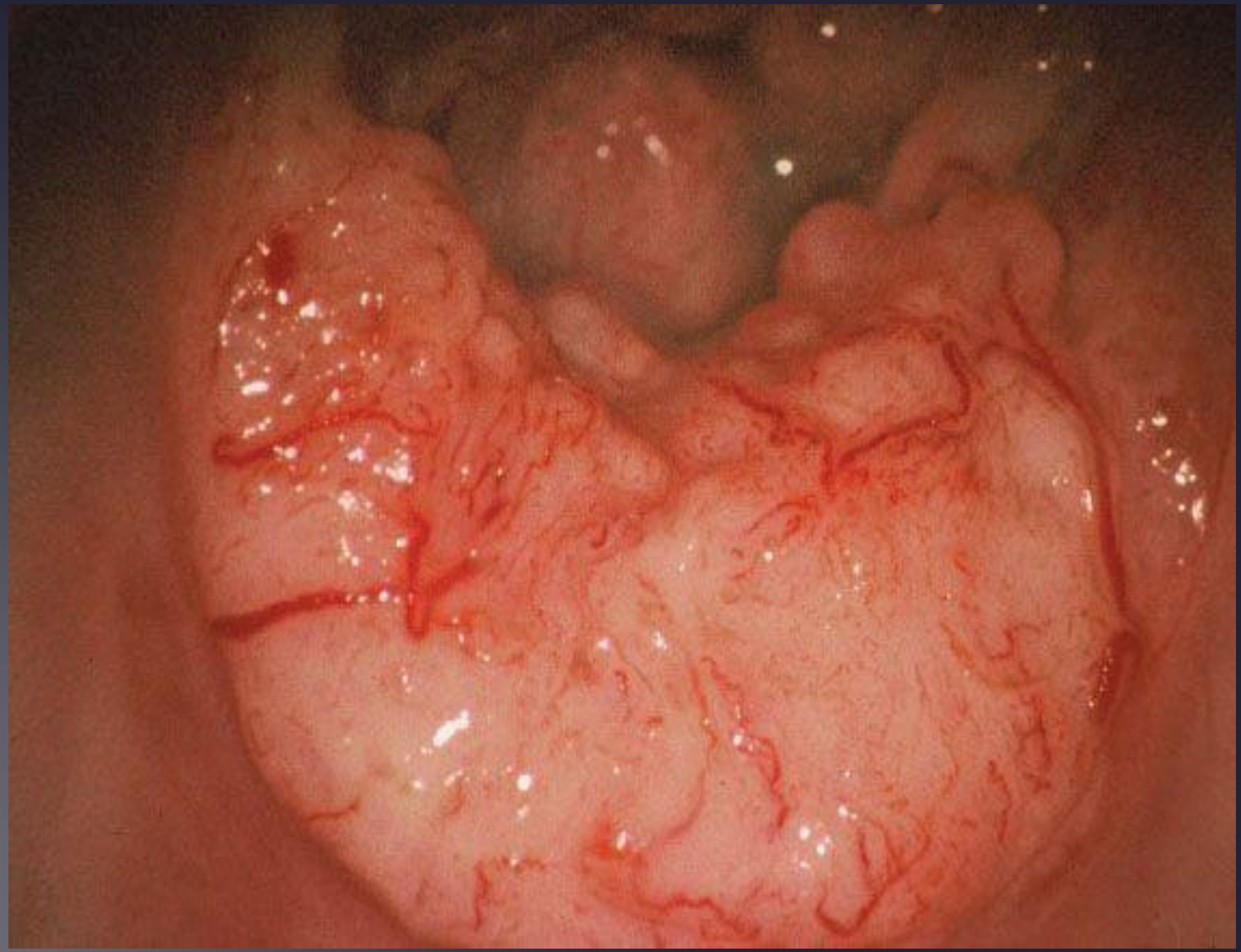
CERVICAL CARCINOMA



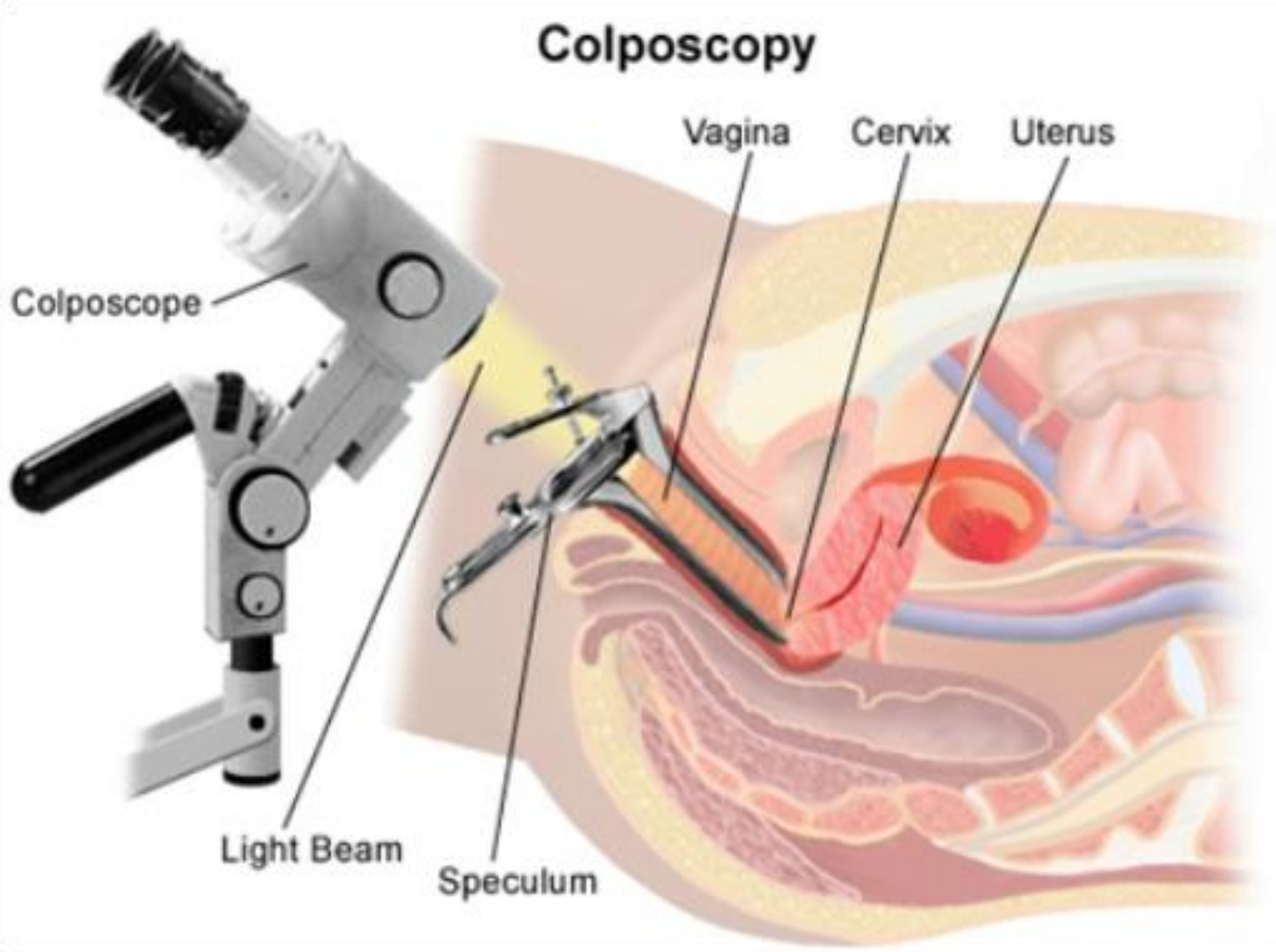
CERVICAL CANCER

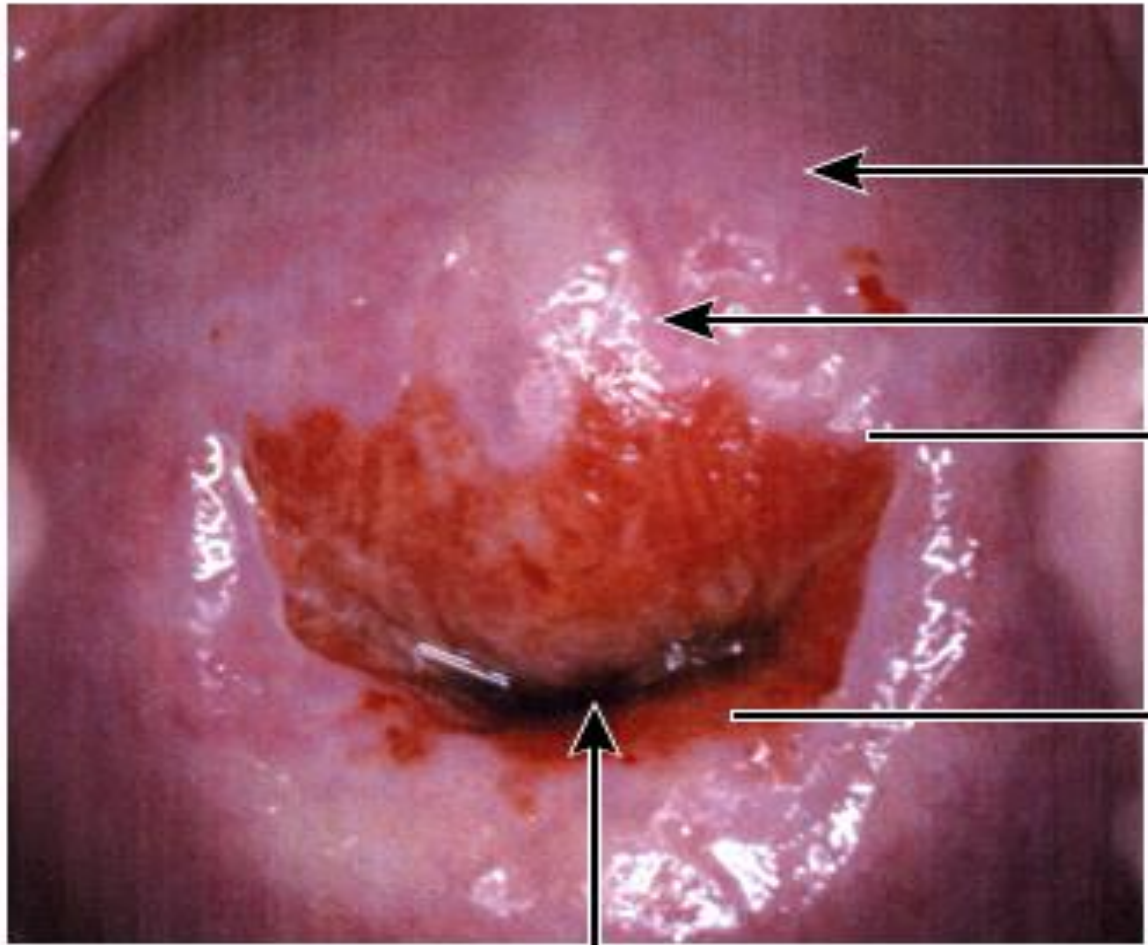
- Between 1950 and 1992, the death rate from cervical cancer declined by 74%. The main reason is the increasing use of cervical cytology cancer screening. The death rate continues to decline by **approximately 4% per year**
- The average age at diagnosis is approximately 50 years
- In studies following patients with advanced CIN, this precursor lesion precedes invasive carcinoma by approximately 10 years. In some patients, however, this time of progression may be considerably less.

