**Teaching unit 11**

1. Definition, method of division and general characteristics of stem cells

2. Division of stem cells

3. Human embryonic stem cells

4. Mesenchymal stem cells

5. Induced pluripotent stem cells

6. Tumor stem cells: general characteristics

7. "Cancer stem cell hypothesis"

8. "p53 cancer hypothesis" of the origin of tumor stem cells

9. Tumor stem cell model as one of the tumor growth models

10. Stochistic model of tumor growth

11. Notch signaling pathway

12. Wnt signaling pathway

13. Hedgehog signaling pathway

14. Signaling pathways responsible for proliferation of tumor stem cells