

6

CHAPTER 6: MANAGEMENT OF INVASIVE CANCER

CHAPTER 6: MANAGEMENT OF INVASIVE CANCER

Key points

- Health care providers at all levels should know the common symptoms and signs of cervical cancer. If a woman presents with such symptoms, her cervix should be examined visually to determine whether further testing is needed.
- The stage of the cancer is a measure of how far it has advanced. This determines how it can be treated, and the likely outcome.
- Invasive cervical cancer should be treated by specialists at central-level facilities.
- Treatment is by surgery or radiation therapy, with or without chemotherapy.
- Access to treatment greatly improves prognosis and survival rates.
- Curative treatment is possible for all except the most advanced disease.
- The availability of a basic radiotherapy unit (teletherapy and brachytherapy) can permit effective treatment and palliation in all cases of invasive cancer.
- Specialists who diagnose or treat women with cervical cancer should write clear referral letters back to the provider closest to the home of the patient.
- Patients should be made aware that they will need long-term follow-up and contact with the cancer unit where they have received treatment. Providers should facilitate this.

ABOUT THIS CHAPTER

It is important for the welfare and survival of women with invasive cancer that they are managed by specialists at tertiary-level facilities. This chapter describes how cancers are staged (to determine the extent of the disease) and gives the recommended specific management for each stage of disease. It also describes the roles of the specialists involved in care of the patient.

THE ROLE OF THE PROVIDER

The provider at first or second health care levels may have diagnosed invasive cancer in the patient and referred her to a tertiary-level facility. This provider is responsible for making a link between the tertiary care level (where the patient undergoes staging and treatment for invasive cancer) and the patient herself, her family and her community. This chapter is not primarily intended to be used by tertiary-level providers, but rather to help first- and second-level providers to understand how cervical cancer is managed, to explain it to the patient and her family, and to communicate with carers at tertiary and community levels. In addition, the providers will be responsible for identifying and managing side-effects and complications of treatment, and referring the patient back to the treatment facility when necessary.

STORY



Betty, aged 42, has 5 children. For the past 3 months, she has had vaginal spotting and copious bleeding after intercourse. She and her partner were told by the community worker that they should go to the gynaecology department of a specialist hospital as soon as possible. At the hospital, the intern examined her and noted a large fungating mass at the top of the vagina, from which he took a biopsy; he also ordered a haemoglobin test. Because cancer was a high probability, Betty was kept in for the combined assessment clinic

the next day, when she was again examined by a number of doctors, who explained that there was a tumour on the cervix. After examining her, they agreed that the tumour had spread beyond the cervix but that she could be cured. They asked about urinary symptoms, but she had none. An ultrasound scan of the kidneys and ureters was done to see if there was obstruction of urine outflow and these tests were normal, so she was told the cancer was in stage IIB. They offered her treatment with radiotherapy and reassured her that she had a good chance of being cured. However, her periods would stop, she would develop hot flushes and she would not be able to become pregnant again. She and her partner were also informed that women who are treated with radiation may develop discomfort on sexual intercourse, but they would be able to give her advice if it happened. They also explained clearly how the treatment would be applied. Because her blood tests showed that she was anaemic, she first received a blood transfusion. She then received 5 weeks of daily treatment by teletherapy and, from the third week on, treatment by high-dose-rate brachytherapy until 4 applications had been given. The treatment was given on an outpatient basis, so that she could continue to care for her children. However, near the end of the treatment, she felt very tired, so she was admitted to the hospital for a few days. Her partner and older children helped with household duties, not only when she was in the hospital, but also in the weeks after, until she recovered.

DIAGNOSIS

Symptoms and signs of invasive cancer

Microinvasive cancers may be asymptomatic, and may be detected only on investigation of an abnormal Pap smear. On the other hand, most cases of frankly invasive cervical cancer come to the attention of providers and are diagnosed once they become symptomatic (see Table 6.1). If the woman is not sexually active, the disease may remain asymptomatic until it is well advanced. The clinical presentation is determined by the patterns of growth and spread as explained in Chapter 2. Eliciting patients' symptoms is important for optimal patient management and for pain control.

Early detection of cervical cancer

Women may present with one or more of the following complaints: irregular bleeding, postcoital bleeding, postmenopausal bleeding, persistent vaginal discharge (especially when unresponsive to STI syndromic management). They should have a speculum examination to visualize the cervix, and any visible lesions should be biopsied. If the woman is pregnant, she should be referred to a specialist for biopsy and follow-up.

Table 6.1. Symptoms of invasive cancer

Early	<ul style="list-style-type: none"> • Vaginal discharge, sometimes foul-smelling • Irregular bleeding (of any pattern) in women of reproductive age • Postcoital spotting or bleeding in women of any age, even young women • Postmenopausal spotting or bleeding • In the case of abnormal perimenopausal bleeding, cervical cancer should always be considered, particularly if the bleeding fails to respond to appropriate treatment
Late	<ul style="list-style-type: none"> • Urinary frequency and urgency • Backache • Lower abdominal pain
Very late	<ul style="list-style-type: none"> • Severe back pain • Weight loss • Decreased urine output (from obstruction of the ureters, or renal failure) • Leakage of urine or faeces through the vagina (due to fistulae) • Swelling of the lower limbs • Breathlessness (due to anaemia or, rarely, lung metastases or effusion)

The definitive diagnosis of cancer is confirmed by histopathological examination of a tissue specimen taken from the lesion and is mandatory before any therapy, or even extensive investigations, are started.

CERVICAL CANCER STAGING

The purpose of staging

Once a histological diagnosis of cervical cancer has been made, the next step is to formulate the most effective therapy for the individual concerned. In order to manage a cervical cancer patient properly, it is essential to understand the extent or “stage” of her disease at the time of diagnosis. Although staging systems are to some extent artificial, they guide the clinician in both tailoring treatment and assessing prognosis.

Cancer staging systems

A number of staging systems are used for cancer. The classification of the International Federation of Gynecology and Obstetrics (FIGO), which is based on tumour size and the extent of spread of disease in the pelvis and distant organs, is recommended for staging invasive cervical cancer. The extent of growth of the cancer is assessed clinically,¹⁹ supplemented by a limited number of relatively unsophisticated investigations (see Table 6.2). An exception to the above is staging of microinvasive cervical cancers, which are staged according to pathological criteria of the depth and width of the invasive lesion in relation to the epithelium of origin (which may be either squamous or glandular epithelium).

Table 6.2 Investigations for staging and treatment for cervical cancer according to FIGO

Mandatory for staging	Supplementary for staging	Optional, to inform additional treatment, not for staging
<ul style="list-style-type: none"> • Speculum, vaginal and rectal examination • Intravenous pyelogram (IVP) or • Abdominal ultrasound 	<ul style="list-style-type: none"> • Cystoscopy • Proctoscopy • Cone biopsy • Endocervical curettage or smear • Chest X-ray • Skeletal X-ray or bone scan (if bone pain) 	<ul style="list-style-type: none"> • Blood tests for HIV and syphilis, and haemogram • Computerized tomographic (CT) scan of abdomen and pelvis • Magnetic resonance imaging (MRI) of pelvis

¹⁹ Occasionally a hysterectomy is performed for a reason unrelated to cervical disease and there is an incidental finding of cervical cancer. These cases cannot be clinically staged, but should be treated according to the characteristics reported by the pathologist.

In many low-resource settings, speculum, vaginal and rectal examinations are the only feasible approaches to staging; these will often provide sufficient information when performed by experienced clinicians, who pay particular attention to the size of the tumour and possible involvement of the vaginal fornices, the parametria (transverse cervical and uterosacral ligaments), the pelvic walls, the bladder and the rectum. This assessment can be done under general anaesthesia, if there is any doubt about the diagnosis or if the patient is too tense or in pain. Other imaging modalities, such as computerized tomographic (CT) scan and magnetic resonance imaging (MRI) of the abdomen and pelvis, are optional and not needed for diagnostic and staging purposes. If easily available, they may be used to acquire more detailed information on the extent of the disease and its prognosis, and to inform the choice of treatment. All investigations for the purpose of staging and their results should be carefully documented in the case record. A descriptive diagram should be included whenever an invasive cervical cancer is assessed.

Overview of FIGO stages related to management and prognosis

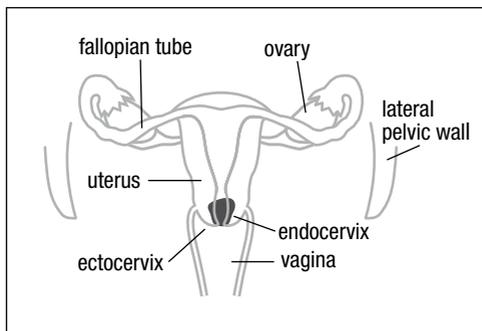
Stage 0: Carcinoma in situ, cervical intraepithelial neoplasia Grade III.

This is not considered invasive cancer, since the lesion has not gone beyond the basement membrane.

Stage I: Carcinoma confined to the cervix. Extension to the uterus is disregarded.

- **IA:** Microinvasive carcinoma, strictly confined to the cervix. Can only be diagnosed by microscopy; it is not clinically visible.
 - **Stage IA1:** Stromal invasion no greater than 3.0 mm in depth and not more than 7.0 mm in horizontal spread.
5-year survival with optimal treatment: ~98%.
 - **Stage IA2:** Stromal invasion of more than 3.0 mm but not more than 5.0 mm in depth and with horizontal spread of 7.0 mm or less.
5-year survival with optimal treatment: ~95%.
- **IB:** Carcinoma strictly confined to the cervix and clinically visible; or a microscopic lesion greater than IA2 (Figure 6.1).
 - **IB1:** Clinically visible lesion 4.0 cm or less in greatest dimension.
5-year survival with optimal treatment: ~85%.
 - **IB2:** Clinically visible lesion more than 4.0 cm in greatest dimension.
5-year survival with optimal treatment: ~75%.

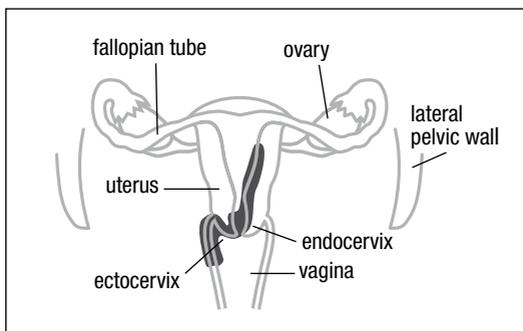
Figure 6.1 Cervical cancer stage IB



Stage II: Carcinoma confined to the cervix. Extension to the uterus is disregarded.

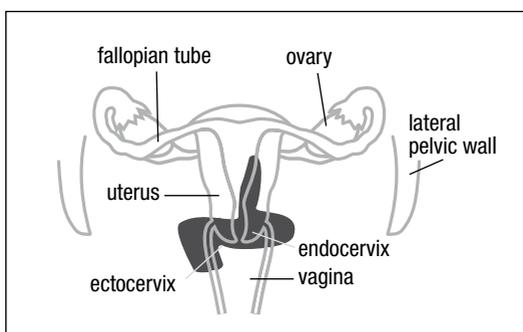
- **IIA:** Spread beyond the cervix, including upper two-thirds of the vagina, but not to tissues around the uterus (parametria) (Figure 6.2).
5-year survival with optimal treatment: ~75%.

Figure 6.2 Cervical cancer stage IIA



- **IIB:** Spread beyond the cervix, with parametrial invasion, but not as far as the pelvic wall or the lower third of the vagina (Figure 6.3).
5-year survival with optimal treatment: ~65%.

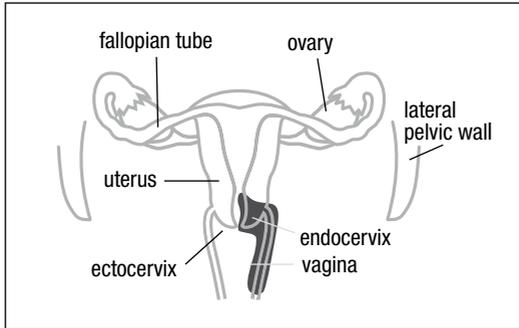
Figure 6.3 Cervical cancer stage IIB



Stage III: Tumour extends to pelvic wall or involves lower third of the vagina, or causes hydronephrosis or non-functioning kidney.

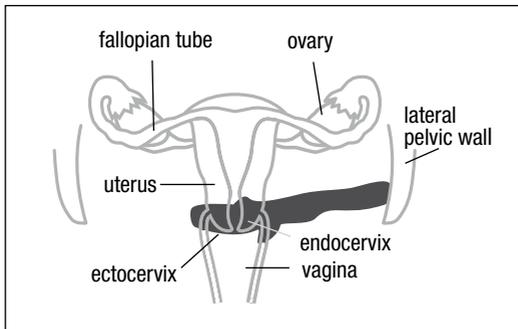
- **IIIA:** Invasion of the lower third of the vagina, with no extension to the pelvic wall (Figure 6.4).
5-year survival with optimal treatment: ~30%.

Figure 6.4 Cervical cancer stage IIIA



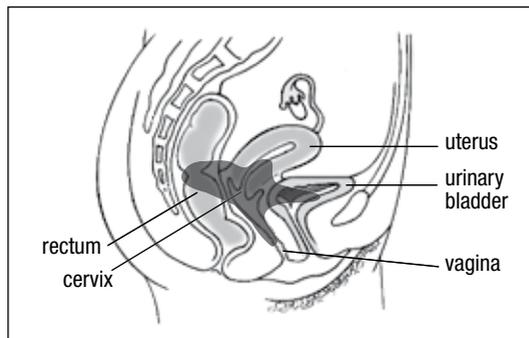
- **IIIB:** Extension to the pelvic wall, or hydronephrosis or nonfunctioning kidney (Figure 6.5).
5-year survival with optimal treatment: ~30%.

Figure 6.5 Cervical cancer stage IIIB

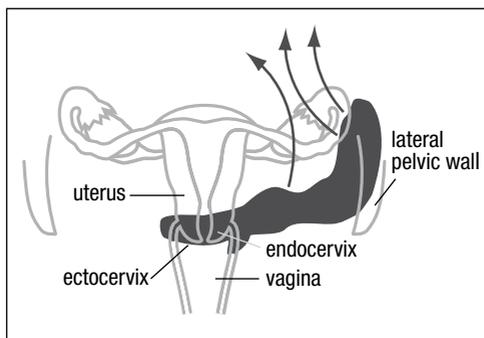


Stage IV: Tumour has spread

- **IVA:** Spread to involve the mucosa of the bladder or rectum (Figure 6.6).
5-year survival with optimal treatment: ~10%.

Figure 6.6 Cervical cancer stage IVA

- **IVB:** Spread to distant organs, such as extrapelvic lymph nodes, kidneys, bones, lungs, liver and brain (Figure 6.7).
5-year survival with optimal treatment: <5%.

Figure 6.7 Cervical cancer stage IVB**RECOMMENDATION**

Histological confirmation of cervical cancer and FIGO staging must be completed before embarking on further investigations and treatment.

PRINCIPLES OF TREATMENT

Treatment must be tailored to the best interests of the patient. While the guidelines on optimal clinical management protocols given in Annex 6 should generally be adhered to, overall assessment of the patient, and differences in availability and quality of surgery, radiotherapy and medical oncology services, may affect the treatment offered. Invasive cancer should be treated at tertiary referral centres, where the necessary expertise and equipment are available. Additional tests, including those to determine the patient's suitability to undergo anaesthesia or major surgery, may be required and may affect treatment selection. In HIV-positive women, the CD4 count may also influence the choice of treatment. Testing for syphilis, and blood tests for haemoglobin and liver and kidney function, must also be done before management can be planned.



Management cancer

Survival rates

The survival rate is expressed as the proportion of women surviving 5 years after receiving treatment. It is determined by both disease stage and treatment given. In countries where therapy is either unavailable or inadequate, survival rates are significantly lower than the optimum.

The following factors influence prognosis:

- the clinical stage of disease at presentation: this is the single most important predictor of long-term survival, along with access to treatment;
- age: survival declines with advancing age;
- lymph node status;
- general health, nutritional status, presence of anaemia;
- degree of immunosuppression.

Primary therapy

Primary therapy may be surgery or radiotherapy, or occasionally a combination of both. Chemotherapy is not used for primary therapy, but may be given concurrently with radiotherapy. Curative surgery in cervical cancer aims to remove the primary tumour, with all extensions, in a single operation. The operation undertaken will depend on the clinical stage of the tumour and the findings of the surgeon when the operation is in progress.

RECOMMENDATION

Surgery and radiotherapy are the only recommended primary treatment modalities for cervical cancer.

Explaining procedures and obtaining informed consent for treatment

The provider should adapt the explanations found in this chapter and in the practice sheets to individual situations, in order to explain procedures, such as surgery and radiotherapy, in terms the patient and her family can understand. The general rules for counselling given in Practice Sheet 4 also apply to communication of complex information about treatment. It may be helpful to draw or use pictures to illustrate difficult points. The provider should keep medical terminology to a minimum and explain any technical words that have no local translation.



Women should be given all the information they need about a procedure before it is performed. This should include the possible benefits, risks, potential side-effects and what to do if one or more occur, recovery time, cost, and chance of success. If a woman would like family members to help her make a decision on care, they should be included in the discussion. Providers should follow local and national regulations on obtaining informed consent, as well as hospital regulations regarding the need for a signature or thumbprint on a consent form. At the very least, what was said, who was present, and the woman's understanding and consent, if given, should be documented in her medical record.

Treatment by stage

Of all cervical cancer patients presenting at multidisciplinary gynaecological assessment clinics in tertiary hospitals in developing countries, only about 5% have microinvasive or early invasive cancer (tumours up to stage IB1/IIA <4 cm in diameter).

