staging for Cervical Cancer, both updated in 2021.<sup>11 12</sup>

Using a structured format, each quality indicator has a description specifying what the indicator is measuring.<sup>13</sup> Measurability specifications are then detailed to define how the quality indicators will be measured in practice. The time frame for assessment of criteria is the last calendar year (unless otherwise indicated). Further to measurement of the indicator, a target is indicated. This specifies the level which each center should be aiming to achieve. When appropriate, two targets were defined: an optimal target, expressing the best possible option for patients, and a minimal target, expressing the minimal requirement when practical feasibility factors are taken into account.

Each quality indicator was associated with a score, and a self-assessment form was built (Table 4). Centers interested in being accredited are required to fill in the self-assessment form. The sum

**Table 3** Indicators dedicated to the surgical management

|   |   |
|---|---|
| <b>Quality indicator 23:</b> Urological fistula rate within 30 post-operative days after a primary surgical treatment   |   |
| Type  | Outcome indicator   |
| Description   | Any bladder or ureteral fistula diagnosed after a procedure including radical parametrectomy. The fistula rate should be calculated on the basis of data of the preceding 3 years. Radical parametrectomies include radical hysterectomies, radical trachelectomies, and parametrectomies   |
| Specifications  | <i>Numerator:</i> number of patients treated in the preceding 3 years who develop ureteral or bladder fistulas within 30 post-operative days<br><i>Denominator:</i> all patients with cervical cancer undergoing a procedure including radical parametrectomy in the preceding 3 years  |
| Target  | ≤3%   |
| <b>Quality indicator 24:</b> Proportion of patients after primary surgical treatment who have clear vaginal (invasive disease) and parametrial margins        |   |
| Type  | Outcome indicator   |
| Description   | Clear surgical margins apply for both the vaginal margins and parametrial margins. Using an adequate clinical staging with modern imaging and careful pre-operative vaginal assessment, as defined in the ESGO-ESTRO-ESP guidelines, positive surgical margins after a radical hysterectomy or trachelectomy should be avoided  |
| Specifications  | <i>Numerator:</i> number of patients after primary surgical treatment who have clear surgical margins for invasive disease in the preceding 3 years<br><i>Denominator:</i> all patients who have undergone primary surgical treatment in the preceding 3 years  |
| Target  | ≥97%  |
| <b>Quality indicator 25:</b> Proportion of patients receiving adjuvant chemoradiotherapy after a primary surgical treatment for a presumed FIGO IB N0 disease |   |
| Type  | Structural indicator  |
| Description   | Management of patients after a surgical treatment for a presumed FIGO IB N0 disease is defined according to the ESGO-ESTRO-ESP guidelines.  |
| Specifications  | <i>Numerator:</i> number of patients receiving adjuvant chemoradiotherapy after primary surgical treatment for a presumed FIGO IB N0 disease, according to the ESGO-ESTRO-ESP guidelines<br><i>Denominator:</i> all patients with primary surgical treatment for a presumed FIGO IB N0 disease  |
| Target  | <20%  |
| <b>Quality indicator 26:</b> Minimum required elements in surgical reports  |   |
| Type  | Process indicator   |
| Description   | The required surgical report, based on the ESGO-ESTRO-ESP guidelines, must be structured and should include at least the following elements: surgical approach; type of lymph nodes staging; technique of sentinel lymph node detection; localization of detected sentinel lymph node; regions of pelvic lymph node dissection; detailed description of type of parametrial resection (Querleu-Morrow classification); type of adnexal procedure; localization of preserved adnexa/ovaries; basic surgical data (duration, blood loss); intra-operative complications (type, grade, and management) |
| Specifications  | <i>Numerator:</i> number of patients with cervical cancer undergoing surgery who have a complete surgical report that contains all required elements as defined above<br><i>Denominator:</i> all patients with cervical cancer undergoing surgery   |
| Target  | 100%  |
| <b>Quality indicator 27:</b> Minimum required elements in pathology reports   |   |
| Type  | Process indicator   |

