

## ULTRASTRUCTURAL CELL MORPHOLOGY IN HUMAN CERVICAL CARCINOMA CELLS LINES: SIHA AND HELA

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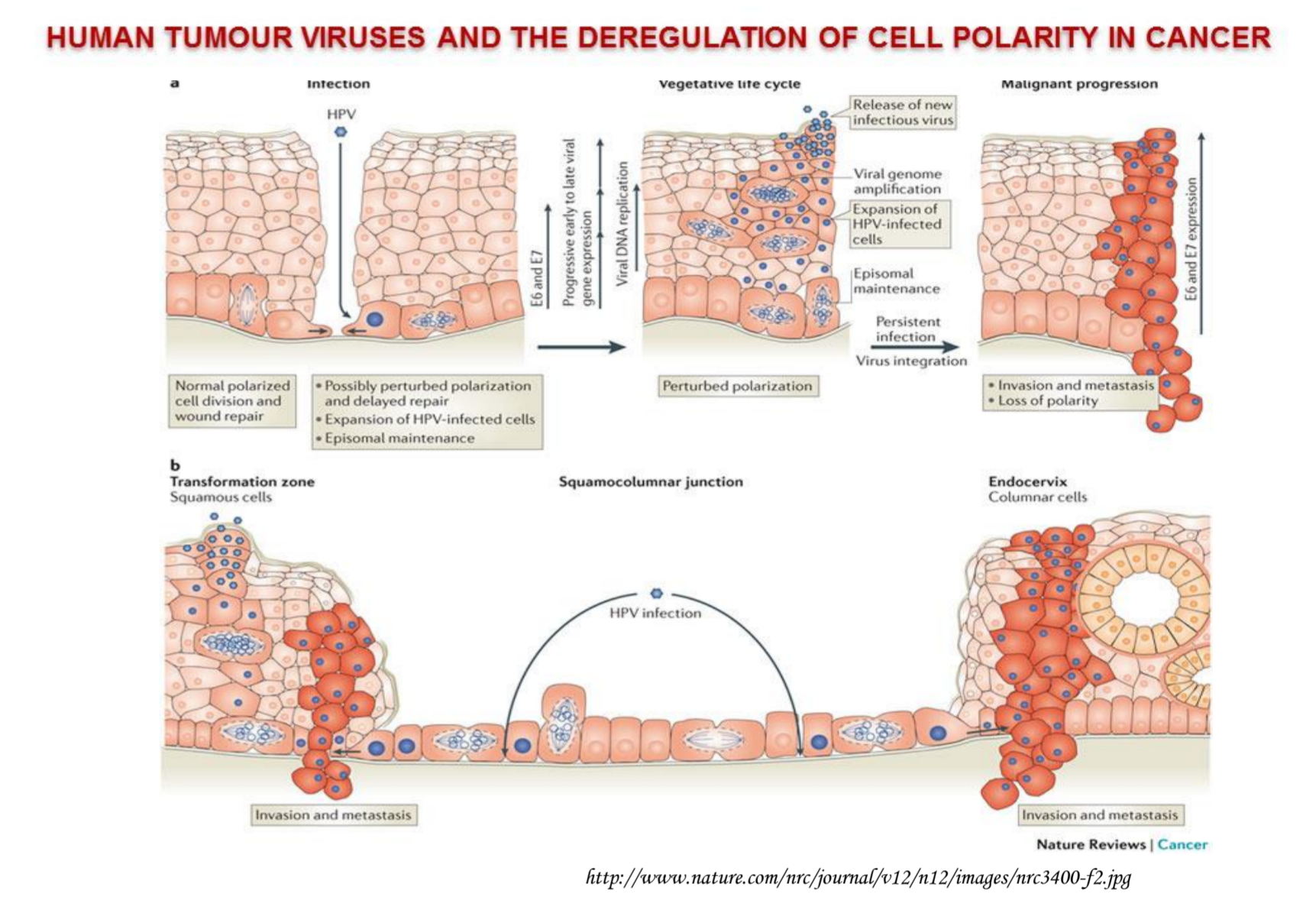