These cases are preferably treated with surgery because:

- The surgical procedure and recovery in hospital takes less than 2 weeks.
- The extension of the tumour and completeness of removal can be assessed immediately.
- Ovarian function is retained, which is particularly important for premenopausal patients.
- The patient keeps a functional, elastic, and lubricated vagina.
- Most complications are seen within a few days of the procedure.

Surgery should also be favoured for patients with pelvic inflammatory disease, especially when there is an abscess in or near the uterus (pyometra). Radiotherapy, while having the same high 5-year survival rates as surgery, takes about 6 weeks to

administer, and the total extent of the tumour cannot be evaluated. Sequelae, such as loss of vaginal elasticity (fibrosis), shortening and narrowing (stenosis) and dryness of the vagina, may occur months to years after radiation and may make intercourse painful.

About 80% of all cases are in stage IB2 to stage IIIB, with cervical tumours and parametrial involvement extending towards or up to the pelvic side walls, with or without obstruction of the ureters. These bulky tumours, which may measure 10 cm across, have a cure rate ranging from 30% to 75% when treated with radical radiotherapy. Large stage IIA tumours (4 cm or more in diameter) are treated as stage IB2 tumours.

Stage IV tumours are less commonly seen. Stage IVA, with rectal or, less commonly, bladder invasion, accounts for about 10% of cases. Only about 10% of these can be cured, and fistulae between the involved organs and the vagina are frequent. Stage IVB (5% of cases), with distant haematogenous metastases, is incurable by any currently known means. However, effective palliative care can be given in these cases.

If the cancer recurs, it is usually in the two years following treatment. The treatment of recurrent cancer is determined by the extent of disease at recurrence, the disease-free interval, the general condition of the patient, and the primary treatment given.

TREATMENT MODALITIES

Surgery

Curative surgery in cervical cancer aims to remove the primary tumour, with all its extensions, in a single operation. The operation undertaken will depend on the clinical stage of the tumour and the findings of the surgeon when the operation is in progress. Palliative surgery is usually used to relieve distressing symptoms when radiotherapy has failed or caused complications, such as rectovaginal or vesicovaginal fistulae.

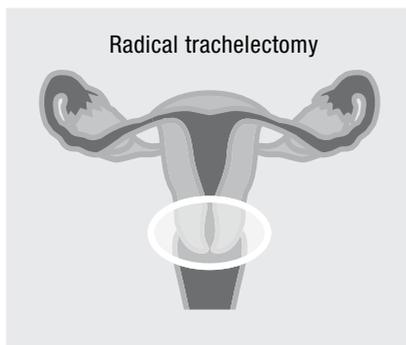
Surgical procedures

The main surgical procedures are radical hysterectomy and pelvic lymphadenectomy, although simple hysterectomy and trachelectomy are indicated in specific cases. After surgery, the patient is usually discharged from the hospital after 7–10 days, but it may take from 6 to 12 weeks for full recovery.

Trachelectomy

Trachelectomy is the removal of the cervix. Radical trachelectomy includes removal of the parametria and upper vagina in addition to the cervix (Figure 6.8).

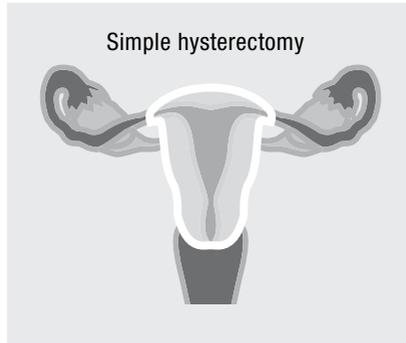
Figure 6.8 Tissue removed by radical trachelectomy



Simple hysterectomy

Simple hysterectomy is the surgical removal of the entire uterus, including the cervix, either through an incision in the lower abdomen, or through the vagina (Figure 6.9). The tubes and ovaries are not routinely removed, but they may be, if they appear abnormal.

Figure 6.9 Removal of the uterus by simple hysterectomy

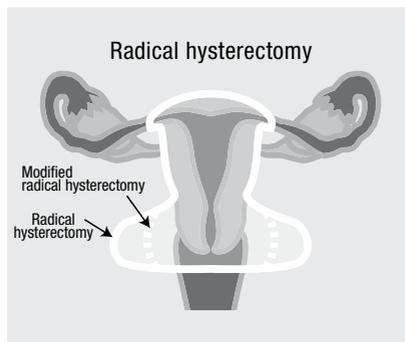


Radical hysterectomy

Radical hysterectomy is the surgical removal of the uterus, cervix, and surrounding tissues (parametria), including 2 cm of the upper vagina (Figure 6.10). The removal of as much cancer-free tissue from around the tumour as possible is associated with a much better cure rate. Ovaries are not routinely removed because cervical cancer rarely spreads to the ovaries. In a modified radical hysterectomy, less parametrium is removed than in standard radical hysterectomy (Figure 6.10).

Recovery time is slightly longer than after simple hysterectomy.

Figure 6.10 Radical and modified radical hysterectomy



It is important to note that, even once the surgery has started, the surgeon may abandon the procedure. This happens when, before incising the peritoneum, the surgeon notices that there is extensive involvement of pelvic nodes. In this case, the patient should be treated with radiotherapy. The peritoneum needs to remain intact, because incising the peritoneum when lymph nodes are involved increases the rate of complications associated with radiotherapy. The procedure for, and complications of, simple and radical hysterectomy are detailed in Practice Sheet 15.



Bilateral pelvic lymphadenectomy or nodal dissection

This operation involves the removal of the three groups of lymph nodes in the pelvis, which are often involved in invasive cervical cancer, even in early stages (IA2 onwards). These nodes are located close to the large blood vessels of the pelvis.

Indications

The specific surgical treatment will depend on the extent of the disease.

Trachelectomy is not a standard procedure, but can be offered to women with microinvasive cancer, who wish to have children in the future. There is increasing evidence that a radical trachelectomy with pelvic lymphadenectomy is a valid procedure for treatment of stage IA2.

Simple hysterectomy is indicated for women with microinvasive cervical cancer of stage IA1 and sometimes IA2. Stage IA2 can be treated with a simple hysterectomy and lymph node dissection, but a modified radical hysterectomy with lymph node dissection is preferred. Hysterectomy is not usually indicated for treatment of high-grade precancerous lesions and carcinoma in situ, which can be treated with simpler outpatient methods, but may be appropriate when there are also other gynaecological problems, such as abnormal uterine bleeding. A desire for sterilization on the part of the patient should not be a reason for hysterectomy.

Radical hysterectomy is performed on women who have invasive cervical cancer, with tumours of up to 4 cm in diameter confined to the cervix, or with very early extension to the vaginal fornices (stages IB1 and IIA). Stage IB1 may not be visible (occult IB1).

Type of provider and level of service

Simple hysterectomy can be performed in a regional or central hospital, by a general or gynaecological surgeon specialized in the treatment of cervical cancer. The operation is performed with general anaesthesia and takes about 2 hours.

Radical hysterectomy is usually performed in a central hospital by a gynaecological surgeon specialized in the treatment of cervical cancer, using general anaesthesia; it takes about 3 hours.

RECOMMENDATION

Surgery for treatment of cervical cancer should be performed only by surgeons with focused training in gynaecological cancer surgery.

Radiotherapy

Radiotherapy plays a central role in the treatment of most invasive cervical cancers. It is mainly used for cases with bulkier tumours (stages IB and IIA through to IVB) and those with extensive involvement of the lymph nodes seen on laparotomy (without hysterectomy). It is also used to manage cancers in patients who are unable to tolerate general anaesthesia. In addition to its curative role, radiation can also alleviate symptoms, especially bone pain and vaginal bleeding.

How radiotherapy works

Notwithstanding its long history of use, radiotherapy is still often poorly understood by the general public. In radiotherapy, the tumour is treated with ionizing radiation. Radiation is like a ray of light with higher energy, which is released as the ray penetrates the body, damaging and destroying cancer cells. It also has a smaller effect on rapidly dividing normal cells in the skin, bladder and large bowel, which causes some of the reversible symptoms noted during and immediately after treatment. The person receiving radiotherapy feels no pain at the time it is being given.

Types of radiotherapy

There are two broad groups of radiation treatment, which differ in terms of position of the source of radiation relative to the patient:

- teletherapy, in which the source of radiation is distant from the patient;
- brachytherapy, in which small radioactive sources are placed in cavities within the body.

Curative treatments are based on a combination of pelvic teletherapy and intravaginal brachytherapy. The procedures and possible complications are described in Practice Sheets 16 and 17.

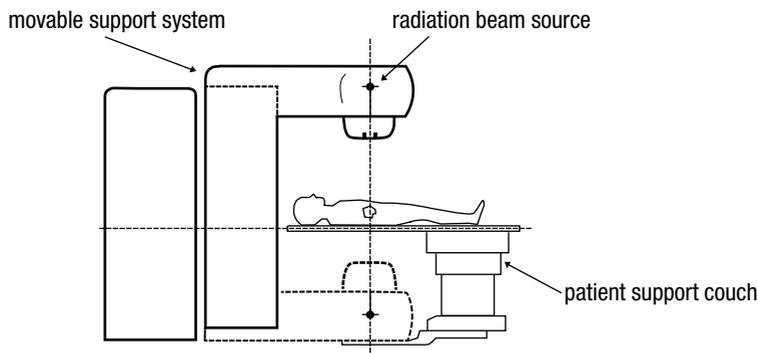


PS16 Teletherapy
PS 17 Brachytherapy

Teletherapy

Teletherapy is also called external beam radiation therapy (EBRT). The origin of the radiation is a shielded head, which has a small opening through which a beam of radiation can pass (Figure 6.11). The beam is aimed at the area of the cervix with cancer and the sites at risk of disease spread. Care must be taken to avoid the bladder and rectum, to protect their function. The treatment is administered in a specialist hospital, and takes place in an enclosed space (therapy bunker). No anaesthesia is needed because the patient feels no pain. Radiation machines weigh many tonnes, and the head can rotate around the treatment table where the patient lies. The head may contain radioactive material, such as cobalt 60, or be a linear accelerator, which accelerates electrons to immense speeds until they hit a target and release their energy as radiation – the same process as a diagnostic X-ray machine. In cervical cancer, the radiation is delivered evenly to the entire pelvic contents, in daily sessions of a few minutes each. Usually four beams are used to deliver the total daily dose. Sessions are given on five days a week for about five weeks. In preparation for this treatment, an image of the pelvis is taken by simulation or computerized tomographic scanning. A computer is then used to plan the treatment. The direction of the beams is verified during the treatment using X-rays.

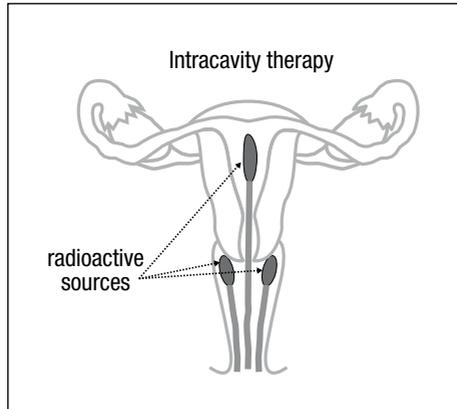
Figure 6.11 Application of teletherapy



Brachytherapy

In brachytherapy, the radiation source is in close contact with the tumour. The radiation sources are placed inside an applicator in the uterus and vaginal vault (intracavitary brachytherapy, Figure 6.12).

Fig 6.12 Application of intracavitary brachytherapy



The radiation is directed to the cancer on the cervix, uterus, upper vagina and tissue surrounding the cervix (parametria). Care is needed to avoid exposing the bladder and rectum to the radiation, in order to preserve their function as much as possible. The treatment is given by a team of a radiation oncologist, a medical physicist and a radiation technician in a specialist hospital with the appropriate equipment. The radiation is highest within the applicator and decreases rapidly over a few centimetres distance. The dose rate is the speed of delivery of a radiation dose at a specified point. Intracavitary brachytherapy can be administered with a low dose rate (LDR), pulsed dose rate (PDR), medium dose rate (MDR) or high dose rate (HDR). The rate used determines the time the patient will be kept in isolation, as well as the total dose to be used, and the number of sessions the patient will have.

The most commonly available brachytherapy devices are LDR and HDR, which have similar effectiveness. Usually, only one of these forms is available in any institution. The two devices are very different in terms of the need for anaesthesia, time spent in hospital, and number of insertions (Table 6.4). It would be advisable for health workers who will be counselling patients on brachytherapy to attend a treatment session at the referral hospital to understand the sequence of events.

Table 6.4: Differences between low-dose-rate and high-dose-rate brachytherapy

	Low dose rate	High dose rate
Commencement	At completion of teletherapy	From the third week of teletherapy
Hospitalization	Inpatient: 2–3 days	Outpatient: 1/2 to 2 hours
Anaesthesia used at placement	General anaesthesia	Mild sedation
Applications	Usually once only	From 2 to 8: usually 4

Indications

Teletherapy is indicated when the entire area affected by the cancer cannot be removed by simple or radical hysterectomy. This means that most women with invasive cervical cancer without distant metastases (stages IB to IVA) should be treated with teletherapy. Brachytherapy is usually used in addition to teletherapy. Its use is mandatory if the intent is to cure cervical cancer. For stages IB1 or lower, if surgery is not possible, brachytherapy can be used as the exclusive treatment.

Provider

Radiotherapy is conducted by a radiation oncologist and a radiotherapy technician with standard radiotherapy training.

RECOMMENDATION

Brachytherapy is a mandatory component of curative radiotherapy of cervical cancer.

Chemotherapy

Chemotherapy is not a primary mode of treatment for cervical cancer, but it may be used concurrently with surgery or radiation to treat bulky tumours. Cisplatin is the most commonly used drug and is included in WHO's Model List of Essential Medicines. The benefits of adding cisplatin to radiotherapy in developing country settings has not been proven. Cisplatin increases the toxicity of radiotherapy and may not be well tolerated by patients with poor nutrition, anaemia, impaired renal function or more advanced cancers. Radiotherapy alone is an acceptable option.

PATIENT FOLLOW-UP

Women who have been treated for cervical cancer should be followed up at the treatment centre, if this is at all possible. The discharge from hospital and follow-up should be discussed at a meeting of all those who have been involved in the patient's care, and should include input from the woman herself and her family. If follow-up needs to be done at a distance from the treatment centre, a primary care physician (preferably a gynaecologist) should receive a comprehensive report detailing the stage, treatment administered, prognosis and common problems expected. The report should include contact information (phone, fax, email, address) of the treatment centre and request regular feedback. The primary care physician should be encouraged to seek advice if the patient presents with unexpected symptoms. Mobile telephones are increasingly available to maintain contact between treating physicians and the patient or family.

Follow-up for women treated with surgery alone

Women who have been treated with surgery alone should have three-monthly follow-up consultations for a period of 2 years, with careful recording of symptoms, particularly bleeding, discharge or pelvic pain.

During the consultations, the following examinations should be performed:

- speculum examination and visualization of the vaginal vault;
- cytological smear of the vaginal vault and of any abnormality noted on examination;
- bimanual vaginal and rectal examination to palpate for recurrence of disease;
- other investigations depending on the clinical findings and resources available.

Recurrent disease in these women can be treated with radiation.

Follow-up for women treated with radiation

For women who have been treated primarily with radiation, follow-up should be the same as for those who have had surgery, but the role of vaginal cytology is less clear and clinical evaluation is more difficult because of radiation-induced fibrosis. One of the reasons for regular follow-up is to look for sequelae of radiotherapy, which may be mistaken for recurrence of cancer. Treatment options for women with recurrence after primary radiation are somewhat limited, as no further radiation can be given. Salvage hysterectomy may be considered where surgical expertise and facilities exist; this approach is unlikely to alter the survival rate, but is associated with a longer disease-free interval and possibly a better quality of life. Chemotherapy is also an option in case of recurrence after radiation. Finally, radiation can be used to treat non-pelvic or distant metastases, e.g. in the bones, lung or other organs.

SPECIAL SITUATIONS

Pregnancy

Although rare, cancer of the cervix is sometimes diagnosed in a pregnant woman. This can pose a serious dilemma for the woman, especially if she is early in her pregnancy. Each case should be treated individually, taking into account the concerns and health of the mother and the impact of possible treatments on the viability of the fetus. The management of cervical cancer in pregnancy is stage-related, as for non-pregnant patients. It is also related to the stage of the pregnancy. A diagnosis of cancer in pregnancy, particularly if it will require termination of the pregnancy, might be difficult for the woman to accept. Skilled counselling will be needed to help the woman and her family come to terms with the diagnosis and arrive at a decision about care. If radiotherapy is used, the treatment begins with pelvic irradiation, which will cause fetal death and abortion. An ultrasound scan must be done to verify that the fetus is no longer viable. After the uterus is evacuated, treatment continues in the usual way. In the third trimester, definitive treatment is usually delayed until the fetus is mature. Then, the baby is delivered by Caesarean section, followed immediately by surgery or radiation as determined by the tumour stage. If radiation is the management of choice, it must be done after involution of the uterus. The overall guidelines for management of invasive cancer in pregnancy are given in Annex 6E.



Annex 6E

HIV/AIDS

A special group of women are those who suffer immunosuppression secondary to infection with HIV. Women with low CD4 counts ($<200 \text{ mm}^3$) are at particular risk of complications when treated by any means. Surgery is preferable when appropriate, and treatment with radiation or chemotherapy must be tailored to the individual.

TALKING TO PATIENTS WHO HAVE INVASIVE DISEASE AND TO THEIR FAMILIES

Disclosure of information

In giving information to women and their families about cervical cancer, it should initially be emphasized that cervical cancer is a treatable disease. A diagnosis of cancer is generally not expected by the woman and her family, and receiving bad news (especially if the cancer is advanced) is never easy. The provider should give such information to the patient, and to her family if the woman wishes, and away from other patients. Some guidelines for disclosure and discussion with families are as follows.