Continued

**Table 3** Continued

|   |   |
|---|---|
| Description   | The minimum required elements in pathology reports, based on the ESGO-ESTRO-ESP guidelines include at least the following elements: <ol style="list-style-type: none"> <li>1. Description of the specimen(s) submitted for histological evaluation</li> <li>2. Macroscopic description of specimen(s) (biopsy, loop/cone, trachelectomy, hysterectomy), including specimen dimensions (three dimensions), number of tissue pieces for loop/cones, and maximum and minimum length of vaginal cuff and the parametria in two dimensions</li> <li>3. Macroscopic tumor site(s), if the tumor is visible grossly, in trachelectomy and hysterectomy specimens</li> <li>4. Tumor dimensions, including two measurements of horizontal extent and depth of invasion or thickness (tumor dimension should be based on a correlation of the gross and histological features). When multi-focal separate tumors are present, each should be described and measured separately, and the largest used for tumor staging. Specimens from prior conization and subsequent conization, trachelectomy, or hysterectomy should be correlated for estimation of the tumor size. This is important because different specimens might have been reported at different institutions. It should also be recognized that simply adding up the maximum size of tumors in separate specimens may significantly overestimate the maximum tumor dimension</li> <li>5. Histological tumor type and tumor grade</li> <li>6. The presence or absence of lymphovascular space involvement</li> <li>7. Co-existing pathology (squamous intra-epithelial lesion/cervical intra-epithelial neoplasia, adenocarcinoma <i>in situ</i>, stratified mucin-producing intra-epithelial lesion)</li> <li>8. Minimum distance of uninvolved cervical stroma</li> <li>9. Margin status (invasive and pre-invasive disease, specify the margin(s))</li> <li>10. Lymph node status, including sentinel lymph node status, the total number of nodes found, the number and location of positive lymph nodes, and the presence of extra-nodal extension. Micrometastasis (&gt;0.2 mm and up to 2 mm) are reported as pN1 (mi). Isolated tumor cells no greater than 0.2 mm in regional nodes should be reported as pN0 (i+). The number of positive lymph nodes for each anatomical group should be reported separately</li> <li>11. Pathologically confirmed distant metastases</li> <li>12. Provisional pathological staging (tumor node metastasis, 8th edition; a pathological FIGO stage may also be provided if dictated by local protocols</li> <li>13. The results of any frozen section specimen evaluation</li> </ol> |
| Specifications  | <i>Numerator</i> : number of patients with cervical cancer undergoing surgery for whom all minimum required elements as defined above are reported<br><i>Denominator</i> : all patients with cervical cancer undergoing surgery   |
| Target  | 100%  |
| <b>Quality indicator 28:</b> Structured prospective reporting of 30-day post-operative morbidity  |   |
| Type  | Outcome indicator   |
| Description   | Structured prospective reporting of the follow-up and 30-day post-operative morbidity using a validated surgical complications scoring system   |
| Specifications  | <i>Numerator</i> : number of patients with cervical cancer who have undergone a surgery and for whom a structured prospective reporting of the follow-up and 30-day post-operative morbidity is available<br><i>Denominator</i> : all patients with cervical cancer undergoing surgery  |
| Target  | 100%  |
| <b>Quality indicator 29:</b> Availability of sentinel lymph node mapping and pathological ultrastaging when indicated   |   |
| Type  | Outcome indicator   |
| Description   | Lymph nodes staging is defined according to the ESGO-ESTRO-ESP guidelines   |
| Specifications  | <i>Numerator</i> : not applicable<br><i>Denominator</i> : not applicable  |
| Target  | Availability of sentinel lymph node mapping and pathological ultrastaging when indicated  |
| ESGO, European Society of Gynaecological Oncology; ESP, European Society of Pathology; ESTRO, European Society for Radiotherapy and Oncology; FIGO, Fédération Internationale de Gynécologie Obstétrique. |   |

of the individual scores being 109, it was decided that an institution that meets at least 80% of the score (score  $\geq 88$ ) provides satisfactory surgical and radiotherapeutic management of patients with cervical cancer. However, this sum is not the only criterion to take into account. Centers interested in becoming accredited must accept that ESGO may perform random audits of applicants by asking for operative reports and pathology reports from select cases in their database.

A database including all referred cases of cervical cancer, including surgical and non-surgical cases during the last 3 consecutive years, must be provided in order to allow the ESGO accreditation committee to validate the center's self-assessment form. The following additional documents should be provided:

- ▶ Documentation of clinical trials (NCT number and recruitment numbers overall per year, and if available publication list with PMID)
- ▶ Description of how complications are documented and quality management is performed.