CERVICAL CANCER

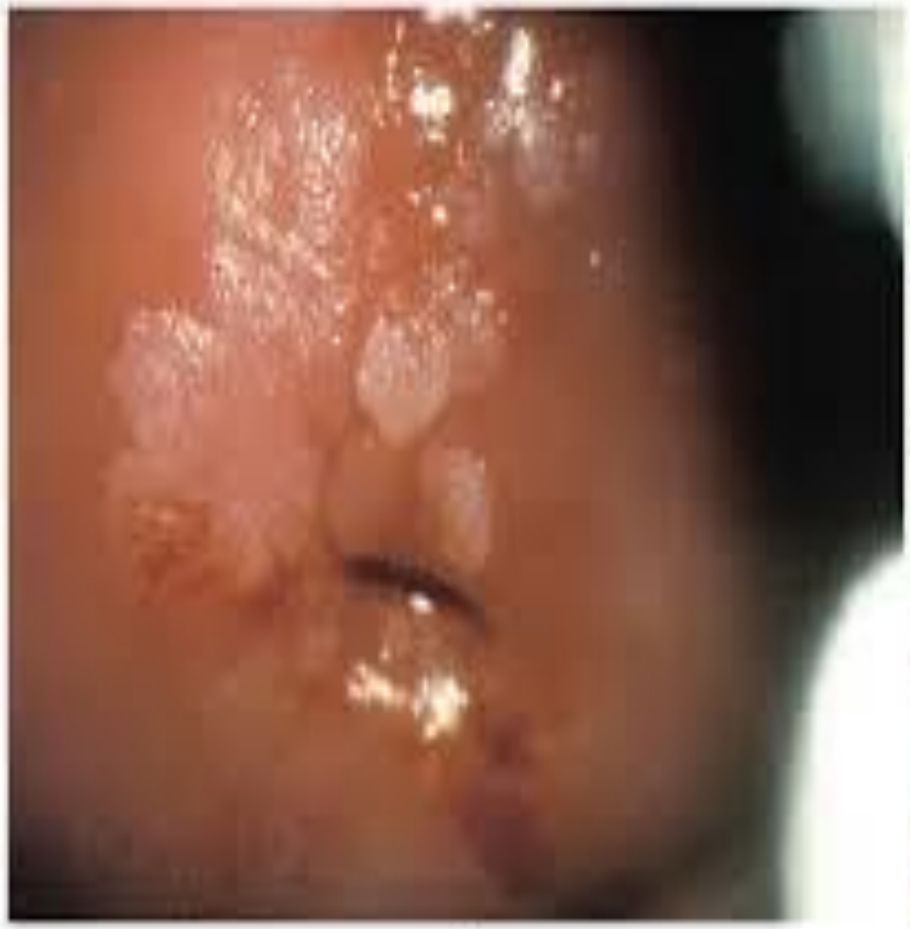
- The etiology of cervical cancer is HPV in more than 90% of the cases.
- The two major histologic types of invasive cervical carcinomas are SCCs and adenocarcinomas.
- SCCs comprise 80% of cases, and adenocarcinoma or adenosquamous carcinoma comprise approximately 15%

colposcopy


Colposcopy
Vagina
Cervix
Uterus
Colposcope
Light Beam
Speculum


Lighter pink area made of squamous cells
The transformation zone
Darker red area made of glandular cells
Cervical OS (opening)-some women require a biopsy of the tissue inside this opening (called endocervical curettage)

LSIL(cin1)