- Respect the culture, norms and customs of the patient; it may or may not be acceptable, for example, to give difficult news directly to her.
- Be clear and direct in meaning and words; do not use words the patient will not understand, or which are vague, such as “growth” or “neoplasm”.
- Do not confuse the patient by saying too much, but do not leave important issues untouched.
- Allow some time for those present to take in the impact of what you have said; then give them time to ask questions.
- As people are often shocked when they receive sudden bad news, they may not fully hear or understand what has been said. Try to talk to the patient and her family (if she agrees) again the next day.
- After the initial diagnosis the patient may go through different stages of denial, anger, and resignation, which require understanding and support.

When further treatment is not feasible

When it becomes obvious that no further anticancer treatment can be given, it is best to counsel the patient and family in a sensitive but truthful manner. Try to avoid saying “nothing more can be done,” because carers can help by relieving symptoms, supplying medication, arranging lower-level care, or just being available. For a patient who has been in hospital and is going home, this is the time to ensure that contact is made with local carers who can provide palliative care services. Questions about how much time is left should be answered honestly, i.e. that one does not know but it may be a question of a few days/weeks/months. This will give an indication to the patient and family of what to expect, so that they can make appropriate arrangements.

Ensuring pain control

When a patient with late-stage cancer goes home, the treating physicians (radiotherapist, oncologist, or gynaecologist) should make sure that she has prescriptions for appropriate pain medications, and that a supply will be available once she leaves the hospital. Most cancer patients, particularly in developing countries, suffer unnecessarily with severe pain without adequate relief, because of restricted availability of opiates at peripheral or lower levels; hospital-based providers, however, may be able to secure and supply the necessary medicines for their patients. There is no substitute for oral morphine for severe pain, though palliative radiotherapy can be a valuable adjunct to morphine for pain relief (see also Chapter 7 and Practice Sheet 18).



Pain management

MANAGEMENT OF INVASIVE CANCER: ACTIVITIES AT DIFFERENT LEVELS

In the community



- Maintain regular direct communication with the patient and her family.
- Maintain regular telephone or personal communication about the patient's condition with health centre staff.
- Detect new distressing symptoms of the disease or side-effects of treatment and inform health centre staff about these findings.
- Provide palliative care as specified in national guidelines and prescribed by specialists and other health care providers.
- Establish links between the patient and her family and faith-based or other assistance agencies, which may provide additional non-medical support.
- Aid the patient and family during the terminal stages as much as possible.

At the health centre



- Maintain oversight of the patient's condition and communication with community-based health workers and with district and tertiary health care staff.
- Provide follow-up, as advised by treating facility, if appropriate at this level or if patient is unable to go to higher-level facilities.
- Prescribe and administer treatment for side-effects of treatments received or symptoms of disease in consultation with the treating centre.
- If feasible, do home visits for severely ill and terminal patients who cannot come to the centre.
- Collaborate in training of community workers and staff newly integrated into care team.

At the district hospital



and

At the central hospital



- Provide treatment.
- If it is not possible to manage the patient directly, inform lower-care levels of needed follow-up and medical care to be provided, including prescription of medicines for pain relief.
- Maintain communication with patient's family and carers by telephone, mail, etc.
- Collaborate in training of lower-level providers in care of cancer patients.

Counselling messages

Make sure you address the following issues with the patient and family:

- the stage of her cancer;
- the treatment she received before discharge;
- what possible side-effects she may note and how to deal with them;
- the symptoms of complications and where she needs to go if she experiences any of them;
- needed follow-up: when, where, who to see;
- your willingness to be supportive in any way possible.

ADDITIONAL RESOURCES

- Benedet JL, Bender H, Jones H III, Ngan HY, Pecorelli S. FIGO staging classifications and clinical practice guidelines in the management of gynaecologic cancers. FIGO Committee on Gynecologic Oncology. *International Journal of Gynecology and Obstetrics*, 2000, 70(2): 209-262.
- Chao KSC, Perez CA, Brady LW, eds. *Radiation oncology: management decisions*, 2nd ed. Philadelphia, PA, Lippincott, Williams & Wilkins, 2001.
- Fletcher GH, ed. *Textbook of radiotherapy*, 3rd ed. Philadelphia, PA, Lea and Febiger, 1980.

PRACTICE SHEET 15: HYSTERECTOMY

PS 15

Hysterectomy is the removal of the uterus. In simple hysterectomy, the entire uterus, including the cervix is removed. The tubes and ovaries may or may not be removed. In radical hysterectomy, the uterus plus tissues around it and part of the upper vagina are removed. The overall procedures are essentially identical. This Practice Sheet is included to allow a first- or second-level health care provider to explain to a patient, before she goes to hospital, how the procedure will be performed, and to help her recover once she returns home.

EXPLAINING THE PROCEDURE

Give the woman as much information as you can on the procedure, the anaesthesia, and the possible side-effects and complications of surgery. The description below will help you answer any questions she may have.

Before the woman goes to hospital

1. The hospital staff will give her instructions for preparation: what clothing to take with her and any medicines she needs to take beforehand. She will be told not to eat or drink anything in the 8 hours before surgery, and to bathe before going to hospital.

In the hospital, preparation for surgery

2. The details of the operation will be explained and informed consent obtained.
3. To help prevent infection, the woman's genital and abdominal areas will be cleaned with soap, water and iodine; her genital hair may be clipped.
4. General anaesthesia will be given intravenously or by inhalation.
5. A plastic tube (catheter) will be placed into her bladder and her urine will be collected in a bag.
6. A gauze pack will be placed in her vagina to make it easier for the surgeon to remove tissues around the cervix.

The operation

7. A cut will be made in the lower abdomen, vertically or horizontally.
8. In *simple hysterectomy*, the uterus is cut away from where it is attached to the fallopian tubes and the vagina. In *radical hysterectomy*, the surgeon removes the uterus, parametria, cervix and the top two centimetres of the vagina. After the uterus and parametria are removed, the surgeon will remove three sets of lymph nodes from the fatty tissue around the large blood vessels of the pelvis.
9. All the tissues removed will be placed in a preservative solution and sent to the laboratory, where a pathologist will examine them to determine if the entire cancer has been removed.
10. At the end of the operation, a drain may be left in the pelvis; this is a plastic tube placed in the abdomen to drain blood and fluid into a bag. It may be left in place for 24–48 hours.
11. Most surgeons will also put a tube (known as a suprapubic catheter) from the outside of the abdomen into the bladder, to drain urine. It will be left in place for 5–7 days in case the nerves to the bladder have been damaged.
12. The abdomen will then be sewn closed and wiped clean, and the wound bandaged.

Just after the operation

13. After the operation, the patient will be cared for by hospital staff in a special recovery room. Once she wakes up, she will be moved to a regular bed to recover.
14. When the patient wakes up, she will have drips and tubes coming out of her body; she will also have nausea, which will last for a few hours. For the first few days, she will have pain in the abdomen where the operation was done. The hospital staff will give her medicines to relieve the pain and nausea for as long as she needs them.

Recovery in the hospital

15. In the hospital, the staff will make sure that the patient regularly coughs and breathes deeply, sits up, moves her muscles, and walks as soon as she is able. This helps to prevent complications.

16. All the moving around of tissues and organs in the pelvis during the operation can damage some of the nerves that supply the bladder and the rectum. As a result, both organs may become “lazy” afterwards, i.e. they empty less efficiently than before the operation. Passing urine or stool will be difficult. The suprapubic catheter will be left in place for a few days, until she can urinate normally again. In most cases the bladder and rectum will have partially recovered before the patient is discharged from the hospital, and they will return completely to normal within 3–6 months of the operation.
17. Most hospitals will allow the patient to return home after 7–10 days, depending on how fast she recovers and what care is available at home. Complete recovery from a radical hysterectomy takes 6–12 weeks.

Follow-up (6 weeks after surgery)

18. The woman will be given the results of the microscopic examination of the tissue removed. The surgeon will examine her thoroughly to make sure that she is recovering normally. Any problems detected will be managed.
19. She will be examined with a speculum to make sure the wound in the vagina has healed.
20. The information from the laboratory will allow the surgeon to discuss with her how far the cancer had spread, what other treatment might be needed, and the chances of the cancer returning.

FOLLOW-UP AT HOME

Before she leaves hospital, the woman will be given counselling on how to take care of herself, and what symptoms of complications to look for. You can help her by reinforcing this advice.

1. To help the patient to recover from the operation, other members of the family should take over her normal household tasks for the first 3–6 weeks, until she regains her strength. During these weeks, the woman should avoid doing heavy housework, walking long distances, carrying heavy objects, or performing other physically taxing tasks. She can perform normal daily activities, such as bathing, showering, and eating normally. She should take short walks a couple of times a day, as she gradually regains strength and returns to normal.
2. The family should encourage the patient to rest when she seems tired, and make sure she eats well.

3. The woman will have a hidden wound in the vagina, which needs at least 6 weeks to heal. To prevent infection and allow proper healing, she should not put anything into the vagina for that time, including fingers or tampons, and she should not use vaginal douching or have sexual intercourse (although she can be intimate in other ways). Her partner's support in this will be important.
4. The chart below lists some symptoms that may occur in the few weeks after surgery, and what the woman should do if they occur.

If she feels	Cause	What she should do
Depression – feeling sad after a major operation is common	Pain, fatigue, worry	Wait; this should not last more than 2 weeks or so
Abdominal discomfort – this is normal	Soreness from the cutting that was done	Eat food high in fibre, drink plenty of liquids, take stool softeners (bisacodyl); this should disappear within 6 months
Difficult and slow urination; bladder not emptying properly	Nerve damage during surgery, “lazy” bladder	“Double void”: pass urine normally then get up, walk around for a few minutes and pass urine again. If this does not work, she may have to put a tube in herself. The hospital will show her how to do this and give her the materials. The problem should disappear within 3–6 months
Tiredness – this is normal	The body is healing itself and needs extra rest	Lie down to rest during the day as often as she needs

5. Make sure that the patient and her family know the signs and symptoms of complications (see below) and instruct her to go to the health centre or hospital if any of them occur.

Complication	Signs and symptoms
Infection of the abdominal wound	Pain, redness and pus in the cut area on the abdomen
Infection in the pelvis	Pain (not just discomfort) in lower abdomen, often with fever, foul-smelling vaginal discharge or bleeding
Lymphocyst – caused by collection of lymph fluid after removal of lymph glands	Swelling or pain in the lower abdomen 2–3 months after surgery
Bladder infection	Burning sensation on urination; frequent urination
Blood clot in the leg (thrombosis)	Redness, pain and swelling in one leg

Supplies needed at home: these can be obtained from the hospital or a prescription written for later if needed:

- paracetamol for mild pain (if needed);
- stool softener (e.g. bisacodyl);
- urinary catheters;
- gauze bandage and disinfectant for wound.

PS 15

Practice Sheet 15: Hysterectomy

PRACTICE SHEET 16: PELVIC TELETHERAPY

Pelvic teletherapy is radiation given to the pelvic area from a distance, using a special machine (Figure PS16.1).

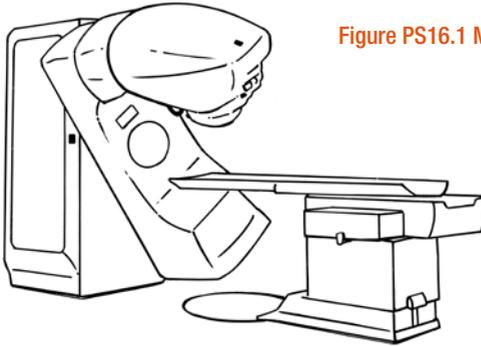


Figure PS16.1 Machine for teletherapy

This Practice Sheet is included to allow a first- or second-level health care provider to explain to a patient, before she goes to hospital, how the procedure will be performed, and to help her recover once she returns home.

EXPLAINING THE PROCEDURE

Give the woman as much information as you can on the procedure, and the possible side-effects. Tell her what the treatment will consist of and who will be in charge of it at the hospital. Tell her that she will be alone during treatment, but that it will not take long and that it does not hurt. The description below will help you answer any questions she may have.

Before the therapy starts

1. The hospital staff will give her instructions for preparation: what clothing to take with her and any medicines she needs to take beforehand.
2. The details of the treatment, its possible complications and options will be explained and informed consent requested. The woman will receive an appointment for pelvic imaging (with X-rays) on a simulator or computerized tomographic (CT) scanner.

Preparation for treatment

3. On the first day at the hospital, she will be asked to undress and to lie on a special table. She may have a pelvic examination, and X-rays will be taken. With the information obtained from the X-rays, her abdomen and pelvis will be marked with an indelible pen. This is to help the operator limit the radiation to the tumour; she must not rub these marks off.
4. She will be told the schedule for the therapy, and when to return for the first treatment.
5. The patient will be given the following information and counselling concerning the entire period of the therapy:
 - To avoid potential chafing of the skin, she should wear loose clothing and avoid wearing trousers.
 - She can shower with warm water, but should not soak in a bath, and should avoid sponging, rubbing the skin and using harsh soaps.
 - She should not put anything into the vagina during the entire therapy (such as tampons), or have sexual intercourse (although she can be intimate in other ways).
 - She should avoid commercially available skin creams, as they may contain harmful heavy metals. If she needs to use cream, she should ask the staff at the health centre to prescribe it for her.
 - She should cut down on heavy work and work performed in a hot, sweaty environment.
 - She can continue with her usual housework or light office work.
 - She may experience some tiredness or depression near the end of the course of treatment, and she should limit her activities accordingly.
 - The repetitive daily treatments will become boring. She should keep in mind that the chance of cure is diminished if she misses appointments or breaks her schedule, thus delaying completion of therapy.

Treatment

6. On the first day of treatment, the radiotherapy technician will reconfirm the patient's identity, therapy plan and informed consent. The technician will explain the procedure and show her the therapy machine inside the bunker.

7. The patient will be placed on the therapy table and told to remain in position. All personnel will leave the room.
8. She will be alone inside the treatment room, but she will have closed circuit television and audio links for communication.
9. During treatment, the therapy machine will be moved several times automatically, or the technician will enter the room to move it.
10. The patient will not feel anything during the therapy, which lasts only a few minutes.
11. Usually, 25 such treatments will take place over a period of 5 weeks.

Repeat treatments

12. The daily treatments will be as described above. The patient will be encouraged to report any problems to the technician. If it is felt she needs a more specialized response, she will be referred to the radiation oncologist.

Side-effect	Signs and symptoms	What to do
Skin response to radiation	Redness starting after about 3 weeks and increasing with treatment. Possibly dry then moist peeling of the skin, especially in the fold between the buttocks.	Only gentle occasional washing of the area. Avoid scrubbing. If painful, take mild analgesia. If the reaction is severe (usually because of excessive washing) the radiation oncologist may delay the completion of treatment (this can compromise the cure rate).
Bowel effects	The rectum and terminal colon, which reabsorb water from the bowel contents, are in the pelvic region. Radiation may impair water reabsorption, resulting in loose stools or diarrhoea.	The radiation oncologist will prescribe medication if required. Usual household remedies should not be used.
Bladder effects	Urinary frequency and urgency. There may be a burning sensation on passing urine. Rarely there may be evidence of blood in the urine.	Patient should return to the hospital for examination and treatment.

PS 16

13. The radiation oncologist will see the patient once a week for a “treatment check”, and will ask about any signs or symptoms and assess how well the patient is tolerating treatment.
14. The woman will be informed about common acute side-effects of radiotherapy (see below) and what to do if they occur. These side-effects will resolve spontaneously once the treatment is finished.

Follow-up

15. The patient will be given an appointment to return 6 weeks after completion of the teletherapy. The doctor will examine her and check the vagina to determine if it has healed.
16. The oncology team (radiation oncologist and gynaecologist) is best placed to assess any symptoms related to the pelvic area – in the vagina, bowel and bladder. They should be told about any symptoms or signs that appear to be unusual or severe.

WHAT YOU CAN DO DURING AND AFTER THE THERAPY

1. Help the woman to keep a positive attitude.
2. Counsel her and her husband that she should not have sexual intercourse during the treatment period. After this period, it is recommended that the woman remains sexually active.
3. Inform her that she does not need to use contraception. Pregnancy is impossible during and after teletherapy to the pelvis.
4. Ask her to keep the regular follow-up appointments with the team of radiation oncologist and gynaecologist. If she has unusual or severe symptoms, she should make an earlier appointment than scheduled.
5. Tell the family that they should help the woman to recover from the therapy by doing her normal household tasks for her, until she regains her strength.
6. Encourage her to lie down during the day if she feels tired; make sure she eats well.

7. Inform the woman about late complications:

- The radiation will cause a premenopausal woman to enter the menopause, with its typical symptoms of lack of menstruation, hot flushes, and vaginal dryness.
- The vaginal symptoms of menopause are made worse by vaginal fibrosis and narrowing of the vaginal tube, making intercourse uncomfortable or impossible. Vaginal lubricants and dilators should be prescribed to keep the vagina free of adhesions. It is important to keep the vagina open to allow inspection of the cervix. Continued sexual activity should be encouraged.
- Starting 6 months after treatment, the skin exposed to radiation may show areas of pigmentation, depigmentation or stiffening.
- Long-term narrowing of the rectum, and a passage (fistula) between the vagina and the rectum may develop. These are very disabling complications, which may need further surgery or even a colostomy.
- The bladder may become stiff and reduced in size, causing the woman to urinate frequently, and predisposing her to urinary infections. Rarely, a vesicovaginal passage or fistula develops, resulting in incontinence. This may require surgical repair.
- Very rarely (one patient in a thousand), the radiation may stimulate the development of a new cancer.

PS16

Practice Sheet 16: Pelvic Teletherapy

PRACTICE SHEET 17: BRACHYTHERAPY

PS 17

Brachytherapy is radiation therapy delivered from a source of radiation placed close to the tumour, i.e. inside the uterus and in the vaginal vault. This Practice Sheet is included to allow a first- or second-level health care provider to explain to a patient, before she goes to hospital, how the procedure will be performed, and to help her recover once she returns home.