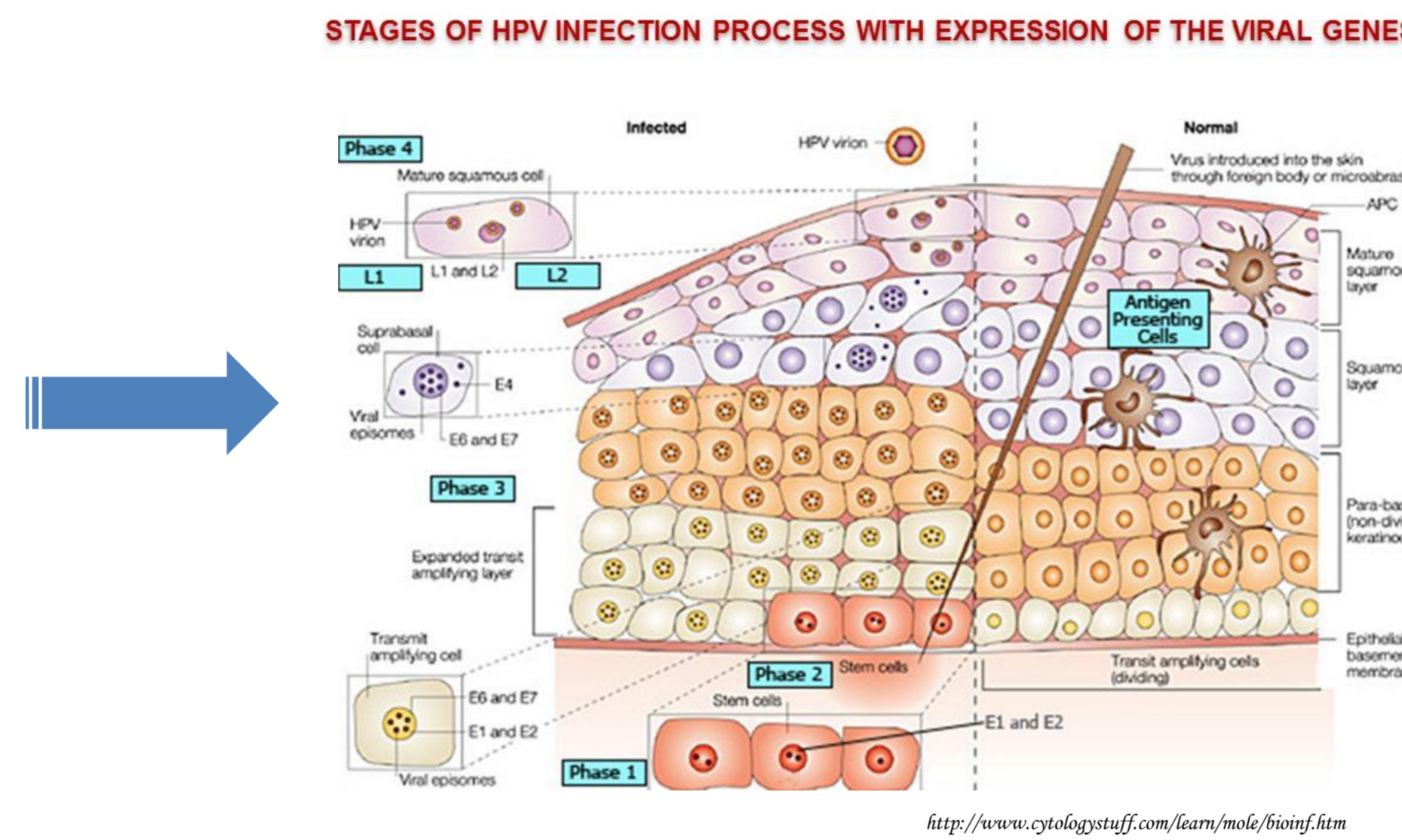
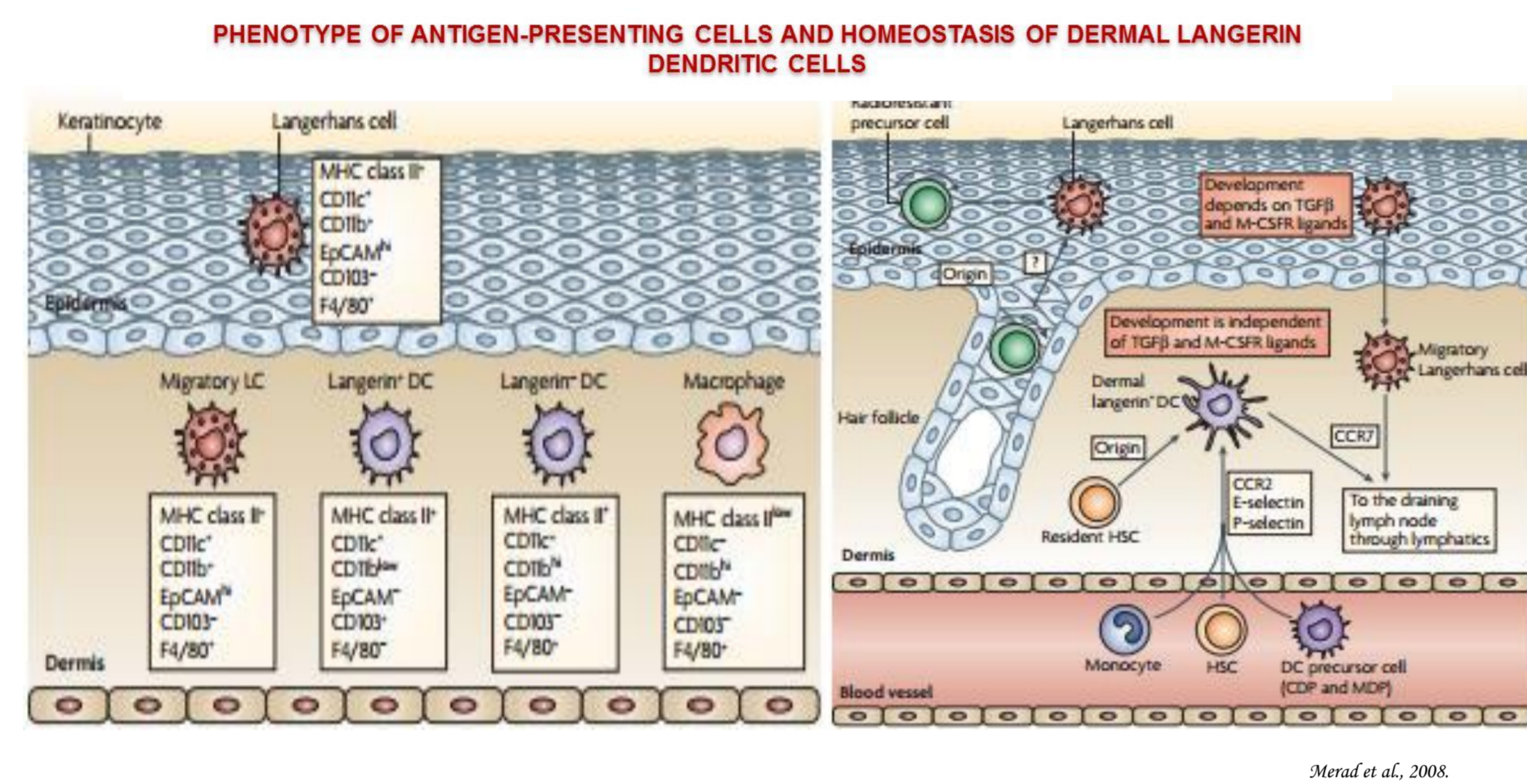
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### INTRODUCTION