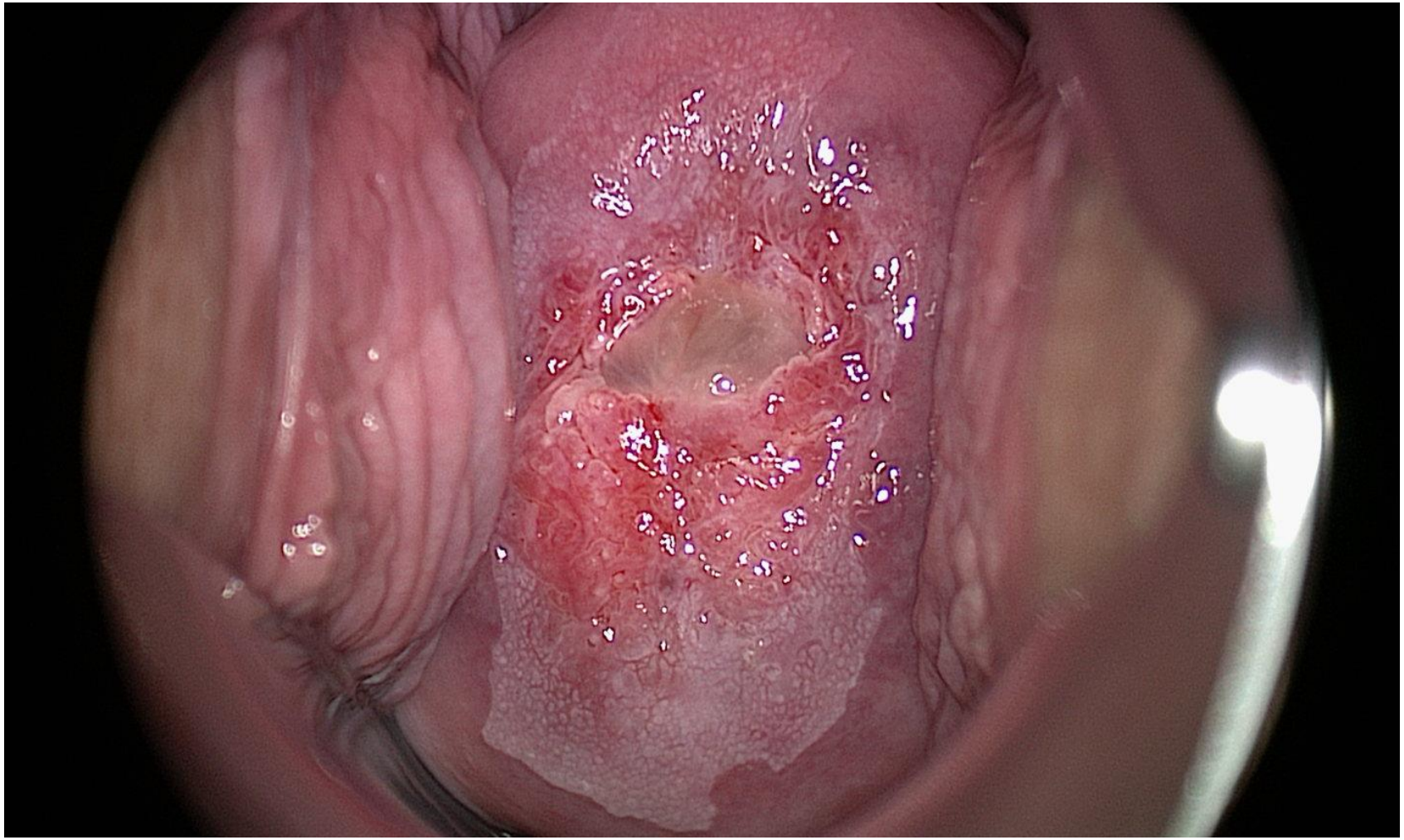


A

B

HSIL(cin2-3)

Cervical cancer



Clinical Evaluation

- signs and symptoms are variable and nonspecific:

❑ **watery vaginal discharge**

❑ **intermittent spotting**

❑ **postcoital bleeding**.

- In cases of suspected microinvasion and early-stage