EXPLAINING THE PROCEDURE

Give the woman as much information as you can on the procedure, the anaesthesia, and the possible side-effects and complications of the therapy. The description below will help you answer any questions she may have.

Low-dose-rate (LDR) brachytherapy

Preparation

1. The hospital staff will give her instructions for preparation: what clothing to take with her and any medicines she needs to take beforehand.
2. The details of the treatment and its possible complications will be explained, and informed consent requested. The patient will receive an appointment for admission to hospital.

Procedure

3. On the day of the procedure, the patient will be taken to the operating room and given a general anaesthetic.
4. She will have a tube placed in her bladder.
5. A pelvic examination will be performed.
6. Through a speculum in the vagina, special metal devices will be placed into the cervical canal and around it in the vagina. These devices will hold the radioactive sources.
7. Their position will be checked with X-rays.
8. When she wakes up, she will be taken to an isolation ward (shielded room).
9. She will be instructed to remain on her back in bed for the duration of the treatment (about 2 days).
10. The urinary catheter will remain in place and will be attached to a bag to collect urine.

11. The hospital staff will leave the room and the radioactive sources will be loaded under computer control into the metal devices previously inserted close to the tumour.
12. The patient will not feel any pain at all while she is receiving the treatment.
13. During the entire procedure, the door of the room will remain closed. She will need to use a bedpan to empty her bowel. The patient will be able to communicate with the nursing staff by audio link, and all meals will be served in bed. She can spend the time reading, listening to radio, or watching television. But she must remain in bed for the entire time! Very limited visiting will be permitted.
14. When the time for the procedure has been completed, she will be given a mild sedative and the devices containing the radiation sources will be removed.
15. Once she has recovered from the sedation, she will be discharged from the hospital.

In some hospitals, two such treatments are given with a one-week interval between them.

High-dose-rate (HDR) brachytherapy

The procedure is similar to that for LDR brachytherapy, with the following differences:

1. Treatment will usually start in the third week after starting teletherapy.
2. Each treatment lasts only one hour, and is given on an outpatient basis. It can be performed under mild analgesia; anaesthesia is seldom used.
3. After catheterization, repeat manual and speculum vaginal examinations will be performed and vaginal retractors and speculum inserted.
4. A metal brachytherapy catheter is inserted into the uterus, and attached to the remote afterloading HDR brachytherapy unit that contains the radioactive source.
5. The patient will be told to remain in position while the personnel leave the room. She must remain in the same position for the whole time that she is receiving radiation, which takes several minutes.
6. She can be discharged when the procedure is over.
7. The number of treatments varies from 2 to 8, but is usually 4. The interval between treatments may vary from one day to a week.
8. After the first treatment, the patient will be given a series of appointments for the rest of the treatments.

Possible side-effects and complications of gynaecological brachytherapy

The side-effects of brachytherapy are the same as those of pelvic teletherapy (see Practice Sheet 16). The information and counselling to be provided to the patient are also similar. Inform the patient about the anaesthesia or sedation she will receive to make her feel more comfortable. Brachytherapy makes a major contribution to vaginal symptoms of local fibrosis, mucosal atrophy and formation of petechiae, which predisposes to local bleeding. It also contributes to late rectal and bladder complications.



Pelvic teletherapy

PS17

Practice Sheet 17: Brachytherapy

7

CHAPTER 7: PALLIATIVE CARE

CHAPTER 7: PALLIATIVE CARE

Key points

- Palliative care is an essential element of cervical cancer control.
- The goal of palliative care is to avoid unnecessary suffering and improve the quality of life of women with advanced cervical cancer and their families, through emotional support, symptom control, end-of-life care and bereavement care. It addresses the physical, psychosocial, and spiritual needs of patients and their families.
- Palliative care should begin as soon as cervical cancer is diagnosed, so that needs can be anticipated, and preventive and treatment measures planned and put into effect.
- Palliative care can help people with advanced disease to have dignity and peace during difficult and final phases of life.
- Freedom from pain can be considered as a human right, yet pain control remains vastly underutilized. The mechanisms for its implementation need to be strengthened.
- Using a broad combination of medical and non-medical methods, pain can be effectively controlled in 90% of cases.
- Patients and their caregivers need training, ongoing support, and supplies for palliative care, including for symptom management at home.

ABOUT THIS CHAPTER

This chapter deals with one of the most important and often neglected components of a comprehensive cervical cancer control programme. It focuses on the importance of having a team of trained, home-based and clinical providers, who can make the end of life of a cancer patient more comfortable and satisfying, and it provides advice on symptom management. The patient's family is considered part of the care team. Most of the issues treated in this chapter are also relevant to patients who need palliative care for other non-curable diseases. Practice Sheets 18–20 provide detailed instructions for management of pain, vaginal symptoms and other common problems encountered in seriously ill patients.



PS 18, 19, 20

THE ROLE OF THE HEALTH CARE PROVIDER

The health care provider has an essential role in improving the quality of life of the patient with a life-threatening illness and her family.²⁰ Providers at all levels of the health system need to work as a team, to provide treatment, comfort and care, and to transmit accurate information and skills to the patient, her family and the community. To be able to do this, providers need special focused training in management of both physical and emotional problems, and must have skills in communication and understanding.

STORY



Amelia is a 57-year-old woman from Angola, with 6 children and many grandchildren. She was taken to the nearest district hospital, 95 kilometres away from her home, by her **eldest daughter**, after she developed a vaginal discharge with a very bad odour, which persisted for many months. The doctor who examined her did some tests, and explained that she had advanced cervical cancer which had spread from her cervix to her



vagina and bladder and the walls of her pelvis. The bad odour was caused by urine leaking from her bladder into her vagina and mixing with discharge from the tumour.

The doctor said that unfortunately, at this stage, there was no treatment or cure for her cancer, but that she could be cared for and made comfortable at home. She added that she worked with community health workers near Amelia's village, who provided home-based care for people who were very sick with AIDS, cancer, or other illnesses. Then she wrote a referral note to the woman in charge of the home-based care organization, explaining Amelia's condition and asking her to visit her at home. The doctor said she would work from a distance with the health worker, to make sure that Amelia would have the medicines she needed, including medicine for pain, which might get worse as the cancer progressed. (continued next page)

²⁰ In this context, "family" includes anyone that the patient considers to be significant to her.

Although Amelia and her daughter were shocked and saddened by the news, the doctor's kindness and concern reassured them. Her promise to watch over her care with the local health worker made them both feel more confident and hopeful about the future.



The health worker came as promised; she showed Amelia and her daughter how to deal with some of the problems; how to prepare pads from old, clean cloths to absorb the vaginal discharge, how often to change them and how to wash them, to apply petroleum jelly to the vaginal area as the skin was beginning to get irritated from the constant moisture, to gently wash the area daily with soap and water, and to have sitting baths. With Amelia's permission, she spoke to the family about supporting Amelia and each

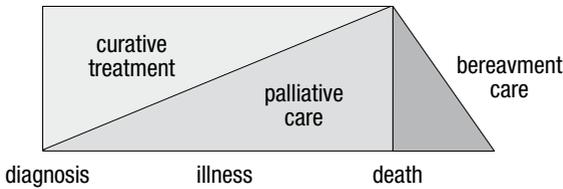
other during her illness, and emphasized the importance of sharing the work as Amelia's condition got worse. There would be more laundry, as bedding and underwear would need to be washed often; the bed should be protected from discharge and urine with a plastic sheet; medicines for pain could be bought at low cost from the local mission hospital, and someone would need to fetch them regularly; other help at home was available through Amelia's church. Amelia's family was poor, but the health worker helped to organize support from the community, the church and the local mission so that the needed supplies were usually there.

She helped the family to understand the importance of keeping Amelia involved in their daily lives, and the life of the community. The family arranged for friends to visit when Amelia felt well enough; they took turns preparing food and, when she became too weak to leave her bed, they made sure that someone was always there for her. Amelia felt that she was not cast aside because of her illness. Even as she approached death, conversation and good spirit kept the house full of life and Amelia felt loved and needed until the end of her life.

A COMPREHENSIVE APPROACH TO PALLIATIVE CARE

Palliative care aims to improve the quality of life of patients and their families facing problems associated with life-threatening illness. Palliative care is not only end-of-life care, but also includes management of all distressing symptoms, including pain. The patient's future needs should be considered at the time she is diagnosed with advanced cancer, so that problems can be anticipated, and prevented or managed (Figure 7.1). Palliative care can be provided by people in the family, community, health centres and hospitals.

Figure 7.1 Continuum of care



Why is palliative care necessary?

Even with the best prevention and screening programmes, some women are diagnosed with advanced disease or will develop such disease, and will need clinical and emotional support and pain control. In many low-resource countries, women are not reached by organized screening programmes and many are diagnosed as having cervical cancer only when they develop symptoms, usually in late stages of disease (see Chapter 6). In addition, facilities for the treatment of cervical cancer may not exist or may not be accessible to many women; as a result, some women with relatively early cancers will not receive the most effective treatment. In these settings, palliative care is particularly important, as many of these women will need relief from pain and other distressing symptoms. Adequate resources have to be made available to care for those who cannot be cured, particularly in rural areas with few health services, where many women will die at home in difficult conditions.

Patients with other chronic severe diseases, such as AIDS, also need special care, and efforts should be made to create a team of health providers at all levels of the health care system with knowledge and skills in palliative care. If appropriate, patients' families should be enrolled into palliative care teams.

RECOMMENDATION

The needs of women with incurable disease should be addressed by using existing palliative care services or establishing new ones. Providers at all levels need to be trained and to have the resources necessary to manage the most common physical and psychosocial problems, with special attention to pain control.

Principles of palliative care

Palliative care:

- provides relief from pain and other distressing symptoms;
- affirms life and regards dying as a normal process;
- is intended neither to hasten nor to postpone death;
- integrates the clinical, psychological and spiritual aspects of care;
- gives the patient and her family as much control and decision-making power as they desire and are able to accept;
- offers a support system to help patients live as actively as possible until death;
- offers a support system to help the family cope during the patient's illness and in their own bereavement;
- uses a team approach;
- will enhance quality of life, and may also positively influence the course of illness;
- is applicable early in the course of illness, in conjunction with other therapies that are intended to prolong life, such as surgery and radiotherapy.

Essential components of palliative care

- *Prevention and management of symptoms:* this may include palliative radiation to reduce the size of the tumour, as well as treatment for vaginal discharge, fistulae, vaginal bleeding, nutritional problems, bedsores, fever, and contractures. Families should be taught how to prevent problems, where possible, as well as how to support the patient in her daily activities, such as bathing, going to the toilet, and moving around.
- *Pain relief:* effective pain control can be achieved in 90% of cases, using the medical management described in this chapter, together with ancillary non-medical methods.

- *Psychosocial and spiritual support*: this is an important component of palliative care and requires trained providers with good communication skills.
- *Involving the family*: the health worker can ensure that the patient and her family understand the nature and prognosis of the disease and recommended treatment. The palliative care worker must also be able to help the patient make decisions about her care. The patient and her family should have sense of being in control, with full support from the health care team, whose task is to provide appropriate information and advice and support informed decisions.

Palliative care requires systematic and continuous application of the five steps (five “A”s), described below. Like other aspects of cervical cancer care, this approach requires teamwork and adequate resources.

The five As of palliative care: Assess, Advise, Agree, Assist and Arrange.

Assess:	Assess the patient’s status and identify the treatments needed; assess the patient’s and carers’ knowledge, concerns and skills related to the illness and the treatment.
Advise:	Explain how to prevent and manage symptoms, and teach needed skills, a few at the time, by demonstration and observed practice.
Agree:	After giving information and teaching skills, make sure that the patient knows what to do and that she wants to do it. Empower her to stay in charge. Support patient self-management and family care.
Assist:	Make sure the patient and her family have enough supplies to cope with difficult situations and give required care. Give written instructions as a reminder of what has to be done, with pictures if needed for those who cannot read.
Arrange:	Schedule a time for the next visit. Make sure the patient, her family and other carers know where to go if they have questions or concerns.

Make sure the family knows when and who to call for help.

The role of the family in palliative care

Palliative care should be available wherever patients are – at home, in hospitals, in hospices, etc. In developing countries, most patients die at home, and the family plays an important role in palliative care. If the patient agrees, and if appropriate, the patient's family should be involved and empowered in joint decision-making, should be constantly kept informed of medical decisions, including changes in carers and treatment, and should be trained in best practices of palliative care. The patient's family and other carers can be taught to give home-based care. Clinical care should be provided by health workers trained to use recommended medicines within the national legal framework. Providers of palliative or home-based care should have continual back-up from first-level health workers (physician, clinical officer, or nurse) who should be available for consultation or referral when needed.

Accessing local resources for care at home

When a woman is no longer able to work or care for her family, meagre resources may become further stretched. Money for food, supplies and medicines for her care or the supplies themselves are sometimes available through local, regional or national nongovernmental organizations, faith-based organizations, women's groups and community-based organizations. A palliative care or home-based care (HBC) programme should have links with these organizations where possible, and provide referrals for women and their families.

MANAGING COMMON SYMPTOMS OF EXTENSIVE CANCER

Women with advanced cancer can suffer a constellation of physical, psychological and emotional problems. Pain is almost always part of the constellation, and its relief should always be part of palliative care.

Pain management

Pain relief for cancer patients:

- is vastly underutilized and, as a result, many patients suffer needlessly;
- is achievable and inexpensive;
- needs cooperation and two-way communication between home-carers and clinical providers at all levels of the health care system.

Home-carers are most in touch with the patient's needs, while clinical providers can offer support and medications.



Pain management

The following are the major barriers to effective pain relief:

- lack of awareness, on the part of health care providers and the general public, that pain relief is achievable and inexpensive.
- lack of availability of pain medications as a result of restrictive regulatory policies. Even when controlled pain medications (opiates and oral morphine) are available in principle, providers – including physicians – may be restricted by national drug control policies from prescribing or dispensing them.
- providers' unrealistic fears of promoting drug dependence in patients, and of contravening drug enforcement laws.

National rules and regulations must be followed. They should be carefully checked to see whether they allow pain relief to be administered by non-medical people under the supervision of doctors or nurses. If not, medical and non-medical people need to join forces to advocate for patients' right to freedom from pain.

In the context of palliative care in national cancer control programmes, restrictive drug regulations need to be modified to allow access to pain control. Although changing policy and law is not the role of the care team, providers should advocate for, and demand, policy change, to remove barriers to access to pain relief, including opioids.

RECOMMENDATION

A comprehensive cervical cancer control programme should ensure that opioid, non-opioid and adjuvant analgesics, particularly morphine for oral administration, are available.

WHO's analgesic ladder

WHO has developed an effective and relatively inexpensive method for relieving cancer pain in about 90% of patients. This method is called the WHO ladder for cancer pain relief and is described in Practice Sheet 18. It can be summarized as follows:

- by mouth: whenever possible, analgesics should be given orally in order to permit wide applicability of this method;
- by the clock: analgesics should be given at fixed time-intervals. The next dose should be given before the effect of the previous one has fully worn off, to ensure continuous pain relief;
- by the ladder: the first step is to give a non-opioid, typically paracetamol. If this does not relieve the pain, opioids for mild to moderate pain, such as codeine, should be



Pain management

given. The third step is to give opioids for severe pain, such as morphine. Additional drugs, called adjuvants, can be used in certain circumstances; for example, psychotropic drugs may be given to calm fear and anxiety;

- for the individual: there is no standard dose for opioid drugs. The right dose is the dose that relieves the patient's pain.

Two rules for opiate dosage:

There is no standard dose for opioid drugs: the right dose is the dose that relieves pain. There is no ceiling dose for opioid drugs: the dose will gradually need to be increased as patients become tolerant to the pain-relieving effects.

In cervical cancer patients, pain management will depend on the body part involved. Table 7.1 outlines management of some commonly encountered pain syndromes.

Table 7.1 Pain syndromes in cervical cancer and their management

Syndrome, clinical features	Pain probably caused by:	Treatment
Tenderness over a bone, may be worse on movement (severe pain or tenderness in weight-bearing bones needs urgent attention to prevent fractures)	Metastases in bone	<ul style="list-style-type: none"> • Radiotherapy • Bisphosphonates • Surgery (e.g. pins) for weight-bearing bones • NSAIDs* ± paracetamol (if no contraindications) always needed • Corticosteroids, if NSAIDs are contraindicated • Opioids if pain still present
Leg calf and foot pain, possible loss of strength	Involvement of lumbosacral nerve plexus	<ul style="list-style-type: none"> • NSAIDs ± paracetamol • Steroids: dexamethasone 4 mg for 1 or 2 days, then 2 mg a day • Opioids • ± Tricyclic antidepressants or an anticonvulsant
Pain when leg flexed at hip (Psoas sign) Leg pain	Infiltration of psoas muscle	<ul style="list-style-type: none"> • Same as above but diazepam or other antispasmodic essential

*Nonsteroidal anti-inflammatory drugs.

Non-medical methods to assist in pain control

Many non-medical methods, appropriate to local customs and culture, can help control pain. These methods can be used together with pain medications but should never take the place of effective pain-relieving medicines. Non-medical pain management may include: emotional support, physical methods (touching and massage), distraction, prayer, meditation and other non-harmful local traditional methods. They should be provided only with the explicit understanding and approval of the patient and her family.

Prevention and management of other problems of advanced disease

Problems to be managed at home may include:

- vaginal discharge,
- fistulae,
- vaginal bleeding,
- nausea and vomiting,
- diarrhoea or constipation,
- fever,
- loss of appetite, wasting, weakness and fatigue,
- leg swelling,
- bedsores,
- shortness of breath,
- depression.



