# Cellular Phones

- Cellular (cell) phones first became widely available in the United States in the 1990s, but their use has increased dramatically since then. Along with the large and still growing number of cell phone users (both adults and children), the amount of time people spend on their phones has also risen sharply in recent decades.
- Cell phones (including smartphones) give off a form of energy known as radiofrequency (RF) waves, so some concerns have been raised about the safety of cell phone use. With respect to cancer, concern focuses on whether cell phones might increase the risk of brain tumors or other tumors in the head and neck area.

# How do cell phones work?

Cell phones work by sending signals to (and receiving them from) nearby cell towers (base stations) using RF waves. This is a form of electromagnetic energy that falls between FM radio waves and microwaves. Like FM radio waves, microwaves, visible light, and heat, RF waves are a form of non-ionizing radiation. They don't have enough energy to cause cancer by directly damaging the DNA inside cell.

(This is the basis for how microwave ovens work.) But the levels of energy given off by cell phones are much lower, and are not enough to raise temperatures in the body.

- First of all, open a website on brain cancer research (**American Cancer** Society)
- It says that the largest study was that rats were plagued phone radiation for 9 hours every day for 2 years. Is that serious? Who even uses the phone so much ?
- People with this disease were asked: "how often did you use the phone ?“ People, of course, saw this connection with their disease, and agreed that they used the phone often.
- Another proof. The Danish study, published in the bmj journal by participants, included all subscribers born between 1925 and 1995, with a large number of sick people. There is no connection with cancer or glioma and the use of a mobile phone.