ESGO has also developed criteria distinguishing centers with accreditation for the management of cervical cancer into two categories, either 'Standard Accreditation' or 'Center of Excellence'. These criteria are outlined in [Box 1](#). Centers accredited as a Center of Excellence may then build a network for education, training, and research. The system will be refined in the future with the feedback provided by the scoring of candidate centers, and by prospective research on the multivariate correlation between survival outcomes,

**Table 4** Scoring system

| Quality indicators  | Targets (tick if applicable)  | Scoring points               |
|---|---|------------------------------|
| General indicators  |   |                              |
| 1. Treatment decisions discussed at a multidisciplinary team meeting  | ≥95%  | <input type="checkbox"/> 3*† |
|   | <95%  | <input type="checkbox"/> 0   |
| 2. Surgery performed or supervised by a certified gynecologic oncologist or a trained surgeon dedicated to gynecological cancer             | 100%  | <input type="checkbox"/> 3*† |
|   | <100%   | <input type="checkbox"/> 0   |
| 3. Number of hysterectomies and trachelectomies for invasive cervical cancer performed per center per year                                  | n≥30 (optimal target)   | <input type="checkbox"/> 5*  |
|   | n≥15 (minimum required target)  | <input type="checkbox"/> 3†  |
|   | n<15  | <input type="checkbox"/> 0   |
| 4. Time to primary radiotherapy less than 6 weeks from the date the patient is referred for the first time to the center                    | ≥90% (optimal target)   | <input type="checkbox"/> 5*  |
|   | ≥75% (minimum required target)  | <input type="checkbox"/> 3†  |
|   | <75%  | <input type="checkbox"/> 0   |
| 5. Number of patients treated with external beam radiotherapy plus brachytherapy per center per year  | n≥20 (optimal target)   | <input type="checkbox"/> 5*  |
|   | n≥10 (minimum required target)  | <input type="checkbox"/> 3†  |
|   | n<10  | <input type="checkbox"/> 0   |
| 6. Center participating in clinical trials in cervical cancers  | ≥3 (optimal target)   | <input type="checkbox"/> 3   |
|   | ≥1 (minimum required target)  | <input type="checkbox"/> 1   |
|   | None  | <input type="checkbox"/> 0   |
| 7. Required pre-treatment work-up   | 100%  | <input type="checkbox"/> 3*† |
|   | <100%   | <input type="checkbox"/> 0   |
| 8. A structured follow-up program of patient outcome is available   | Availability of a structured follow-up program monitoring all disease-related events and severe complications as defined in the description | <input type="checkbox"/> 3*  |
|   | Other situations  | <input type="checkbox"/> 0   |
| 9. Patients are offered a survivorship program (including pelvic, urogenital, gastrointestinal, lymphadema, etc)                            | A structured survivorship program is offered to the patients after treatment  | <input type="checkbox"/> 3*  |
|   | Other situations  | <input type="checkbox"/> 0   |
| 10. Recurrence rate at 2 years in patients with a stage pT1b1 and pT1b2 confirmed N0 after primary surgical treatment for common histotypes | <15%  | <input type="checkbox"/> 3   |
|   | ≥15%  | <input type="checkbox"/> 0   |
| 11. Counseling about the option of fertility-sparing treatment where eligible   | 100%  | <input type="checkbox"/> 3   |
|   | <100%   | <input type="checkbox"/> 0   |
| Radiotherapy  |   |                              |
| 12. Patients are treated with brachytherapy boost if indicated  | ≥95%  | <input type="checkbox"/> 5*† |
|   | <95%  | <input type="checkbox"/> 0   |
| 13. Patients are treated with intensity-modulated radiotherapy techniques   | 100% (optimal target)   | <input type="checkbox"/> 3*† |
|   | ≥90% (minimum required target)  | <input type="checkbox"/> 10  |
|   | <90%  | <input type="checkbox"/>     |
| 14. Daily on-board image-guided radiotherapy to ensure target volume coverage   | ≥95%  | <input type="checkbox"/> 3*  |
|   | <95%  | <input type="checkbox"/> 0   |
| 15. Prescribed pelvic dose is 45 Gy in 1.8 Gy per fraction  | ≥95%  | <input type="checkbox"/> 3*† |
|   | <95%  | <input type="checkbox"/> 0   |
| 16. Lymph node boosts are delivered in patients with macroscopic lymph node spread  | Lymph node boosts: ≥95% and simultaneous integrated boosts use: ≥90%  | <input type="checkbox"/> 3*† |
|   | Other situations  | <input type="checkbox"/> 0   |

