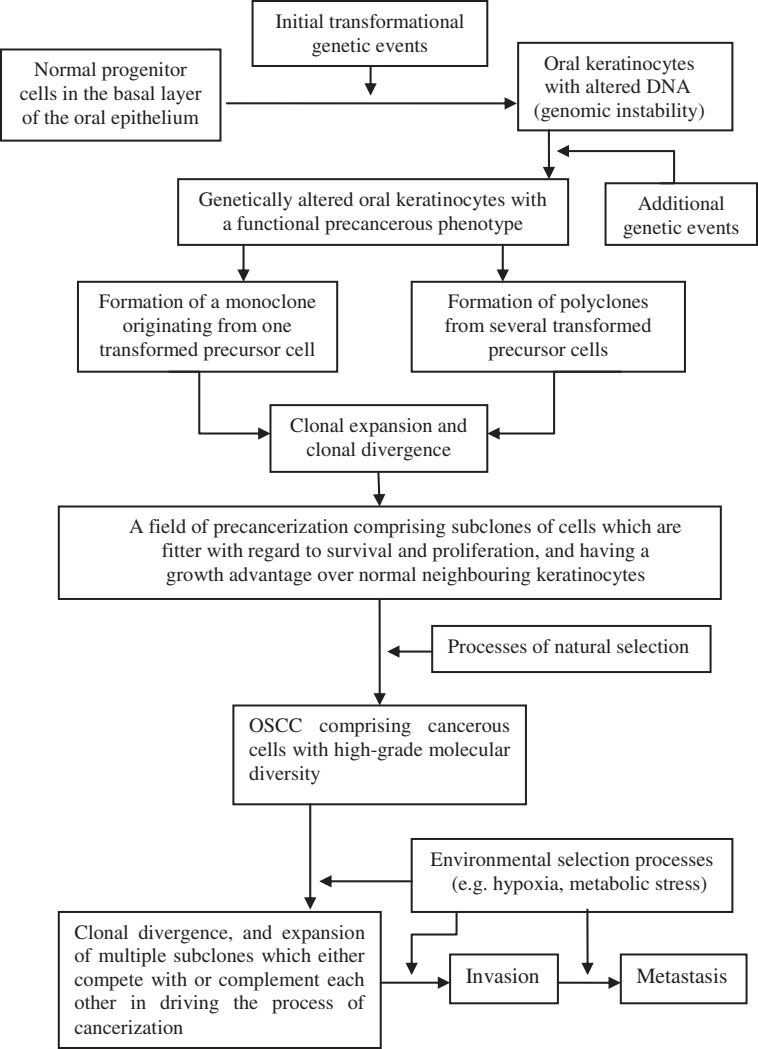
Initial transformational genetic events
Normal progenitor cells in the basal layer of the oral epithelium
Oral keratinocytes with altered DNA (genomic instability)
Genetically altered oral keratinocytes with a functional precancerous phenotype
Additional genetic events
Formation of a monoclone originating from one transformed precursor cell
Formation of polyclones from several transformed precursor cells
Clonal expansion and clonal divergence
A field of precancerization comprising subclones of cells which are fitter with regard to survival and proliferation, and having a growth advantage over normal neighbouring keratinocytes
Processes of natural selection
OSCC comprising cancerous cells with high-grade molecular diversity
Environmental selection processes (e.g. hypoxia, metabolic stress)
Clonal divergence, and expansion of multiple subclones which either compete with or complement each other in driving the process of cancerization
Invasion
Metastasis