cervical carcinoma, conization of the cervix is indicated to evaluate the possibility of invasion or to define the depth and extent of microinvasion.

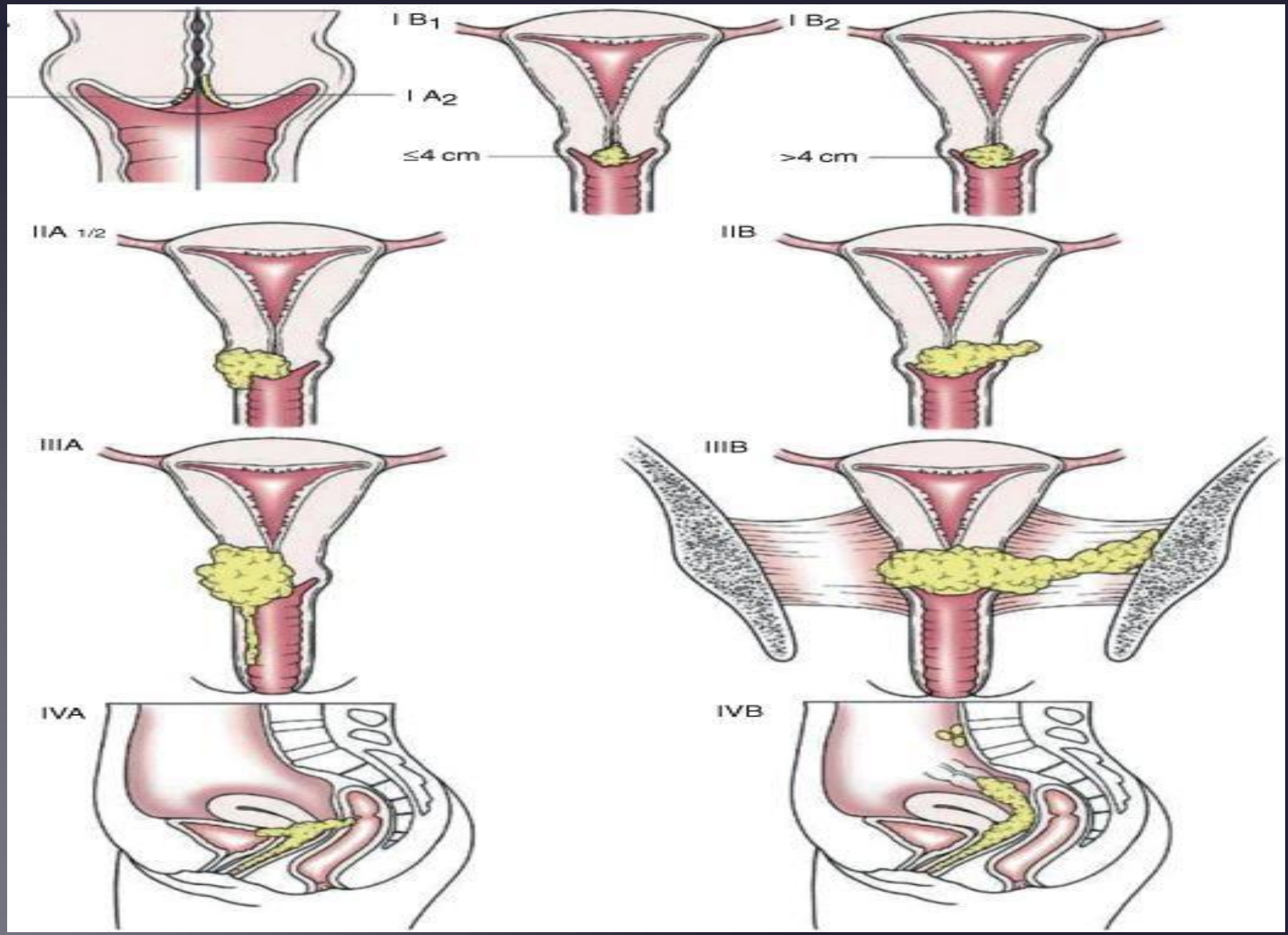
•cytologic screening, colposcopically directed biopsy, or biopsy of a gross or palpable lesion