Papillomaviruses constitutes a family of epitheliotropic and mucosotropic closed circular double-stranded DNA genome. There are several phenotype of antigen-presenting cells (Langerhans cell, Migratory LC, Langerin dendritic-cell populations, dermal macrophages) in the skin which are migratory in the epithelial tissue. There are different cellular markers in the skin and skin-draining lymph nodes in mice and humans. Dendritic cells stimulant CD4<sup>+</sup> T cells, CD8<sup>+</sup> lymphocytes, natural killer (NK) that act as receptors similar to the toll like receptors (TLRS).



### MATERIAL AND METHODS

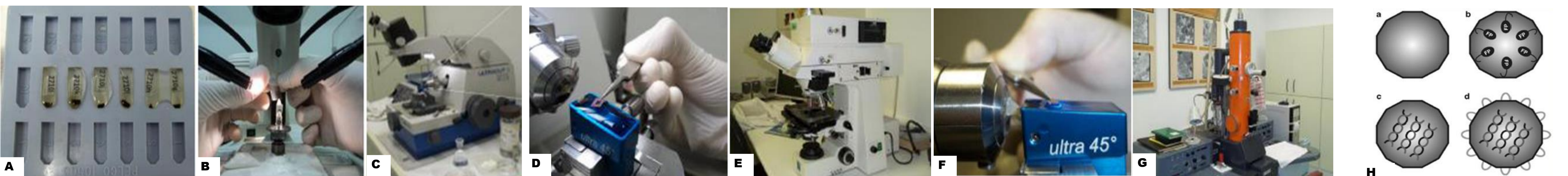


Figure 1: Stages of material processing for photonic and electron microscope analyses of the cell morphology: A) Inclusion in epoxy resin; B-C) Ultramicrotomy; D) Obtention of semi-thin sections; E) Photonic microscopy; F) Obtention of ultra-thin sections; G) Transmission electron microscopy; H) Diagram of VLP (a) VLP without packaged genomic DNA; (b) VLP with packaged FP; (c) VLP with packaged genomic DNA; (d) VLP assembled from VP1 pentamers modified to express a foreign peptide sequence on the VLP surface with packaged genomic DNA (Pease et al., 2008).

