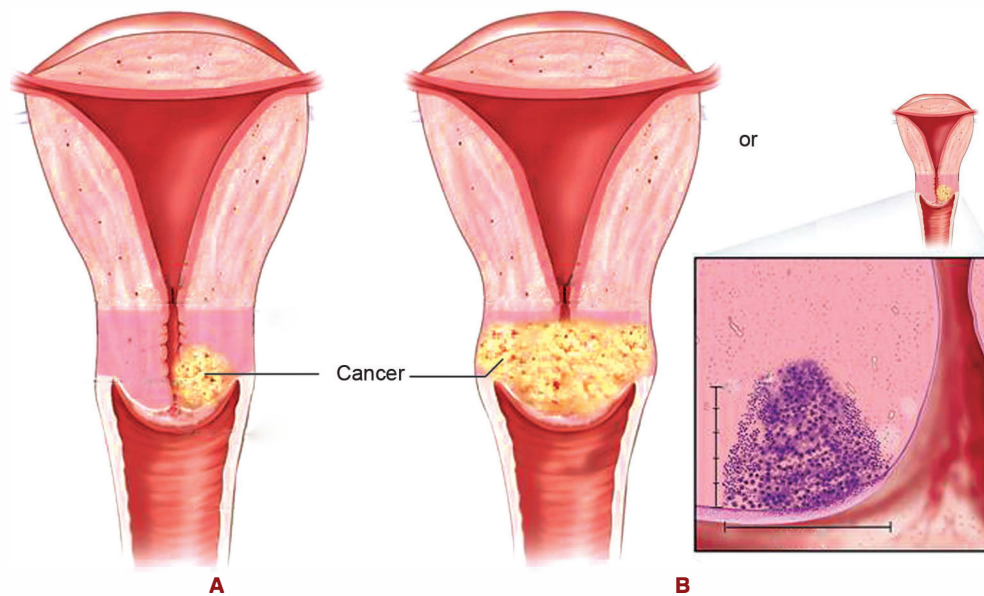


Stage I

IB2: Clinically visible lesion, >4 cm in greatest dimension (Fig. 1.1B).

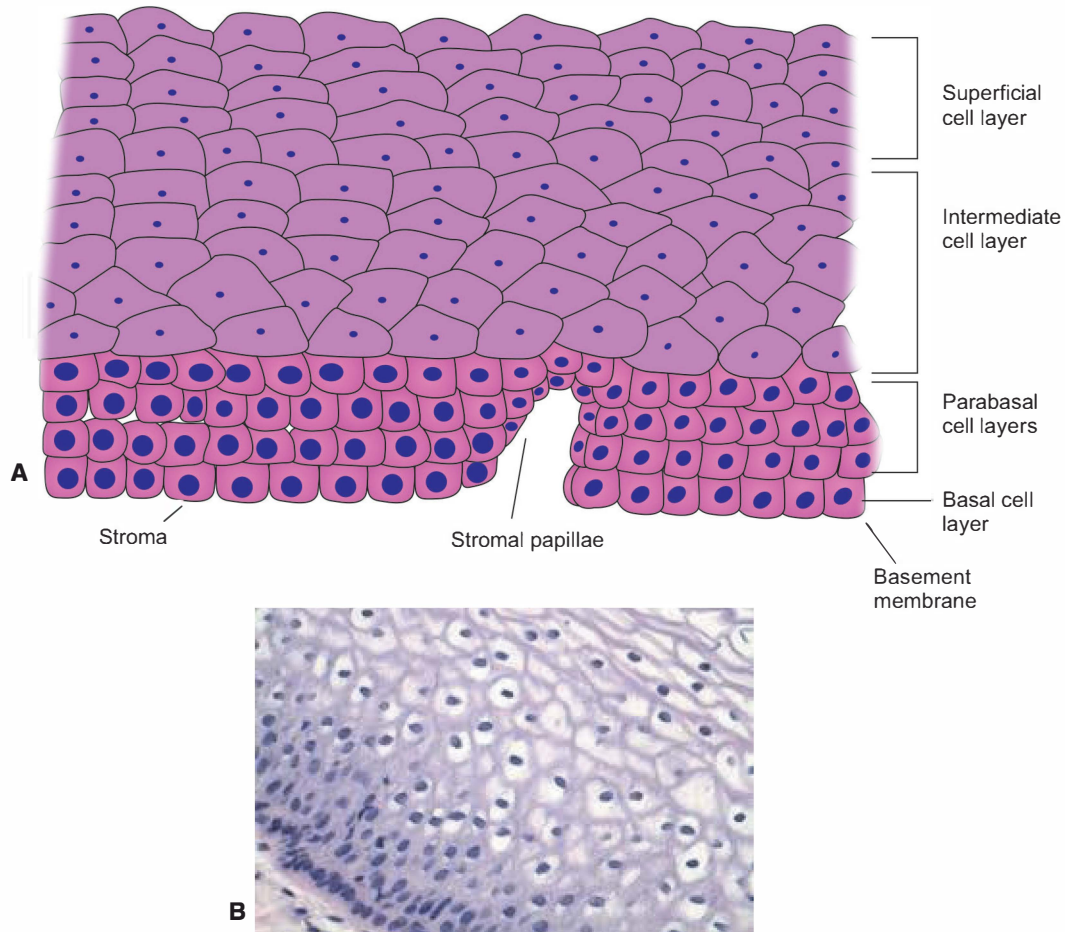


Figs 1.1A and B: Stage I of cervical cancer

IIB: With parametrial involvement.

epithelium. The endocervix is covered completely by columnar epithelium. The squamocolumnar junction (SCJ) is situated at the external os. Identifying SCJ is a vital step in colposcopic examination.