- **CKC provides the most accurate evaluation of the margins.**

CERVICAL CARCINOMA

TABLE 47.2 INTERNATIONAL FEDERATION OF GYNECOLOGY AND OBSTETRICS STAGING OF CERVICAL CANCER

Stage	Description
Stage I: The carcinoma is strictly confined to the cervix (extension to the corpus would be disregarded)	
Ia	Invasive carcinoma which can be diagnosed only by microscopy, with deepest invasion ≤5 mm and largest extension ≥7 mm
Ia1	Measured stromal invasion of ≤3.0 mm in depth and extension of ≤7.0 mm
Ia2	Measured stromal invasion of >3.0 mm and not >5.0 mm with an extension of not >7.0 mm
IIa2	Clinically visible lesion >4 cm in greatest dimension
IIb	With obvious parametrial invasion
Stage III: The tumor extends to the pelvic wall and/or involves lower third of the vagina and/or causes hydronephrosis or nonfunctioning kidney[b]	
IIIa	Tumor involves lower third of the vagina, with no extension to the pelvic wall
IIIb	Extension to the pelvic wall and/or hydronephrosis or nonfunctioning kidney
Stage IV: The carcinoma has extended beyond the true pelvis or has involved	


I A2
I B1
≤4 cm
I B2
>4 cm
IIA 1/2
IIB
IIIA
IIIB
IVA
IVB

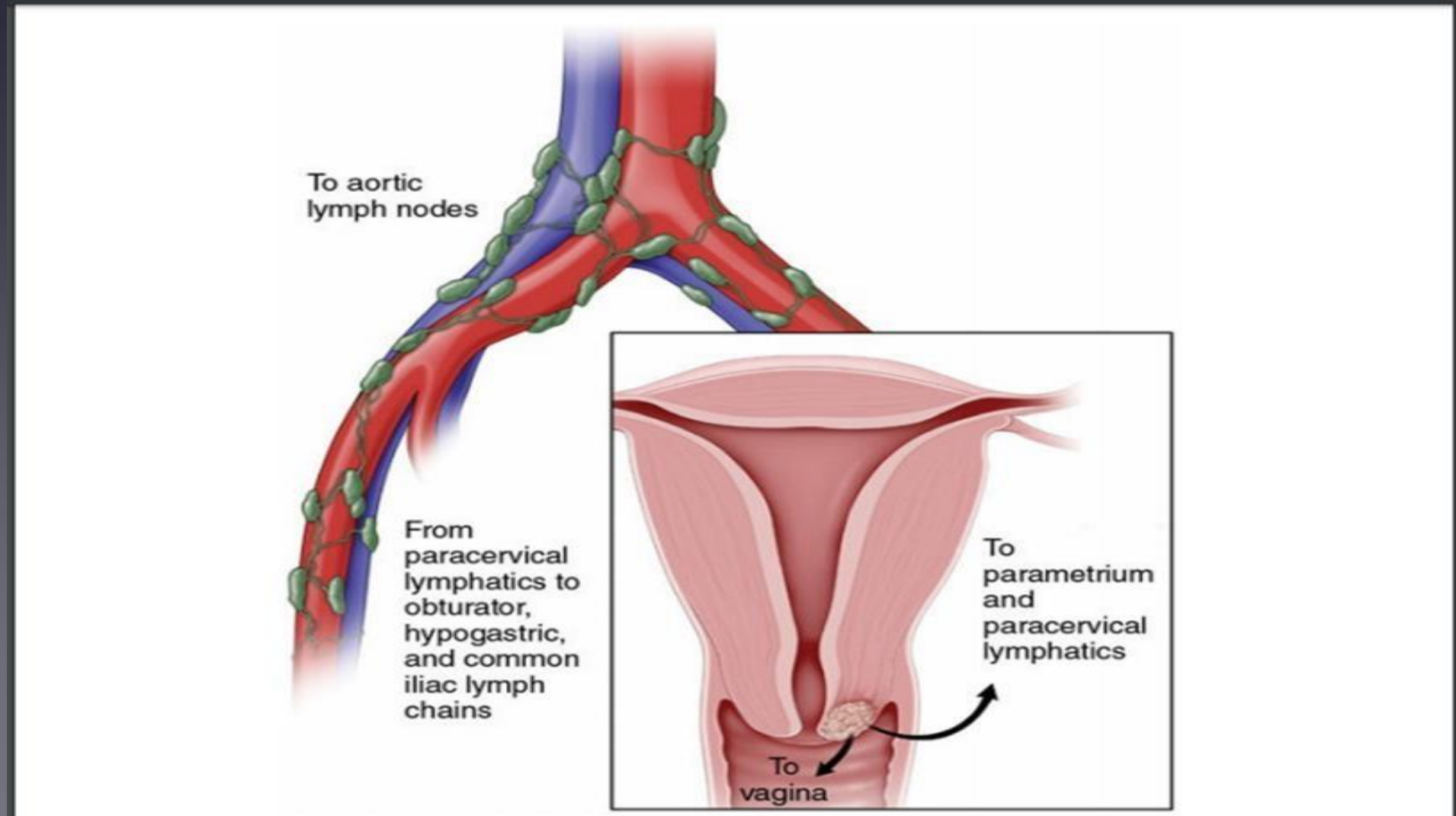


FIGURE 47.9. Spread patterns of cervical carcinoma.

cervical carcinoma spreads by direct invasion and by lymphatic metastasis

Careful clinical examination should be performed on all patients. Examinations should be conducted by experienced examiners and may be performed under anesthesia

Various optional examinations: ultrasonography , computed tomography, magnetic resonance imaging, lymphangiography, laparoscopy, and fine-needle aspiration, are valuable for treatment planning and to help define the extent of tumor growth,especially in patients with locally advanced disease

MANAGEMENT

- **Surgery or radiation** therapy may be options depending on the stage and size of the lesion:
- Patients with scc and those with adenocarcinomas should be managed similarly, **except** for those **with microinvasive** disease. Criteria for **microinvasive adenocarcinomas** have not been established.
- For **stage Ia1, microinvasive** scc :

conization or simple extrafascial hysterectomy may be considered.

- **Stage Ia2, invasive** scc: **radical hysterectomy with lymph node dissection or radiation therapy**, depending on clinical circumstances.

MANAGEMENT

- **Stage Ib1:** should be distinguished from stage Ib2 carcinoma of the cervix, because the distinction predicts nodal involvement and overall survival and may, therefore, affect treatment and outcome.
- **For bulky stage Ib and selected IIa: radical hysterectomy and lymph node dissection or radiation therapy with cisplatin-based chemotherapy** should be considered.
- Adjuvant radiation therapy may be required in those treated surgically, based on pathologic risk factors, especially in those with stage Ib2 carcinoma. •
- **Stage IIb and greater: external beam and brachytherapy radiation and concurrent cisplatin-based chemotherapy**.

RADIOTHERAPY

- Brachytherapy delivers radiation close to the affected organ or structure.
- Both high- and low-dose brachytherapy are used to treat cervical cancer.
- The brachytherapy radiation is delivered using special apparatuses known as tandem and ovoid devices placed through the cervix into the uterus and at the apices of the vagina.
- The external beam radiation is applied primarily along the paths of lymphatic extension of cervical carcinoma in the pelvis.