### RESULTS AND CONCLUSIONS

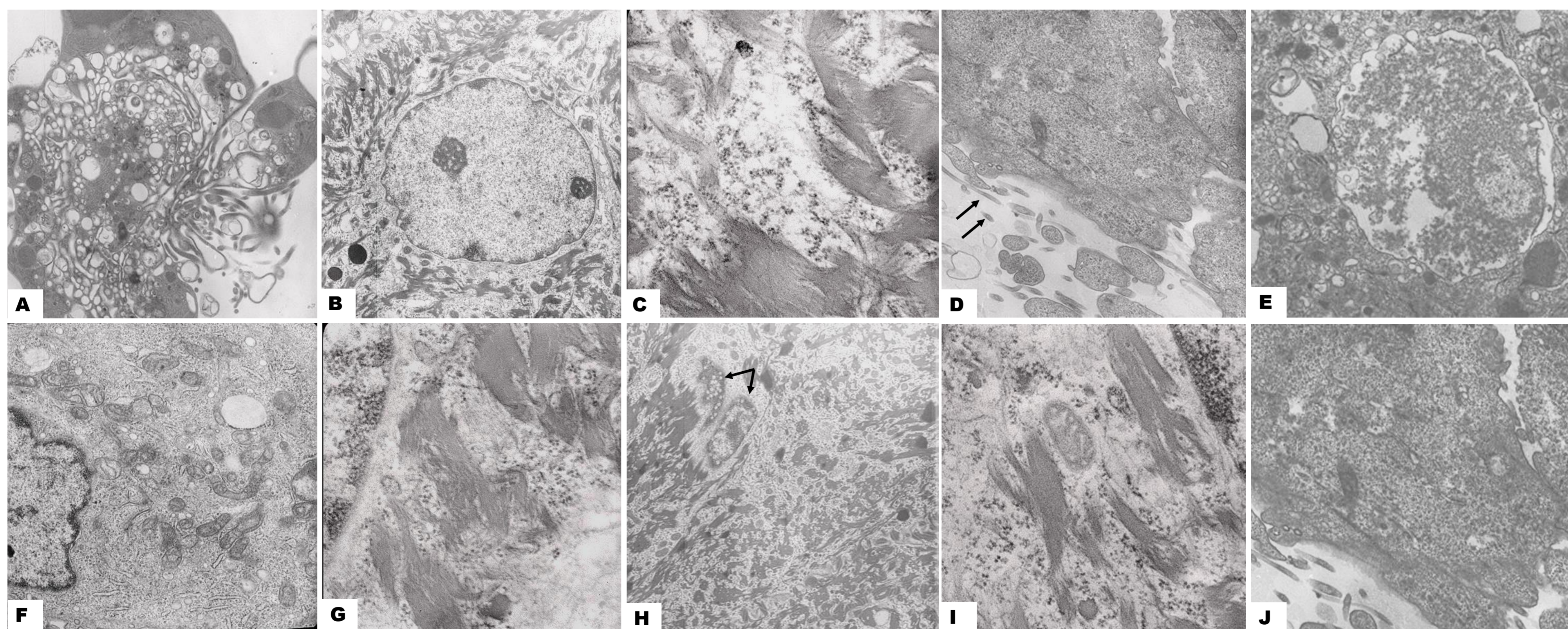


Figure 2: Morphologically, very electron-dense cells were detected by electron microscopy presenting well developed mitochondria and rough endoplasmic reticulum (rER), E -J) Cell line: many vesicles and ribosomes in HeLa and SiHa cell lines. A) Cellular modifications similar to antigen-presenting cells; B) Presence of fibers and fiber bundles, nucleus with two nucleoli, nuclear membrane well preserved with pores; C) keratin activity and massive presence of ribosomes; D) Presence of filopodia formation, granular cytoplasmic material and presence rER for protein synthesis; E) Many activated mitochondria, poorly differentiated cells presenting vesicle transport. Well preserved and active core and very rER indicating high cellular activity; F) keratin near the core; G) Presence of VLP, mitochondria, keratin, many ribosomes and cellular junctions desmosomes type; H) Presence of keratin fibers, mitochondria and ribosomes.

These morphological changes suggest a high cellular activity of HPV-positive (SiHa and HeLa) cell lines can be possible prognostic markers of cervical cancer.

### FINANCIAL SUPPORT