Squamous epithelium: A mature stratified squamous epithelium is composed of four layers (Figs 2.1A and B): (1) Basal layer; (2) Parabasal layers; (3) Intermediate layer; and (4) Superficial layer.



Figs 2.1A and B: Stratified squamous epithelium—(Note 1) The coloring scheme shown above and noted below is purely schematic in nature for the aid of the reader to quickly identify the different cell types. (Color code: Violet: Physiological superficial and intermediate layers; Pink: Physiological basal and parabasal layers.) The pathological cells in layers will be represented by darker shade of the respective color code. The pathological cells will be seen in subsequent chapters. (Note 2) Actually the cells are colorless. Different colors are seen due to different staining techniques.

Basal and parabasal cells are round cells with large nucleus in comparison to cytoplasm, intermediate cells are polygonal in shape with abundant cytoplasm and small round nuclei forming basket weave pattern, superficial cells are flattened with pyknotic nuclei and transparent cytoplasm.

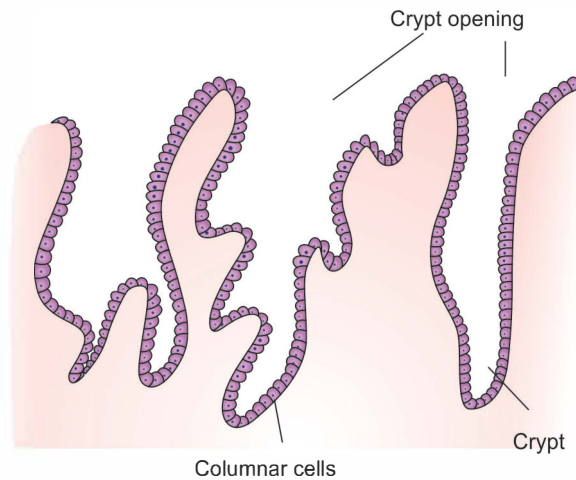


Fig. 2.4: Columnar epithelium thrown into folds to form crypts

Normal Cervix

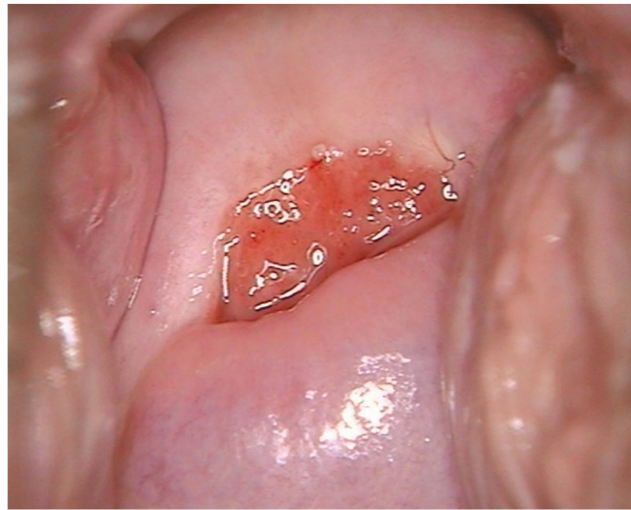


Fig. 2.5: Columnar epithelium seen as reddish grape-like structure, squamous epithelium is seen as pinkish structure

Cervical polyp (Figs 2.6A and B): A cervical polyp is an overgrowth and enlargement of single columnar epithelial papillae which appears as reddish mass protruding from the cervical os.

Squamocolumnar Junction

The squamocolumnar junction (SCJ) is the dynamic junction of squamous epithelium and columnar epithelium. The position of SCJ varies according to the age and hormonal status of the woman (Figs 2.7A and B).



3

Normal Transformation Zone

During childhood and perimenarche, the original squamocolumnar junction is located at or very close to, the external os. During puberty due to the influence of hormone estrogen, there is growth of endocervical columnar cells. The endocervical cells enlarge in size. The cervix swells and the endocervical canal elongates. There is buckling of the endocervical cells and later on overgrowth of the endocervical columnar epithelium. This leads to the eversion of the columnar epithelium of the lower part of the endocervical canal on the ectocervix. This condition is called **ectropion** or **ectopy** (Fig. 3.1), which is visible as angry reddish looking ectocervix, which is sometimes referred to as erosion or ulcer.

In the active phase of ectopy, the SCJ moves out from the os and is located distally on the ectocervix. The columnar epithelium of the endocervix maintains its continuity while covering the ectocervix now replacing the squamous epithelium. The everted columnar epithelium is usually arranged in a single layer follicular—flat type. Sometimes they are thrown into inwards folds to accommodate in the area—follicular type of ectropion or follicular ectopy; sometimes they get folded inwards and outwards—papillary ectopy. Underneath the epithelium, there are evidences of round cell infiltration and glandular proliferation. The columnar epithelium is less resistant to infection than the squamous epithelium. Ectropion becomes very prominent during pregnancy and in the patients on oral contraceptive pills.

The everted columnar epithelium on the ectocervix is under constant effect of acidic pH. This leads to the stimulation of subcolumnar reserve cells. These cuboidal sub-columnar reserve cells then proliferate to produce a reserve cell hyperplasia, lifting off the columnar epithelium and replacing it by a thin multilayered immature squamous epithelium without stratification. Morphologically, the reserve cells are similar to the basal cells of the squamous epithelium, with round nucleus and a little cytoplasm. These cells then proliferate and differentiate to immature squamous epithelium. The immature cells do not produce glycogen; hence do not stain brown or black with Lugol's iodine. In the due course, the immature metaplastic squamous cells differentiate into mature stratified squamous epithelium. This is now called mature metaplasia.

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