PS 19 Home-based care
PS 20 Managing vaginal discharge

DEATH AND DYING**Anticipating practical issues**

To help the patient and her family bear the burden of imminent death and bereavement, home-care providers can encourage discussion of important issues, such as writing a will, financial support of the family, changing roles within the family and reconciliation of old quarrels.

Preparing for death

Encouraging communication within the family can make a death less stressful and ease bereavement (see Chapter 6 for additional advice on how to talk with the incurable patient and her family). At times, the patient may express anger or other strong emotions towards her closest family members and the health care provider; such outbursts need to be accepted and not taken personally.

The trained provider can help the dying woman by doing the following:

- helping her deal with guilt or regret;
- talking about her impending death;
- providing comfort and care;
- responding to grief reactions, such as denial, sadness, bargaining, yearning, anger, humiliation, despair, guilt and acceptance;
- keeping communications open, and giving her the chance to talk about her feelings, without pressuring her if she is not ready to talk;
- offering practical support, such as helping to make a will;
- asking her how she wishes to die (where, and with only family present or with pastoral care);
- making sure that her wishes are respected.

When considering the possibility of transferring the patient to the hospital, carers should take into account her wishes and those of her family. It is probably not appropriate to transfer a dying patient, unless she requests it.

Death

At the time of death, it is essential to respect local rites and rituals, as well as the previously expressed personal wishes of the patient concerning care of the body, funeral, and other issues.

Bereavement

Bereavement care is support given to the family after a patient's death, to help them accept the loss of their loved one. Home-care workers and clinic providers involved in the woman's terminal care can share the family's sorrow, by encouraging them to talk and express their memories. Workers should not offer false comfort but should be supportive, take time to listen, and try to arrange practical support with neighbours and friends.

ORGANIZATION OF PALLIATIVE CARE SERVICES

In resource-poor settings, palliative care is most often provided by untrained community health workers.

To be effective, these workers require:

- training in clinical and psychological palliative care, which can be given in 1–3 weeks for those with basic medical skills;
- supportive supervision from hospice nurses or others trained in the management of psychosocial and medical problems in severely ill patients;
- essential medicines and other supplies needed for effective palliative care, provided according to a national essential drug list. The primary health care facility can arrange for regular supplies for home-based care providers and their patients;
- a secure place to store medicines, and a separate tracking system for pain medications, if this is required by the drug regulatory authority;
- open communication with the formal health system, and access to more skilled providers for consultation and referral of patients when needed.



Home-based care

A team approach to palliative care

Providers at all levels of care, from specialists to home-care providers, should work together to ensure the best quality of life and outcome for the patient with advanced cervical cancer. In tertiary care settings, the team might include a gynaecologist, a radiotherapist, a radiotherapy technician, a psychologist or counsellor, a nutritionist, a physiotherapist, an oncology nurse, a pharmacist, a social worker and a palliative care nurse. In resource-poor settings it is unlikely that such a highly specialized team can function down to the level of the community where the woman lives. Strategies need to be devised for individual community providers responsible for the patient's continuing care, to allow them to link the patient and her family with staff at the health centre and district and central hospitals.

PALLIATIVE CARE AT DIFFERENT LEVELS OF THE HEALTH SYSTEM

In the community



- Visit the patient's home on a regular, scheduled basis, in order to anticipate and follow up problems.
- Facilitate access to supplies and medicines.
- Teach care and comfort-giving procedures to the patient and her family and check that they are being done.
- Answer questions, provide information and keep records.
- Encourage the family to keep the patient involved in their daily life as much as possible.

At the health centre



- Supervise, support and maintain supplies for the CHWs who do home visits for women with cervical cancer.
- Provide emergency or routine follow-up care for problems after diagnosis or treatment for invasive cancer.
- Manage referrals to other facilities for palliative care.

At the district hospital



- Maintain contact with health centre and palliative care providers, and follow up women referred from this level.
- Support and supervise the team at lower levels.
- Provide treatment and care.
- Refer patients to central level for acute problems that are best managed there, such as uncontrolled vaginal bleeding and intractable pain.

At the central hospital



- Be involved in palliative care services organized at district and primary facility levels. Assist, train and supervise lower-level providers and CHWs.
- Provide certain palliative procedures, e.g. radiotherapy.
- Counsel and educate the family and patient in how to prevent common problems, such as contractures and bedsores.
- Participate in the development of an individualized home-based care plan for each patient. Refer patients back to facilities closer to their home, instructing the facilities and providing distance supervision. Be available for consultations by telephone or mail.
- Write prescriptions for medications such as analgesics, including oral morphine, and give them to the patient or her carers for immediate or future use.
- Visit the community from time to time to conduct training sessions for HBC workers or CHWs, and to learn from them about the conditions in which they work, and in which their patients live.

ADDITIONAL RESOURCES

- Bruera E, de Lima L, ed. *Cuidados paliativos: guías para el manejo clínico*. Washington, DC, Pan American Health Organization, International Association for Hospice and Palliative Care, 2004 (available only in Spanish).
- Burns AA et al. *Where women have no doctor. A health guide for women*. Berkeley, CA, Hesperian, 1997.
- Davis E, Higginson IJ, ed. *Palliative care: the solid facts*. Copenhagen, WHO Regional Office for Europe, 2004.
- Doyle D, Hanks G, Cherney NI. *Oxford textbook of palliative medicine*, 3rd ed. Oxford, Oxford University Press, 2003.
- European Association for Palliative Care. *A guide to the development of palliative nurse education in Europe, report of the EAPC task force*. Milan, EAPC, 2004.
- *Palliative care for women with cervical cancer: a field manual*. New York, NY, Seattle WA, PATH, EngenderHealth, 2003.
- *Palliative care for women with cervical cancer: a Kenya field manual*. Washington, DC, PATH, 2004.
- Recommendation 24 of the Committee of Ministers to Member States on the organisation of palliative care and explanatory memorandum, 2003 (adopted by the Committee of Ministers on 12 November 2003 at the 860th Meeting of the Ministers' Deputies) (www.coe.int).
- WHO. *Cancer pain relief*, 2nd ed. Geneva, 1996.
- WHO. *Narcotic and psychotropic drugs: achieving balance in national opioids control policy-guidelines for assessment*. Geneva, 2000.
- WHO. *National cancer control programmes*, 2nd ed. Geneva, 2002.
- WHO. *Palliative care: symptom management and end-of-life care. Interim guidelines for first-level facility health workers*. Geneva, 2004 (WHO/CDS/IMAI/2004.4 Rev. 1).
- WHO. *Caregiver booklet: a guide for patients, family members and community caregivers*. Geneva, 2004.

PRACTICE SHEET 18: PAIN MANAGEMENT

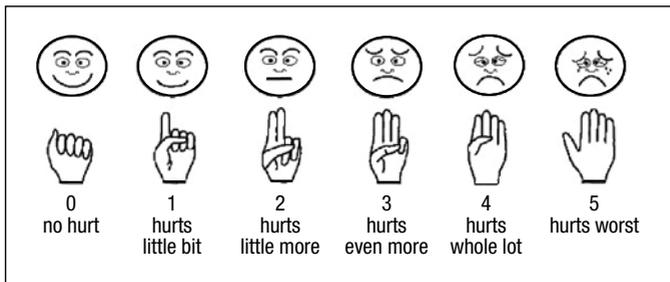
This Practice Sheet details clinical actions to relieve pain. See also Table 7.1 for additional suggestions on pain management.

Freedom from pain can be considered a human rights issue

MANAGING PAIN ²¹

1. Assess the patient's pain. If possible, determine the cause, identify any new pain and any change in pre-existing pain. Ask the patient questions to determine the following:
 - Where is the pain? What makes it better or worse? What type of pain is it?
 - What is the patient taking for the pain?
 - Is there a psychological or spiritual problem in addition to a physical, cancer-related reason for the pain? Is the patient worried, fearful, depressed or grieving?
 - How bad is the pain? Fingers or faces can be used to grade the pain (Figure PS18.1).

Figure PS18.1 Assessing pain by using fingers or faces



2. Record your findings on the patient's chart and your own record.
3. If you find the cause of the pain, treat the cause if possible (bone pain, muscle spasm, gastrointestinal pain from constipation, swelling around tumour).

²¹ Adapted from: *Palliative care: symptom management and end-of-life care. Interim guidelines for first-level facility health workers*. Geneva, WHO, 2004 (WHO/CDS/IMAI/2004.4 Rev.1).

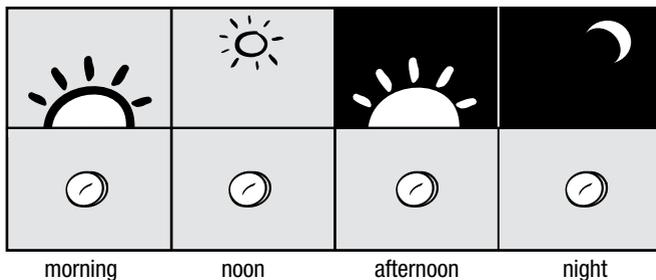
4. Use analgesics according to the recommendations below.
5. In addition, you may use appropriate, non-medical treatment, as long as it is not harmful. Non-medical treatment should not replace medical management.
6. Check frequently the patient's need for pain-relieving medication, especially if the pain becomes more severe.

Teach the woman and her carers how to use pain-relieving medications. Check often to make sure that she is receiving the right doses of the right medicines at the scheduled times.

Pain should be treated using the WHO ladder for cancer pain relief (see Figure PS 18.3), and the following principles:

1. Treatment should be provided by mouth or rectally. Injections should be avoided whenever possible.
2. Medicines should be given at fixed time intervals (calculated by the clock, the radio or the sun). Each dose of medicine should be given before the previous dose wears off. Give the first dose when the patient wakes up, and the last dose just before she goes to sleep; do not wake a person who is sleeping comfortably to give medications. The bedtime dose can be doubled if needed.
3. If pain returns before the next dose is due, immediately give a “rescue” dose (the same dosage as the regular dose). This is in addition to the next scheduled dose, not in place of it.
4. The dose of pain medication should be calculated and adapted where necessary in order to control the pain while keeping the patient as alert as possible.
5. Write out a detailed schedule for each drug, with words or in a drawing (Figure PS18.2).

Figure PS18.2 Example of a drawing that can be used to show the schedule of drug



Source: *Palliative care for women with cervical cancer: a field manual*. PATH, EngenderHealth, 2003.

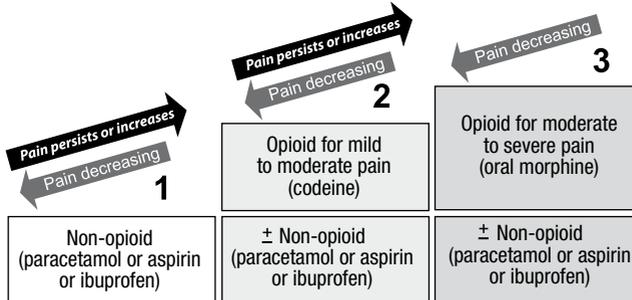
Keep in mind: There is no such thing as an established dose for all patients. Medical personnel and home-carers need to establish, with the patient, her need for medication, based on the amount of pain she has. The right dose is the dose that relieves pain; it will gradually need to be increased because patients become tolerant to the medicine's effects.

How to give medicines for pain

1. Start with a non-opioid, such as paracetamol, aspirin or ibuprofen.
2. If the pain persists or increases, give an opioid for mild to moderate pain, e.g. codeine, with or without a non-opioid (paracetamol, aspirin or ibuprofen). When opioids are prescribed, you should systematically give a laxative to prevent constipation. Add an anti-emetic if necessary.
3. If pain persists or increases, give morphine, with or without an additional non-opioid.

Note: in most countries, opioids require medical prescription and supervision.

Figure PS 18.3 WHO's pain relief ladder



Source: *Palliative care: symptom management and end-of-life care. Interim guidelines for first-level facility health workers*. Geneva, WHO, 2004 (WHO/CDS/IMAI/2004.4 Rev.1).

In what dose and how often should medications for pain be given?

Medication	Starting dose	Dose range	Side-effects/ precautions
NON-OPIOID FOR MILD PAIN			
Paracetamol	2 tablets of 500 mg, every 4–6 hours	1 tablet may suffice in very ill patients, or in combination with opioid. Maximum dose 4000 mg daily	Can cause liver toxicity
Aspirin	600 mg (2 tablets of 300 mg) every 4 hours		Avoid if patient has gastric problems or vaginal bleeding; stop if patient has stomach pain, indigestion, black stools, small bruises, bleeding
Ibuprofen	400 mg every 6 hours	Maximum dose 3000 mg (7.5 tablets of 400 mg) daily	Avoid if patient has gastric problems; give with food if possible
OPIOID FOR MILD TO MODERATE PAIN			
Codeine (if not available, alternate aspirin and paracetamol)	30 mg, every 4 hours	30–60 mg every 4–8 hours	Give laxatives from the beginning to avoid constipation Can be costly
OPIOID FOR MODERATE TO SEVERE PAIN			
Morphine liquid, 5 mg/ml or 50 mg/5 ml Drop into mouth from syringe; can be given rectally using syringe (no needle)	2.5–5 mg every 4 hours (if pain persists increase dose by 1.5 or 2 times after 24 hours)	According to patient need, and breathing There is no ceiling dose	Give laxatives to avoid constipation Reduce dose if breathing problems occur

NON-MEDICAL METHODS TO ASSIST IN PAIN CONTROL

A number of methods, appropriate to local customs and culture, can be very important in helping the patient cope with pain. These methods may be used in addition to effective modern medicines, and should never take their place.

Non-medical methods may include:

- emotional support: the care and support of family and friends are most important in relieving discomfort during severe illness;
- touch, such as stroking, massage, rocking and vibration;
- distractions, such as radio, music and helping the patient to imagine a calm scene or a happy event in her life;
- prayer and meditation, according to the patient's practice.

Traditional practices, if not harmful, can be very beneficial.

The attitude of the health care provider is also important:

- Listen with empathy.
- Try to understand her reactions to her illness (the different stages of grief).
- Refer to a spiritual counsellor or pastoral caregiver, according to her religion and wishes.
- Avoid imposing your own views.
- Empower the family to continue to provide care.

PS18

Practice Sheet 18: Pain Management

PRACTICE SHEET 19: HOME-BASED PALLIATIVE CARE ²²

PS 19

This Practice Sheet summarizes recommendations for supportive home-care for severely ill cervical cancer patients.

- You can adapt it to the role you play in palliative care for a patient.
- Your objective is not to cure the patient, but rather to make her life more comfortable by reducing the severity of symptoms and side-effects of the illness and the treatment.
- You can use these recommendations with people with any advanced or terminal illness.
- You need to be conscious of the important contribution to patient comfort provided by physical, emotional, spiritual and alternative measures, e.g. massage, stroking, distractions, such as music, prayer and meditation, and local traditional practices.
- The patient herself must decide if she or someone else will use the available alternatives to treat her problems.

Particularly when medications are needed, the support of nurses and doctors is essential.

Management of common symptoms of advanced disease

Problem/ Symptoms	Cause	Prevention	Clinical management	Home-care
Vaginal discharge, which may be foul-smelling (see also Practice Sheet 20)	Tumour necrosis Fistula Bacterial overgrowth	Difficult to prevent Palliative radiation or surgery of tumour	Pack vagina twice a day with cloths soaked in vinegar, sodium bicarbonate (baking soda) or metronidazole. Give antibiotics and/or antifungals, if necessary	Frequent sitting baths Clean, absorbent pads changed often Douching

²² Adapted from: *Palliative care for women with cervical cancer: a field manual*. PATH, EngenderHealth, 2003; and *Palliative care: symptom management and end-of-life care. Interim guidelines for first-level facility health workers*. Geneva, WHO, 2004.

PS 19

Practice Sheet 19: Home-based Palliative Care

Problem/ Symptoms	Cause	Prevention	Clinical management	Home-care
Vesicovaginal or rectovaginal fistula (symptoms: leaking urine or faeces from the vagina; vulvar irritation) (see also Practice Sheet 20)	Tumour creates passage between bladder or rectum and vagina	Difficult; a common problem of late invasive cancer	None	As above Keep patient clean and comfortable Zinc ointment or petroleum jelly to protect anus and vagina Plastic or newspaper under bedding for protection
Vaginal bleeding (see also Practice Sheet 20)	Bleeding tumour	Palliative radiotherapy	Pack vagina if needed	Rest; avoid strenuous activity and sexual intercourse
Nausea or vomiting	Opioids Gastrointestinal infection Severe pain Fever Radiation Chemotherapy Renal failure	Give anti-emetics when starting opioids and as needed, to prevent nausea	Metoclopramide or promethazine orally or rectally (by injection only if absolutely necessary)	Small, regular sips of rehydration drinks, ginger tea, ginger ale or cola drinks, as tolerated

Problem/ Symptoms	Cause	Prevention	Clinical management	Home-care
Diarrhoea	Gastrointestinal infection, parasites, radiotherapy	Good food hygiene, handwashing; use clean or boiled drinking-water	Treat cause if known Loperamide	Fluids, oral rehydration salts solution, food as desired; keep clean; prevent skin problems
Fever: body temperature >37 °C	Bacterial infection (lymphangitis, kidney, lung, etc.)	Prevent infections where possible	Treat cause, using most appropriate antibiotics Paracetamol	Remove blankets; ventilate room; sponge baths; paracetamol
Constipation	Opioids, poor intake of fluids and solids, immobility	Encourage fluids, high-fibre diet, mobility, regular use of stool softeners and laxatives	Modify diet; give laxatives with opioids	Modify diet; give laxatives with opioids
Loss of appetite, wasting	Illness, medications	Small frequent meals, desired food only, fresh foods	Can use corticosteroids	Can use corticosteroids
Weakness, fatigue	Illness, normal postoperative recovery, anaemia, wasting	Good general care	Treat cause if possible	Good general care

PS 19

Practice Sheet 19: Home-based Palliative Care

Problem/ Symptoms	Cause	Prevention	Clinical management	Home-care
Leg swelling	Lymph blockage from tumour, lymphangitis, kidney failure		Antibiotics, if infection is suspected	Wrap leg and elevate, massage
Bedsore	Constant pressure breaks down skin	Daily bathing, turn patient every 2 hours, soft padding underneath, cushions, massage	Wash sores with antiseptic twice a day, remove dead tissue, cover with clean bandage; if infected give oral antibiotics	Daily bathing, frequent turning. Clean sores gently every day with diluted saltwater. Fill the bedsore area with pure honey and cover with a clean light dressing to encourage healing
Cough, breathing problems	Pneumonia, bronchitis, viral upper respiratory tract infection, tuberculosis, heart failure	If family member is sick, ensure good ventilation in home	Treat cause if known	Increase fluids, home cough remedies, sit patient upright, codeine
Depression, anxiety	Illness, grief reaction	Family and spiritual support, pain control	Counselling or support around cause, if any; amitriptyline for depression; diazepam for anxiety	Continued support, time spent with her doing things she likes, prayer

When to transfer a patient for care and emergency treatment of acute symptoms

If the patient has any of the following, consider transferring her to hospital for emergency care:

- severe vaginal bleeding;
- signs of severe dehydration:
 - pulse > 100/minute,
 - fast breathing,
 - no urine for over 24 hours;
- severe diarrhoea for more than 48 hours;
- blood in stool;
- fever over 39 °C for over 48 hours;
- convulsions;
- confusion;
- severe abdominal pain, gastrointestinal obstruction (swollen, very painful abdomen, no defecation for over 48 hours);
- severe pain, not controlled with opioids;
- multiple infected bedsores;
- acute respiratory distress;
- attempted suicide.

