Subject of Lesson 1: To know 1.Knowledge about structural features of interphase and metaphase human's chromosomes is necessary for understanding the patterns of heredity and variability, for cytogenetic diagnostics of chromosome diseases. Levels of DNA packing (nucleosome, 30–nm fiber and 300–nm loops, interphase and metaphase chromosomes). Besides, knowledge about karyotype, human idiogram and sex chromatin is necessary by study the pathogenesis and diagnostics of inherited diseases. There are: mitochondria, rough and smooth endoplasmic reticulum, lysosomes, Golgi apparatus, centrioles, ribosomes. Structural and functional features of nuclear and extranuclear inherited material of human cells. Description of metaphase chromosomes. Karyotypic analysis. 2.3.2.3.4.6.