RADIOTHERAPY

- the bladder and distal colon, tolerate radiation relatively well.
- Radiation therapy doses are calculated by individual patient needs to maximize radiation to the tumor sites and minimizing the amount of radiation to adjacent uninvolved tissues.
- **Complications of radiation therapy** :
- *radiation cystitis and proctitis*
- *intestinal or vaginal fistulae*
- *small bowel obstruction*
- *difficult-to-manage hemorrhagic proctitis or cystitis.*

FOLLOW UP

- Following treatment for cervical carcinoma, patients should be monitored regularly:
- follow-up examinations every **4 months for the first 2 years** and visits **every 6 months subsequently to year 5,** followed by **cervical cytology annually to perpetuity and chest x-rays annually for up to 5 years**.

TABLE 47.3 FIVE-YEAR SURVIVAL RATES FOR CERVICAL CANCER

Stage	5-Year Survival Rate (%)
0	93
IA	93
IB	80
IIA	63
IIB	58
IIIA	35
IIIB	32
IVA	16
IVB	15

RECURRENCE

- Treatment for recurrent disease is associated with poor cure rates.
- Most chemotherapeutic protocols have only limited usefulness and are reserved for palliative efforts.
- specific “spot” radiation to areas of recurrence also provides only limited benefit.
- **Occasional patients with central recurrence (i.e., recurrence of disease in the upper vagina or the residual cervix and uterus in radiation patients) may benefit from ultraradical surgery with partial or total pelvic exenteration**.

PREVENTION

- Preventive approaches to cervical cancer include
- sexual abstinence
- vaccination
- use of barrier protection with or without spermicides
- regular gynecologic examination and cytologic screening with treatment of precancerous lesions

PREVENTION

- It is estimated that gynecologic examination and cervical cytology may reduce cancer incidence and mortality by **40%**
- **The HPV vaccine** prevents transmission and acquisition of type specific HPV through sexual and nonsexual contact. Currently, there are three vaccines on the market (**bivalent, quadrivalent, and 9-valent**). One is active against oncogenic HPV types 16 and 18 only, one is active against HPV5 types 16, 18, as well as two types that cause genital warts, HPV types 6 and 11.
- The other vaccine is active against oncogenic HPV types 16 and 18, with some possible protection against seven other genotypes including 45 and 31

HPV VACCINES

- These vaccines contain virus-like particles that consist of the main **structural HPV-L1 protein**
- lack the viral genetic material and, noninfectious.
- These vaccines stimulate the production of immunoglobulin G–type-specific antibodies to prevent acquisition of type-specific HPV in the genital and vulvar areas.
- The quadrivalent vaccine has been shown to prevent 91% of new and 100% of persistent infections.
- ***Currently, HPV vaccines are indicated only for prophylaxis***

Current Guidelines for Administration of the Human Papillomavirus Vaccine

- Currently, there are at least three vaccines which are approved by the Food and Drug Administration for preventing HPV infection. They differ in the number of serotypes covered.
- The HPV vaccine is given as **two or three separate doses** depending on age of first dose.
- If the first dose is administered **before age 15, then only two doses are required, 6 to 12 months apart**.
- **If, for some reason, the second doses are administered less than 5 months apart, then a third dose is required**.

Current Guidelines for Administration of the Human Papillomavirus Vaccine

- If the first dose is administered at the age of 15 or older, then three doses are required. The second dose should be given 1 to 2 months after the first dose, and the third dose given 6 months after the first dose.
- It is recommended as a routine vaccination for boys and girls aged 11 to 12 years. However, it can be given as young as 9 years.
- Previous exposure to HPV is not a contraindication to vaccination. Testing for HPV is currently not recommended before vaccination. •

The vaccine
is not recommended
for pregnant women,
but is safe for
women who are
breastfeeding.

Current cervical cytology screening recommendations remain unchanged and should be followed **regardless** of vaccination status.

CLINICAL FOLLOW-UP

You explain that a colposcopy is a diagnostic procedure that will provide more information. On colposcopic examination, you see the full TZ and notice a small acetowhite area at the 3:00 position,which you biopsy.The biopsy results demonstrate no evidence of dysplasia or cancer.You relay this information to the patient and make a plan for future follow-up with cervical cytology