The patient (if conscious) and her immediate family need to be involved in the decision to transfer her. ***If the woman is dying, she should not be transferred at the last minute.***

PS19

Practice Sheet 19: Home-based Palliative Care

PRACTICE SHEET 20: MANAGING VAGINAL DISCHARGE AND FISTULAE AT HOME

This Practice Sheet explains how to provide care and comfort for women with vaginal problems, resulting from advanced invasive cervical cancer and complications of treatments. It includes management of vaginal discharge, fistulae and bleeding.

In addition to the specific advice in this sheet, supportive, emotional and other non-medical measures can be very effective.

Managing vaginal discharge

Women with cervical cancer may have watery, bloody, foul-smelling vaginal discharge. This symptom is a result of bacterial growth in the unhealthy tissues of the lower genital tract. The bacteria produce gas.

The bacteria cannot be permanently eliminated, but symptoms can be temporarily alleviated by doing one or more of the following.

- Absorb the discharge with clean cloths, cotton or menstrual pads, placed in the panties.
- Carry out periodic, *careful* vaginal douching (rinsing the vagina using a tube attached to a clean plastic bottle or syringe), using one of the following solutions:
 - one tablespoon of sodium bicarbonate (baking soda) in two cups of boiled warm water; or
 - one part vinegar in 4 parts water; or
 - 5–10 crushed tablets of metronidazole dissolved in 2 cups of boiled warm water.
- *Gently* pack the vagina twice a day with clean cloths soaked in one of the above solutions. Packs should not be left in place for more than a few hours.²³
- Broad-spectrum antibiotics may be prescribed by a physician, but they should be used with caution because they are, at best, only temporarily effective. In addition, they can cause a yeast infection in the vagina, which can make symptoms worse. The patient and family must be made aware of the importance of completing any prescribed antibiotic regimen; not completing it may worsen the problem. The following antibiotics can be given during a minimum of 5 days: doxycycline, 100 mg by mouth, twice a day; or amoxicillin, 250 mg by mouth, 3 times a day; or metronidazole, 400 mg by mouth, twice a day.

²³ To avoid making the problem worse, whenever something is inserted into the vagina (douche tube, packing), the utmost gentleness must be used.

Managing fistulae

A fistula is an abnormal passage between the vagina and urinary bladder or rectum, caused either by extension of the cancer into these organs or as a complication of radiotherapy. It is a psychologically and physically debilitating condition, because urine or faeces may pass directly to the vagina, causing a foul-smelling and irritating discharge.

The fistula itself cannot be repaired, but the patient can be made more comfortable and clean.

- She can sit in warm water to gently clean herself.
- Soft clean cloths can be placed in her panties to absorb the discharge.
- Cover the bed with a plastic sheet or newspapers, which can be changed and cleaned frequently.
- Protect the skin around the vagina and anus by drying the areas after bathing and covering them with zinc oxide cream or petroleum jelly. These measures can be used in a preventive way, without waiting for irritation to occur.
- Ventilate the room or burn incense or herbs, if this is acceptable.

Managing vaginal bleeding

Vaginal bleeding can be alarming and is not uncommon in women with advanced cervical cancer. It can be triggered by sexual intercourse or strenuous activity, or it may occur spontaneously for no obvious reason.

- If bleeding is slight, recommend bed rest and cleanliness until it stops.
- If bleeding is moderate, it often subsides with simple bed rest. If needed, the vagina can be packed with a clean moistened cloth for a few hours.
- If bleeding is severe, transfer the patient to a hospital or health centre for a possible blood transfusion.

Supplies for home-based management of vaginal problems

The following supplies are needed:

- a constant supply of clean, boiled water;
- soap for washing hands and clothes;
- clean towels;
- latex gloves, if possible (need not be sterile);
- plastic sheeting or newspapers;

- bags for disposal of contaminated materials;
- chlorinated water (one cup of bleach to 6 cups of water) for soaking gloves, wiping down furniture and plastic sheeting, etc.;
- a basin for sitting baths;
- a plastic bottle and tube for douching;
- plenty of clean cloths, or cotton or menstrual pads (if possible). These should be boiled if they are going to be used to pack the vagina;
- sodium bicarbonate (baking soda);
- vinegar;
- zinc oxide cream or petroleum jelly;
- antibiotics and other medicines prescribed by the physician (metronidazole, doxycycline, amoxicillin).

COUNSELLING TIPS

- Visit the patient as often as possible.
- Always listen to the patient's and the family's complaints, and try to relieve symptoms.
- Maintain communication with providers in the health centre or hospital and seek their advice for specific problems.
- Provide comfort and security by explaining the reasons for the symptoms and reassuring the family that you will do all you can to keep the patient comfortable.
- Instruct the patient and family in symptom management.
- Assist them in obtaining needed supplies.
- Most importantly, try to avoid burn-out for yourself by avoiding overwork, maintaining close relationships, and seeking the support of those close to you (without breaching patient confidentiality).

PS 20

Practice Sheet 20: Managing Vaginal Discharge and Fistulae at Home

ANNEX 1: UNIVERSAL PRECAUTIONS FOR INFECTION PREVENTION²⁴

Universal precautions are simple measures that help prevent the spread of infection. All health care providers must use universal precautions to protect patients, themselves and other health care workers from the spread of infectious diseases.

The current epidemic spread of bloodborne viruses, including hepatitis B, C and D, and HIV, underscores the importance of paying scrupulous attention to preventing infection in clinical practice. Many transmissible infections are asymptomatic, and it is not always possible to know who is infected. Therefore, precautions against spreading infection should be used with all patients, whether they appear sick or well, and whether their HIV or other infection status is known or not.

Quality control and supervision are essential to ensure that infections are prevented. A pelvic infection after a clinical procedure is an indicator of poor infection-prevention measures.

Infection prevention: universal precautions

Wear latex gloves whenever:

- you handle items or body surfaces that might be contaminated;
- you perform clinical examinations or procedures (cryotherapy, biopsy, endocervical curettage and LEEP), or give injections;
- you clean the area where the patient has been;
- you handle used instruments.

Remember:

- If gloves get damaged, remove them, wash your hands thoroughly, and then put on new gloves.
- Gloves are not a substitute for handwashing.

Wash your hands with soap and water for at least 30 seconds:

- before and after contact with each client or patient;
- if you touch blood or body fluids;
- immediately after you take off latex gloves.

²⁴ Adapted from: *Universal precautions against infectious diseases*. University of Michigan Health System (www.med.umich.edu/1libr/wha/wha_unipre_crs.htm); and Burns AA et al., *Where women have no doctor*. Berkeley, CA, Hesperian Foundation, 1997.

Handle contaminated disposable items and clinic surfaces as follows:

- Discard disposable items that are soiled with blood or body fluids in a tightly sealed plastic bag.
- Disposable needles need special handling; use your health facility's protocols.
- Wash linen and reusable cloth items. Use detergent, dry them in the sun, and iron them if possible.
- Clean and disinfect surfaces such as examination tables and floors.

Process reusable instruments and gloves after each use, as follows:

- All instruments that have been in contact with the vagina or cervix (e.g. specula, biopsy forceps, gloves, etc.) should be decontaminated, cleaned, and sterilized or high-level disinfected.
- Cryoprobes should be decontaminated, cleaned, and high-level disinfected.
- The examination or procedure table must be decontaminated after each patient. Other instruments (e.g. colposcope, cryogun, torch lights) must be decontaminated at least once a day, and more often if visibly soiled.

Processing instruments²⁵

There are three basic steps for processing instruments used in clinical and surgical procedures, before they can be reused: (1) decontamination, (2) cleaning, and (3) sterilization or high-level disinfection (HLD).

Decontamination

Decontamination is the process by which used instruments and gloves are made safe for handling; this step inactivates hepatitis B and HIV. To decontaminate instruments and gloves immediately after use, immerse them in a large plastic bucket containing 0.5% chlorine solution for 10 minutes (not longer, as the instruments may become corroded); remove and rinse with clean water. The chlorine solution can be prepared by diluting 1 part household bleach in 9 parts clean water. It must be prepared fresh daily and discarded as soon as it appears dirty. For surfaces in the clinic, 60–90% ethanol or isopropanol can be used as an alternative to chlorine solution.

Cleaning

Soon after decontamination, instruments should be cleaned by a person wearing heavy gloves and glasses or goggles. Use a brush to scrub instruments with water and detergent, and rinse thoroughly with boiled water. Special attention must be given to instruments with teeth, joints and screws.

²⁵ Adapted from: Sellors JW, Sankaranarayanan R, *Colposcopy and treatment of cervical intraepithelial neoplasia: a beginners' manual*. Lyon, IARC Press, 2003.

Sterilization

Sterilization destroys all microorganisms and must be used for all instruments that come into contact with sterile parts of the body, e.g. that penetrate the skin or enter the womb.

Sterilization can be achieved by one of the following:

- Expose instruments to superheated steam in an autoclave: 20 minutes for unwrapped instruments and 30 minutes for wrapped instruments. Autoclaving is the preferred method of sterilization.
- Soak instruments in either 2–4% glutaral for 8 to 10 hours, or 8% formaldehyde for 24 hours. Then rinse thoroughly with sterile water.

High-level disinfection

HLD destroys all organisms except bacterial spores, and is used when sterilization equipment is not available or the instrument is too delicate to be sterilized. One of the following processes can be used for HLD:

- Boil instruments for at least 20 minutes in plain tapwater, which is changed at least daily. Make sure that instruments are fully covered by the water, and start timing after the water with the instruments is fully boiling. Do not add anything to the pot once you have started to time.
- Soak instruments in 0.1% chlorine or 2% glutaral solution for 20 minutes, or 6% hydrogen peroxide for 30 minutes. Rinse thoroughly in boiled water, air-dry and store in a sterile cloth. These chemicals may be corrosive and can reduce the useful life of instruments that are repeatedly disinfected with them.

Supplies and equipment

The following supplies and equipment are needed for infection prevention (depending on the processing methods used):

- clean and boiled water;
- detergent;
- household bleach or commercial chlorine powder;
- one or more sterilizing chemicals (2–4% glutaral, 8% formaldehyde);
- one or more HLD chemicals (0.1% chlorine, 2% glutaral, 6% hydrogen peroxide);
- 60–90% ethanol or isopropanol;
- sterile cloths;
- plastic bucket;

(continued next page)

- scrubbing brush;
- large jars for storage of solutions;
- heavy gloves for cleaning;
- sterile or high-level disinfected gloves and long-handled forceps for handling processed instruments;
- autoclave or vessels for boiling and soaking instruments;
- closet with tight closure to prevent entrance of dust, for storage of processed instruments and supplies.

A1

ANNEX 2: THE 2001 BETHESDA SYSTEM ²⁶

SPECIMEN ADEQUACY

- Satisfactory for evaluation (note presence or absence of endocervical transformation zone component).
- Unsatisfactory for evaluation (specify reason).
- Specimen rejected/not processed (specify reason).
- Specimen processed and examined, but unsatisfactory for evaluation of epithelial abnormality because of....(specify reason).

GENERAL CATEGORIZATION (OPTIONAL)

- Negative for intraepithelial lesion or malignancy.
- Epithelial cell abnormality.
- Other.

INTERPRETATION AND RESULT

Negative for intraepithelial lesion or malignancy

Organisms:

- *Trichomonas vaginalis*;
- fungal organisms morphologically consistent with *Candida* species;
- shift in flora suggestive of bacterial vaginosis;
- bacteria morphologically consistent with *Actinomyces* species;
- cellular changes consistent with herpes simplex virus.

Other non-neoplastic findings (optional to report, list not comprehensive):

- reactive cellular changes associated with inflammation (includes typical repair);
- radiation;
- intrauterine contraceptive device;
- glandular cells status post-hysterectomy;
- atrophy.

²⁶ This categorization can be used for reporting results of Pap smears.

Epithelial cell abnormalities

Squamous cells

- Atypical squamous cell (ASC):
 - of undetermined significance (ASC-US);
 - cannot exclude high-grade lesion (ASC-H).
- Low-grade squamous intraepithelial lesion (LSIL).
- High-grade squamous intraepithelial lesion (HSIL).
- Squamous cell carcinoma.

Glandular cells

- Atypical glandular cells (AGC) (specify endocervical, endometrial, or not specified).
- Atypical glandular cells, favour neoplastic (specify endocervical or not specified).
- Endocervical adenocarcinoma in situ (AIS).
- Adenocarcinoma.

Other (list not comprehensive)

- Endometrial cells in women 40 years of age or over.

ANNEX 3: HOW IS A TEST'S PERFORMANCE MEASURED?

A test's performance is measured in terms of its reliability and accuracy in predicting disease. The ability to predict disease depends on two key characteristics: sensitivity²⁷ and specificity.

- *Reliability* is the degree to which repeated measurements yield the same result, and can be reproduced in other settings.
- *Sensitivity* refers to the ability of the test to correctly identify individuals with the condition, in this case precancer or cancer. The higher the sensitivity, the fewer women with precancer or cancer will be wrongly identified as normal (false negative).
- *Specificity* refers to the ability of the test to correctly identify individuals without precancer or cancer. The higher the specificity, the fewer women with a normal cervix will be wrongly identified as having precancer or cancer (false positive).

An ideal screening test would have both high sensitivity and high specificity. Such a test does not currently exist for cervical precancer and cancer. The danger of low sensitivity is that some women with disease will be missed; the danger of low specificity is that some women without disease may be unnecessarily referred for further diagnosis or treatment.

Women might also want to know the likelihood of really having the disease when they have a positive screening test. This is the *positive predictive value* (PPV) of the test. The *negative predictive value* (NPV) is the chance of not having the disease when the test is negative. Unlike sensitivity and specificity, which are in general intrinsic features of the test, the PPV and NPV depend on the prevalence of disease in the population.

Calculation of specificity, sensitivity, PPV and NPV

Result of screening test	True disease state ²⁸		
	Positive	Negative	
Positive	a	b	a+b
Negative	c	d	c+d
	a+c	b+d	a+b+c+d

Sensitivity = $a/a+c$; specificity = $d/b+d$; PPV = $a/a+b$; NPV = $d/c+d$.

²⁷ In this guide, the reported sensitivity and specificity of screening tests for cervical precancer and cancer are calculated using a histological result of CIN2 or higher as the threshold (see Chapter 2).

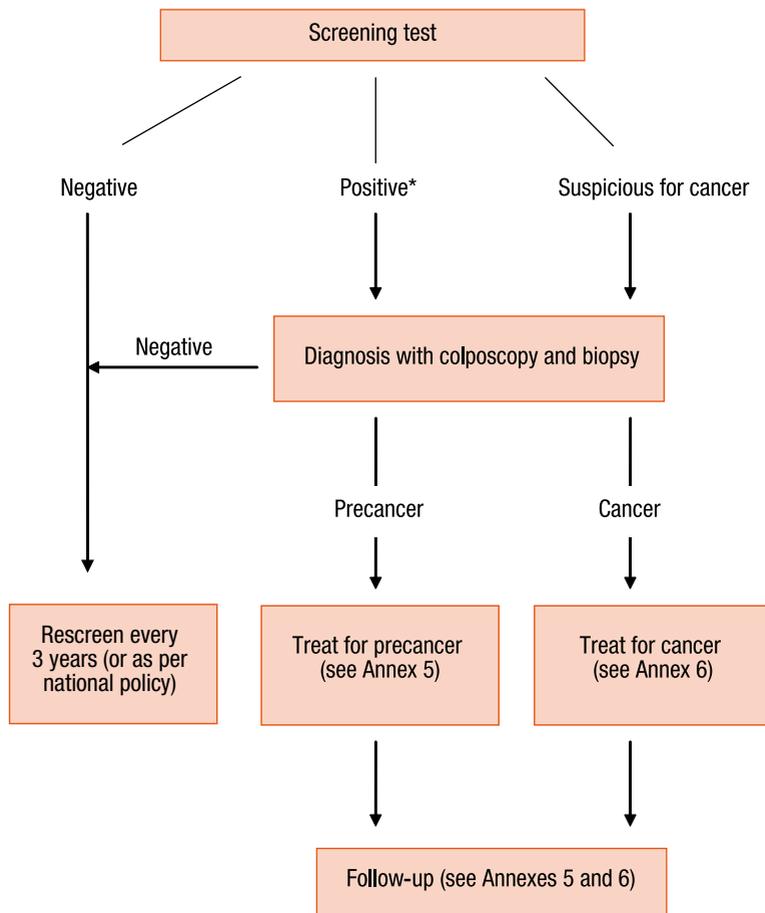
²⁸ The "gold standard" for true disease state in the diagnosis of cervical precancer is the histological result of the biopsy.