Continued



**Table 4** Continued

| Quality indicators   | Targets (tick if applicable)  | Scoring points               |
|--|---|------------------------------|
| 17. Patients treated with curative intent radiotherapy and concurrent chemotherapy (if indicated)  | ≥95%  | <input type="checkbox"/> 3*† |
|  | <95%  | <input type="checkbox"/> 0   |
| 18. Imaging for image-guided brachytherapy   | Image-guided adaptive brachytherapy (MRI or CT): 100%                       | <input type="checkbox"/> 3*† |
|  | Image-guided adaptive brachytherapy (MRI or CT) <100% and                   | <input type="checkbox"/> 0   |
|  | MRI at least at the first fraction: 100%                                    | <input type="checkbox"/> 3   |
|  | MRI at least at the first fraction <100%                                    | <input type="checkbox"/> 0   |
| 19. Combined intracavitary/interstitial brachytherapy use  | Yes   | <input type="checkbox"/> 3*† |
|  | No  | <input type="checkbox"/> 0   |
|  | and   |                              |
|  | If yes: ≥60% (optimal target)   | <input type="checkbox"/> 3   |
|  | If yes, ≥40% (minimum required target)                                      | <input type="checkbox"/> 1   |
| 20. Brachytherapy is delivered after the patient has received a total external beam radiotherapy dose ≥36 Gy   | ≥95%  | <input type="checkbox"/> 3   |
|  | <95%  | <input type="checkbox"/> 0   |
| 21. Overall treatment time does not exceed 50 days   | ≥90%  | <input type="checkbox"/> 3*† |
|  | <90%  | <input type="checkbox"/> 0   |
| 22. Minimum required criteria for brachytherapy treatment planning   | Brachytherapy treatment planning meets criteria detailed in the description | <input type="checkbox"/> 3*  |
|  | Other situations  | <input type="checkbox"/> 0   |
| Surgery  |   |                              |
| 23. Urological fistula rate within 30 post-operative days after a primary surgical treatment   | ≤3%   | <input type="checkbox"/> 5*† |
|  | >3%   | <input type="checkbox"/> 0   |
| 24. Proportion of patients after primary surgical treatment who have clear vaginal (invasive disease) and parametrial margins  | ≥97%  | <input type="checkbox"/> 5*† |
|  | <97%  | <input type="checkbox"/> 0   |
| 25. Proportion of patients receiving adjuvant chemoradiotherapy after a primary surgical treatment for a presumed FIGO IB NO disease   | <20%  | <input type="checkbox"/> 3*† |
|  | ≥20%  | <input type="checkbox"/> 0   |
| 26. Minimum required elements in surgical reports  | 100%  | <input type="checkbox"/> 3   |
|  | <100%   | <input type="checkbox"/> 0   |
| 27. Minimum required elements in pathology reports   | 100%  | <input type="checkbox"/> 3   |
|  | <100%   | <input type="checkbox"/> 0   |
| 28. Structured prospective reporting of 30-day post-operative morbidity  | 100%  | <input type="checkbox"/> 5*† |
|  | <100%   | <input type="checkbox"/> 0   |
| 29. Availability of sentinel lymph node mapping and pathological ultrastaging when indicated   | Yes   | <input type="checkbox"/> 5*† |
|  | No  | <input type="checkbox"/> 0   |
| ADDITIONAL REQUIREMENT (CENTER OF EXCELLENCE)  |   |                              |
| Publication of 3 articles on cervical cancer authored by a member of the team over the last 3 years, including at least one article as first or last author                                |   | <input type="checkbox"/> -*  |
| PLEASE INDICATE THE SUM OF YOUR INDIVIDUAL SCORES /109‡‡   |   |                              |
| *Mandatory to be a center of excellence.<br>†Mandatory for accreditation.<br>‡Maximum score if all optimal targets are met.<br>FIGO, Fédération Internationale de Gynécologie Obstétrique. |   |                              |

## Society statement

### Box 1 Center criteria for ESGO accreditation for cervical cancer management: (A) Standard Accreditation and (B) Center of Excellence

#### A. Entry criteria for standard ESGO accreditation

- ⇒ Sum of the individual scores  $\geq 88$  (>80% of the score)
- ⇒ All the following criteria must apply (minimum required targets should be met (if any)): 1, 2, 3, 4, 5, 7, 12, 13, 15, 16, 17, 18, 19, 21, 23, 24, 25, 28, 29.

#### B. Requirements for ESGO accreditation as a Center of Excellence

- ⇒ Sum of the individual scores  $\geq 88$  (>80% of the score)
- ⇒ All the following criteria must apply (optimal targets should be met (if any)): 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 28, 29.
- ⇒ Publication of three articles on cervical cancer authored by a member of the team over the last 3 years, including at least one article as first or last author.

patient characteristics, and quality indicators. The ESGO hospital accreditation program for cervical cancer management has been launched and centers interested in being accredited can start the accreditation process online using the following link: <https://esgo.org/explore/esgo-accreditation/>.

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