Radiofrequency Surgery: Ellman unit

- Active electrode, antennae (passive electrode), transformer
- Radiosurgery is the passage of HIGH frequency radio waves through soft tissue to cut, coagulate, and/or remove the target tissue.
  - Resistance of the tissue to the radio waves causes water in the cells to heat and the cells to vaporize.

★ IDEAL FREQUENCY: 3.8 MHz
★ NO PACEMAKERS!
★ NO FLAMMABLE FUMES/LIQUIDS!
★ NEEDS MOISTURE TO WORK

- Loop and bent tip most common tips in eye care. (Blue sleeve = reusable)

❖ Setting #1: Pure Cut = 90% cut / 10% coag
  ➢ Used for BIOPSIES
  ➢ Also used for incisions, chalazion

❖ Setting #2: Cut/Coag = 50% Cut / 50% Coag
  ➢ Used for removing benign lid lesions
  ➢ Useful for vascular regions
  ➢ Great for excising skin tags and verruca
  ➢ MOST USED SETTING IN EYE CARE!

❖ Setting #3: 90% coag / 10% cut
  ➢ Used for epilation and punctal occlusion

❖ Setting #4: Fulguration
  ➢ Doesn't penetrate deeply - superficial treatment
  ➢ Electrodesication (papilloma bed)
  ➢ Destruction of remnants
  ➢ Intentional destruction of diseased tissue, i.e. BCC, SCC