ANNEX 4: FLOWCHARTS FOR FOLLOW-UP AND MANAGEMENT OF PATIENTS ACCORDING TO SCREEN RESULTS

A4

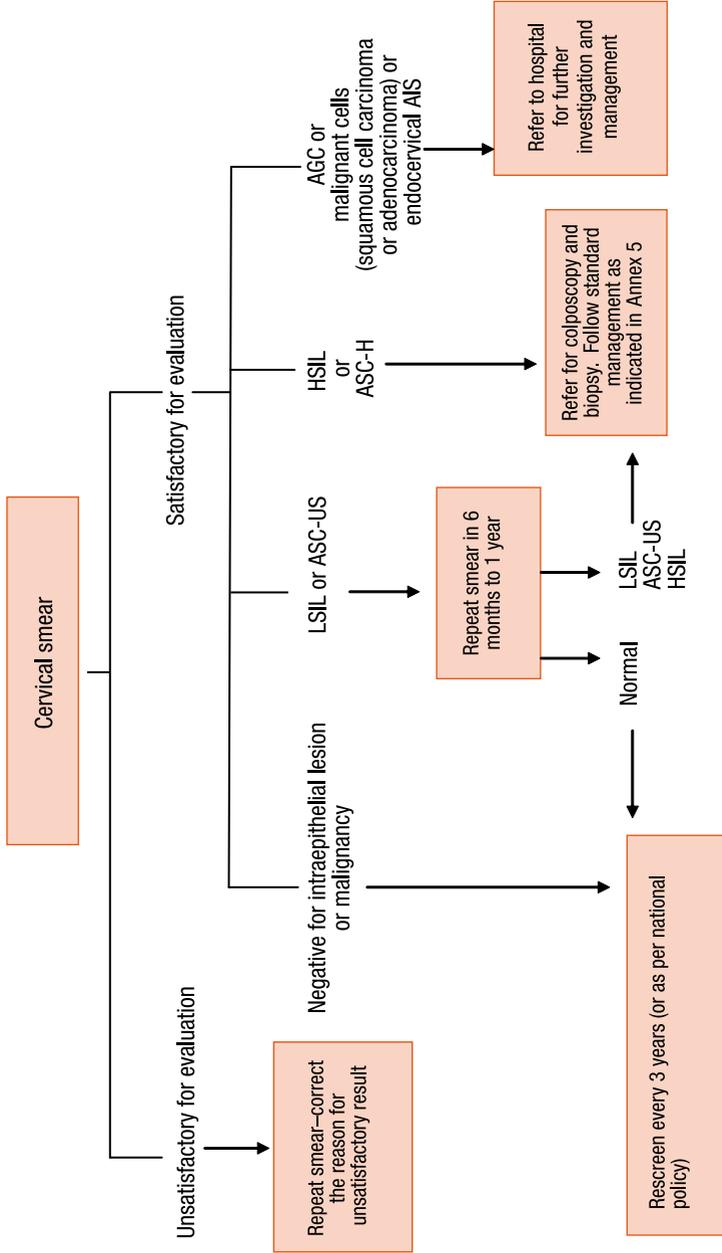
Annex 4: Flowcharts for follow-up and management of patients according to screen results

4a. STANDARD APPROACH



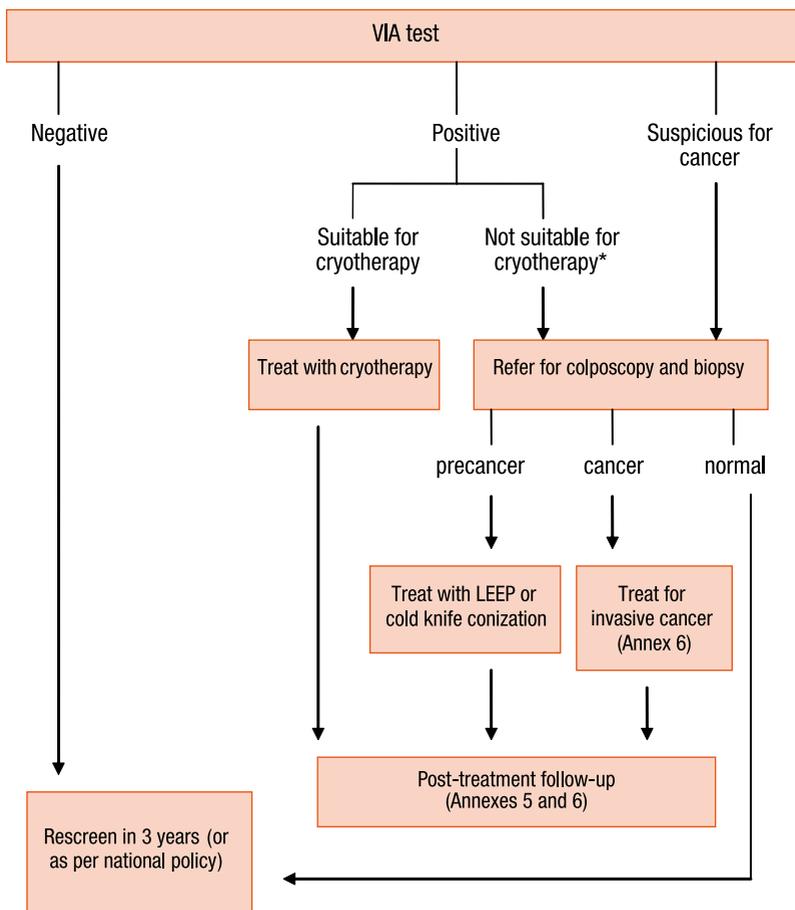
* When the Pap smear reports ASC-US or LSIL, only persistent lesions (reported on two Pap smears within 6 months to 1 year) should be investigated further.

4a (example). STANDARD APPROACH BASED ON PAP SMEAR AS SCREENING TEST



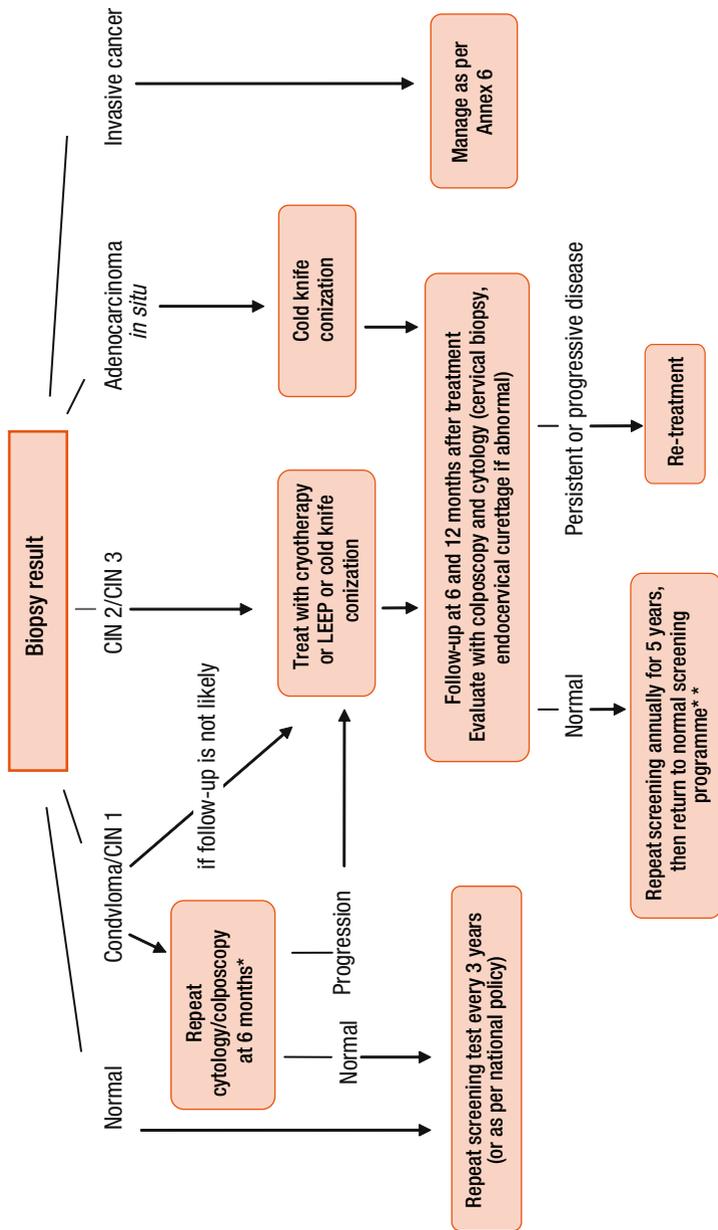
LSIL = low-grade squamous intraepithelial lesion HSIL = high-grade squamous intraepithelial lesion ASC-US = atypical squamous cells of undetermined significance ASC-H = atypical squamous cells – cannot rule out HSIL AGC = atypical glandular cells AIS = adenocarcinoma in situ
 * Adapted from: CHIP. *Implementing cervical screening in South Africa. Volume 1: A guide for programme managers.* Cervical Health Implementation Project, South Africa. University of Cape Town, University of the Witwatersrand, EngenderHealth, 2004.

4b. THE “SCREEN-AND-TREAT” APPROACH, BASED ON VISUAL INSPECTION WITH ACETIC ACID AS SCREENING TEST



*Not suitable for cryotherapy: lesion >75% of cervical surface, extends onto vaginal wall or more than 2 mm beyond cryoprobe, or into the cervical canal beyond the probe tip. Pregnant women should also be referred.

ANNEX 5: STANDARD MANAGEMENT OF CERVICAL PRECANCER

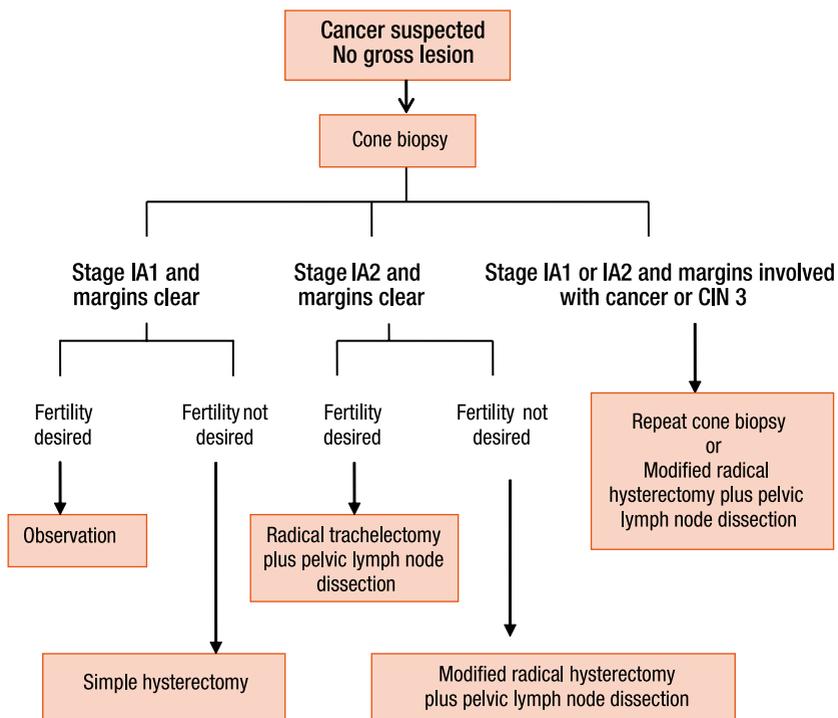


* If the lesion persists, the colposcopy should be repeated every 6 months until regression or progression occurs

** In case of CIN1 or CIN2, return to normal screening programme after 1 year

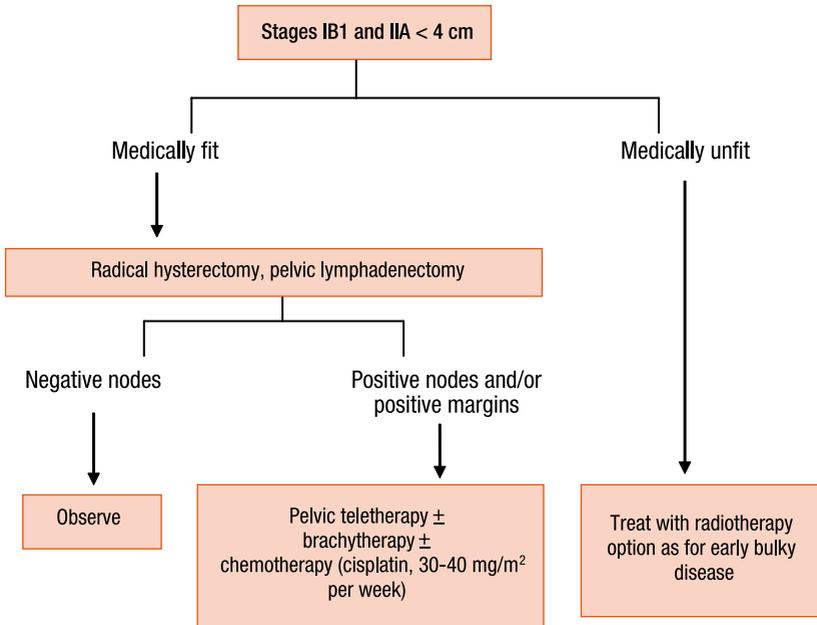
ANNEX 6: CERVICAL CANCER TREATMENT BY STAGE

6a. TREATMENT OF MICROINVASIVE CARCINOMA: STAGE IA1 AND IA2



6b. TREATMENT OF EARLY INVASIVE CANCER: STAGE IB1 AND IIA < 4 CM

When the tumour is more extensive but predominantly situated in the cervix, possibly with some vaginal involvement, surgical removal is preferred, except in the unfit patient.

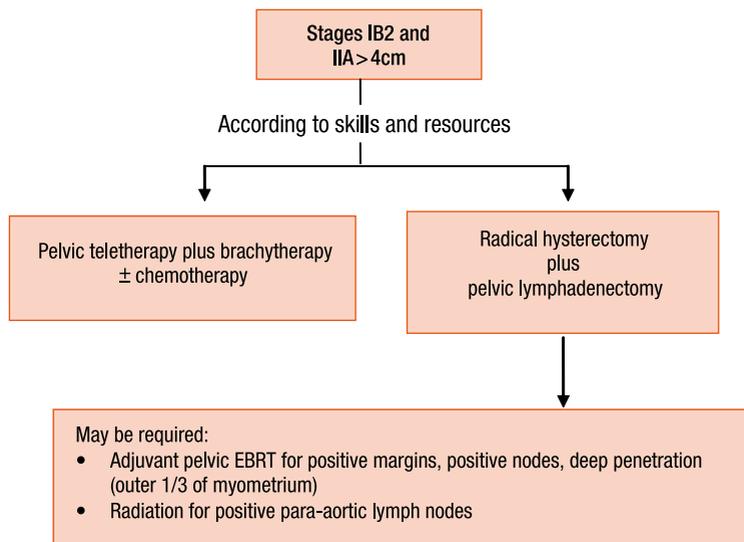


A6

Annex 6: Cervical cancer treatment by stage

6c. TREATMENT OF BULKY DISEASE: STAGE IB2-IIIIB

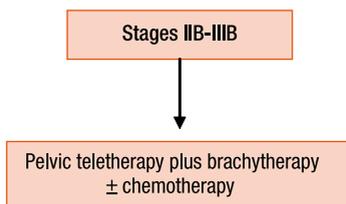
Treatment of early bulky disease: Stage IB2 and IIA > 4cm



EBRT: external beam radiotherapy

Treatment of extensive disease: Stages IIB–IIIIB

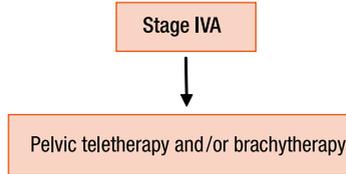
These patients are managed by radical (curative intent) radiotherapy, comprising teletherapy and brachytherapy. The role of chemotherapy has not yet been proven in developing country settings.



6d. TREATMENT OF STAGE IV

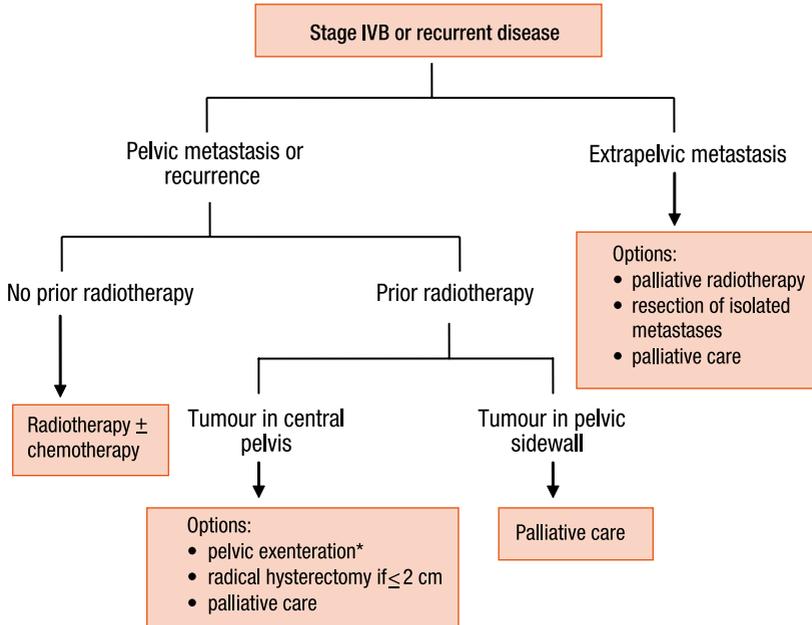
Treatment of Stage IVA

The radiotherapy to be administered depends on the condition of the patient



Treatment of Stage IVB and recurrent disease

Stage IVB (5% of cases) indicates the presence of distant haematogenous metastases and is incurable by any currently known means.



*Pelvic exenteration is infrequently used as it has major sequelae of urinary and colonic diversion, both of which are difficult to care for in developing countries, and are unacceptable to many patients when it is not possible to offer a cure.

6e. CERVICAL CANCER MANAGEMENT DURING PREGNANCY

Gestational age	Stages IA1 & IA2	Stages IB & IIA	Stages IIB, III
< 12 weeks	Immediate hysterectomy as in non-pregnant woman	Either: Radical hysterectomy with fetus in situ or Pelvic radiotherapy at 20Gy (2 weeks), with spontaneous abortion or evacuation of fetus, followed by brachytherapy	Pelvic radiotherapy with spontaneous abortion or evacuation of fetus, followed by brachytherapy
12–24 weeks	Immediate hysterectomy as in non-pregnant woman	Either: Radical hysterectomy with fetus in situ or Pelvic radiotherapy with hysterotomy at 2 weeks, followed by brachytherapy	Pelvic radiotherapy with hysterotomy at 2 weeks, followed by brachytherapy

continued next page

A6

Annex 6: Cervical cancer treatment by stage

Gestational age	Stages IA1 & IA2	Stages IB & IIA	Stages IIB, III
24–32 weeks	Delay management until 32 weeks; at 32 weeks: amniocentesis and steroids for lung maturity if needed; then as > 32 weeks	Delay management until 32 weeks; then amniocentesis and steroids for lung maturity; then as >32 weeks	Delay management until 32 weeks; then amniocentesis and steroids for lung maturity; then as >32 weeks
>32 weeks	Classical caesarean section plus hysterectomy	Classical caesarean section plus radical hysterectomy, or pelvic teletherapy plus brachytherapy after involution of uterus	Classical caesarean section Pelvic teletherapy plus brachytherapy after involution of uterus

ANNEX 7: SAMPLE DOCUMENTS ²⁹

7a. SAMPLE LETTER TO PATIENT WITH AN ABNORMAL PAP SMEAR WHO DID NOT RETURN FOR RESULTS AT EXPECTED TIME

A7

Annex 7: Sample documents

Date _____

Dear _____ (patient name),

We are writing to remind you to come in to _____ [*health centre/hospital*] to discuss the results of the screening Pap test you had on _____ [*date of Pap smear*]. We were hoping you would come in last week but since you have not returned, we send you this reminder.

Your Pap test showed some abnormal changes in your cervix (entrance of the womb) requiring another visit on your part for _____ [*further diagnosis/treatment*]. (*If Pap abnormality is not invasive cancer, you may add: The changes are not indicative of cancer but, if left untreated, they may develop into cancer in the future.*)

We request that you come as soon as possible in the next two weeks so that we can give you all the information, answer any questions and plan further consultations with you.

If you have any questions, please contact us at _____

Yours sincerely,

_____ [*provider*]

²⁹ Adapted from: CHIP. *Implementing cervical screening in South Africa. Volume 1: A guide for programme managers*. Cervical Health Implementation Project, South Africa. University of Cape Town, University of the Witwatersrand, Engenderhealth, 2004.

7b. SAMPLE CARD THAT CAN BE USED AS PART OF A SYSTEM TO TRACK CLIENTS WHO NEED A REPEAT PAP SMEAR

A7

Annex 7: Sample documents

Cervical screening
Tracking card: patient recall for Pap

Name: _____

Patient number: _____ Date of birth: _____

Home address:

Work address:

Telephone number:

Date Pap smear done:

Pap smear result:

Date when client was asked to return:

NOTES:

Follow-up:

Date of repeat Pap smear:

Action taken if she did not return: Note sent (date) _____

Other action: _____

NOTES:

7c. SAMPLE CARD THAT CAN BE USED AS PART OF A SYSTEM TO TRACK PATIENTS REFERRED FOR COLPOSCOPY

A7

Annex 7: Sample documents

Cervical screening

Tracking card: patient referral

Name: _____

Patient number: _____ Date of birth: _____

Home address:

Work address:

Telephone number:

Date Pap smear done:

Pap smear result:

Appointment for referral at _____ (name of referral site)

Date of referral appointment _____

Tracking record:

Date patient informed of referral appointment:

Outcome of referral:

7d. SAMPLE LETTER INFORMING REFERRING CLINIC OF THE OUTCOME OF A PATIENT'S COLPOSCOPY

A7

Annex 7: Sample documents

To: _____ [name of referring clinic]

Name of patient: _____ Patient number: _____

From: _____ [name of colposcopy clinic]

Patient was seen in our facility on: _____ [date]

Colposcopy and biopsy were performed on: _____ [date]

Final histological diagnosis:

Management provided:

Recommended follow-up:

Thank you for your referral. Please contact us should you need further information.

Yours sincerely,

Name: _____ Signature: _____ Date: _____

ANNEX 8: TREATMENT OF CERVICAL INFECTIONS AND PELVIC INFLAMMATORY DISEASE (PID)³⁰

8a. TREATMENT OF CERVICAL INFECTIONS

Therapy for uncomplicated gonorrhoea PLUS therapy for chlamydia			
Coverage	First choice Choose one from each box below (= 2 drugs)	Effective substitutes	If woman is pregnant, breastfeeding or under 16 years old Choose one from each box below (= 2 drugs)
Gonorrhoea	cefixime 400 mg orally as a single dose, or ceftriaxone 125 mg by intramuscular injection	ciprofloxacin ^{a,b} 500 mg orally as a single dose, or spectinomycin 2 g by intramuscular injection	cefixime 400 mg orally as a single dose, or ceftriaxone 125 mg by intramuscular injection
Chlamydia	azithromycin 1 g orally as a single dose, or doxycycline ^a 100 mg orally twice a day for 7 days	ofloxacin ^{a,b,c} 300 mg orally twice a day for 7 days, or tetracycline ^a 500 mg orally 4 times a day for 7 days, or erythromycin 500 mg orally 4 times a day for 7 days	erythromycin ^d 500 mg orally 4 times a day for 7 days, or azithromycin 1 g orally as a single dose, or amoxicillin 500 mg orally 3 times a day for 7 days

- Doxycycline, tetracycline, ciprofloxacin, norfloxacin and ofloxacin should be avoided in pregnancy and when breastfeeding.
- The use of quinolones should take into consideration the patterns of *Neisseria gonorrhoeae* resistance, such as in the WHO South-East Asia and Western Pacific Regions.
- Ofloxacin, when used as indicated for chlamydial infection, also provides coverage for gonorrhoea.
- Erythromycin estolate is contraindicated in pregnancy because of drug-related hepatotoxicity; only erythromycin base or erythromycin ethylsuccinate should be used.

In case of a cervical infection, the woman and her partner should be treated and counselled on condom use.

³⁰ From: *Sexually transmitted and other reproductive tract infections. A guide for essential practice*. Geneva, WHO, 2005.

8b. OUTPATIENT TREATMENT FOR PID

A8

Annex 8: Treatment of cervical infections and PID

Single-dose therapy for gonorrhoea PLUS multidose therapy for chlamydia PLUS multi-dose therapy for anaerobic infections .	
Coverage	Choose one from each box (= 3 drugs)
Gonorrhoea	ceftriaxone 250 mg by intramuscular injection, or cefixime 400 mg orally as a single dose, or ciprofloxacin ^a 500 mg orally as a single dose, or spectinomycin 2 g by intramuscular injection
Chlamydia	doxycycline ^b 100 mg orally twice a day for 14 days, or tetracycline ^b 500 mg orally 4 times a day for 14 days
Anaerobes	metronidazole ^b 400–500 mg orally twice a day for 14 days

- The use of quinolones should take into consideration the patterns of *Neisseria gonorrhoeae* resistance, such as in the WHO South-East Asia and Western Pacific Regions.
- These drugs are contraindicated for pregnant or breastfeeding women. PID is uncommon in pregnancy.
- Patients taking metronidazole should be cautioned to avoid alcohol. Metronidazole should also be avoided during the first trimester of pregnancy.

In case of a PID, the partner should be treated for gonorrhoea and chlamydia, and the couple should receive counselling on condom use.

Note: Hospitalization of patients with acute pelvic inflammatory disease should be seriously considered when:

- a surgical emergency, such as appendicitis or ectopic pregnancy, cannot be excluded;
- a pelvic abscess is suspected;
- severe illness precludes management on an outpatient basis;
- the patient is pregnant;
- the patient is an adolescent;
- the patient is unable to follow or tolerate an outpatient regimen;
- the patient has failed to respond to outpatient therapy.

ANNEX 9: HOW TO MAKE MONSEL'S PASTE

What is Monsel's paste?

Monsel's paste is a thick, sticky, quickly acting compound that is used to cover bleeding areas on the cervix to stem the bleeding. It can be useful after cryotherapy, punch biopsy and LEEP. As it is a caustic product that can damage tissues if left too long, no vaginal packing should be used after application.

Ingredients	Quantity
1. Ferric sulfate base	15 g
2. Ferrous sulfate powder	a few grains
3. Sterile water for mixing	10 ml
4. Glycerol starch (see preparation on next page)	12 g

Preparation **Take care, as the reaction is exothermic (emits heat).**

1. Add a few grains of ferrous sulfate powder to 10 ml of sterile water in a glass beaker. Shake.
2. Dissolve the ferric sulfate base in the solution by stirring with a glass stick. The solution should become crystal clear.
3. Weigh the glycerol starch (see preparation instructions below) in a glass mortar. Mix well.
4. Slowly add the ferric sulfate solution to the glycerol starch, constantly mixing to get a homogeneous mixture.
5. Place in a 25-ml brown glass bottle.

Note: Most clinics prefer to leave the stopper of the bottle loose, to allow the mixture to evaporate until it has a sticky paste-like consistency and looks like mustard. This may take 2–3 weeks, depending on the environment. The top of the bottle can then be secured for storage. If necessary, sterile water can be added to the paste to thin it.

Label: Monsel's paste

Store in a cool place

For external use only

Use by: [day/month/year] (one year from date of preparation)

Preparation of glycerol starch

Ingredients	Quantity
1. Starch	30 g
2. Sterile water for mixing	30 ml
3. Glycerine	390 g

Preparation

1. In a china crucible, dissolve the starch in the sterile water.
2. Add the glycerine. Shake well.
3. Heat the crucible and its contents over a Bunsen burner. Mix constantly with a spatula until the mass takes on a thick, swelling consistency.

Note: Do not overheat, otherwise the mixture will turn yellow.

Label: Glycerol starch

Store in a cool place

For external use only

Use by: [day/month/year] (one year from date of preparation)

GLOSSARY

Note: the definitions given in this glossary refer to the way words are used in this guide. Dictionary definitions may be more general and broader.

acetowhite: area on cervical epithelium that turns white when acetic acid is applied

adenocarcinoma: cancer with gland-like characteristics; for example, cancer arising from the columnar epithelium of the cervical canal

adnexae: tissues and organs lateral to the uterus; include fallopian tubes, ovaries and ligaments

atypical cells: cells seen on a Pap smear that suggest an abnormality but are not conclusive

basement membrane: a thin layer of tissue that lies under the epithelium

carcinoma in situ (CIS): preinvasive stage of cancer involving the entire thickness of the covering layer, or epithelium, of an organ (e.g. cervix) but not penetrating the basement membrane

cervical intraepithelial neoplasia (CIN): a precancerous condition involving the covering layer (epithelium) of the cervix. It can be diagnosed using a microscope. The condition is graded as CIN 1, 2 or 3, according to the thickness of the abnormal epithelium (1/3, 2/3 or the entire thickness)

cofactor: a factor that contributes to or magnifies the effect of an agent that causes a change; usually not active on its own

colostomy: surgical construction of an artificial excretory opening from the colon

condyloma: a wart-like structure caused by low-risk HPV types; also seen in chronic syphilis

cost-effective: describes an activity or procedure that produces an adequate beneficial effect on a disease or condition in relation to its cost (in money, equipment, or time)

coverage: the proportion of all targeted persons who attend a given service in a specified time

cure rate: the percentage of a group of persons with a disease or condition who are cured by a specific treatment

cytology: the study of the structure of cells under the microscope. Abnormal findings are usually confirmed by biopsy

cytopathologist/cytotechnician/cytologist: persons trained in the microscopic examination of smears for the presence or absence of abnormal cells

effectiveness: how well a treatment works to reduce a harmful condition in a target population

efficacy: the power of a given treatment to produce a desired effect

efficiency: the effects or results achieved in relation to the effort expended, in terms of money, resources and time

epithelium (plural: epithelia): a covering or lining, comprising one or more layers of cells; usually protective of the organ it covers

fistula: an abnormal passage between one hollow organ and another. With cervical cancer, fistulae may form between the vagina and the rectum, either as a result of extension of the cancer or as a late complication of radiation therapy

fulgurate: to use heat or electric current to destroy tissue. Fulguration is used in LEEP to control bleeding

fungating: describes an irregular, outward, tumour growth pattern

gold standard: a test considered to have the highest sensitivity and specificity; used as a measure to compare all other similar tests

high-grade lesion: a term used in the Bethesda classification to denote cervical abnormalities that have a high likelihood of progressing to cancer if not treated. Includes CIN 2 and CIN 3

high-risk HPV types: types of the human papillomavirus known to cause cervical cancer

histopathology: microscopic study of thin slices of stained tissue to determine the presence or absence of disease

hysterotomy: a surgical procedure to make an opening in the uterus

immunosuppression: reduced capacity of the body to resist attack by germs and other foreign substances, as seen in HIV-infected people

incidence rate: the number of new cases of a disease in a defined population in a specified time, e.g. if there are 500 new cervical cancer cases every year in a country with 5 million women, the crude (non-age-standardized) cervical cancer incidence rate is 100 per million per year, or 10 per 100 000 per year

koilocytosis: a condition of certain cells characterized by the presence of vacuoles around the cell nucleus

laparotomy: a surgical incision in the abdomen

menarche: the age at which a young woman has her first menstruation

metaplasia: a transformation of tissue from one type to another, e.g. from squamous to columnar epithelium

metastasis (plural: metastases): the appearance of a tumour, very similar to the original or parent tumour, in a distant organ

microinvasive cervical cancer: cancer strictly confined to the cervix, not more than 5 mm deep and 7 mm wide; it can only be diagnosed by microscopy

morbidity rate: the proportion of a population who suffer from a particular disease in a specified time, often expressed as number of cases per 100 000 population per year

mortality rate: the proportion of a population who die from a particular disease in a specified time, often expressed as number of deaths per 100 000 population per year

negative predictive value (of a test): the likelihood of not having the disease when the test is negative

neoplasia: process of new growth or tumour formation, sometimes malignant

opioid: a type of drug used to relieve strong pain, e.g. morphine

pathology: the study of disease and its effect on body tissue

peritoneum: a continuous thin sheet of tissue covering the abdominal walls and organs

persistent: describes lesions or diseases that do not disappear over a certain time

pilot study: a demonstration project in a limited population; it usually aims to provide information on performance but not necessarily on outcome (which needs to be tested in a large population)

positive predictive value (of a test): the likelihood of having a disease when a test is positive

preclinical stage: the early stage of an illness, when symptoms or signs have not yet appeared

prevalence rate: the proportion of persons in a defined population with a condition or disease at a specific point in time

primary prevention: actions to avoid exposure to the principal causes of a disease; in the case of cervical cancer, prevention of HPV infection

primary treatment: treatment that is usually tried first to attempt to cure a disease or condition

prognosis: the likely outcome of a disease (improvement, deterioration or death)

radical radiotherapy: radiotherapy with a curative intent

recurrence (of lesions, disease): the reappearance of a problem that had previously disappeared with treatment

regression: the disappearance or lessening of an abnormality

reliability or reproducibility: the extent to which a treatment or test gives the same results when repeated many times

screen-negative: result of a screening procedure that shows no abnormality

screen-positive: result of a screening procedure that shows an abnormality

sensitivity: the proportion of people who have a condition who are identified correctly by a test (true positives).

specificity: the proportion of people who do not have a condition who are correctly identified by a test (true negatives)

squamous intraepithelial lesion (SIL): precancer or abnormality of the squamous cells of the lining of the cervix. The Bethesda classification distinguishes between low-grade SIL (LSIL) and high-grade SIL (HSIL). This classification should be used only for reporting results of cytological tests

stenosis: an abnormal narrowing of a canal, which can cause health problems

survival rate: the proportion of all the people with a condition who are still alive after a certain time

syndromic approach: treatment of infection based on knowledge of the principal causes of the presenting symptoms; for example, cervical infection can be treated with antibiotics against both gonorrhoea and chlamydia, without first performing other tests to diagnose which of the two pathogens is present

triage: selection of persons, out of all those affected, for further testing or treatment

ulcerating: eating into tissue and causing a shallow crater; describes some cancers

For more information, please contact:

Department of Reproductive Health and Research

World Health Organization, Avenue Appia 20

CH-1211 Geneva 27, Switzerland

Fax: +41 22 791 4189 / 4171

E-mail: reproductivehealth@who.int

Internet address: www.who.int/reproductive-health

or

Department of Chronic Diseases and Health Promotion

World Health Organization, Avenue Appia 20

CH-1211 Geneva 27, Switzerland

Fax: +41 22 791 4769

E-mail: chronicdiseases@who.int

Internet address: www.who.int/chp



**World Health
Organization**

ISBN 92 4 154700 6
ISBN 978 92 4 154700 0

