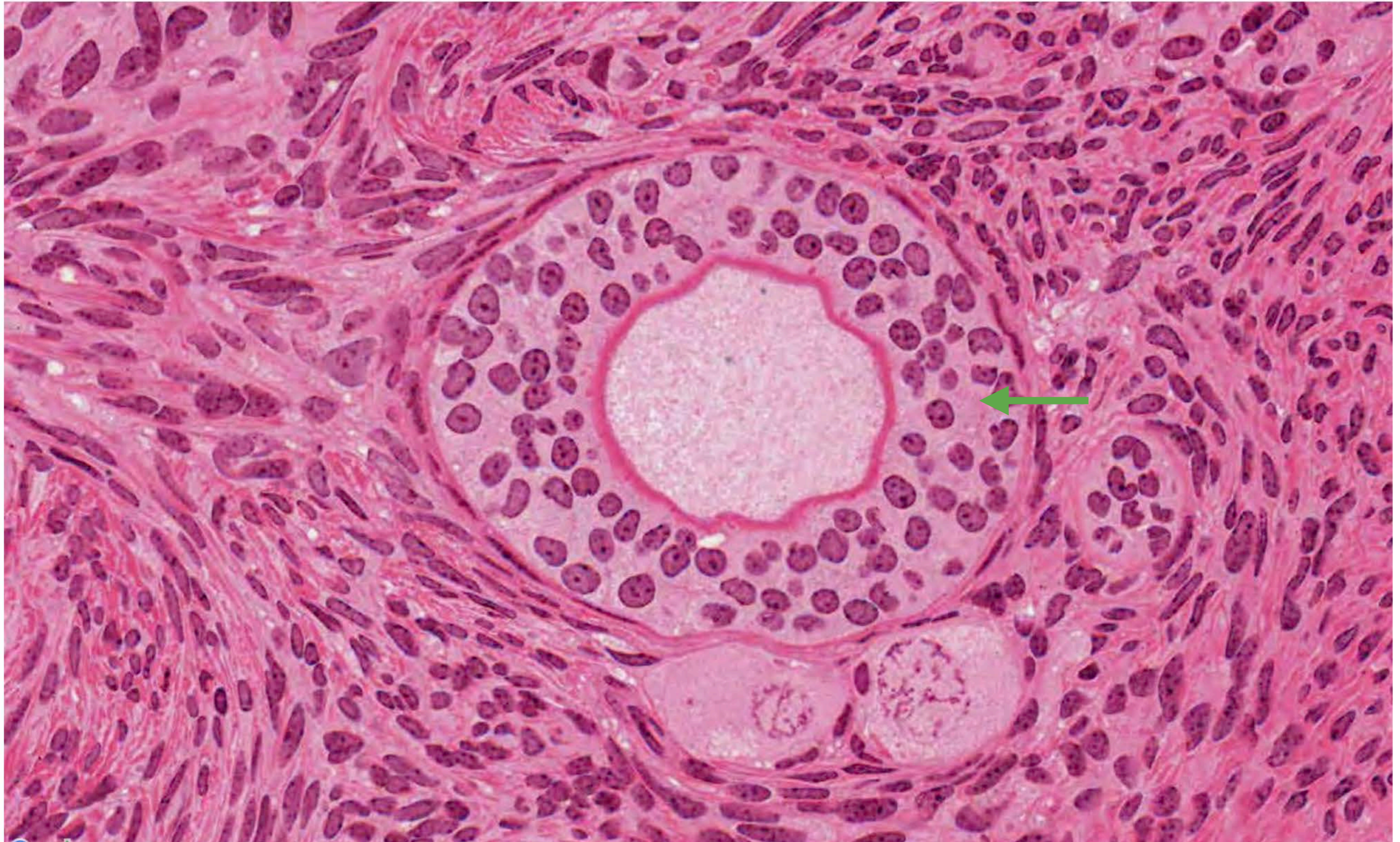


Reproductive Systems

Readiness Assessment Questions

1. Which hormone primarily stimulates these cells?

- Follilce-Stimulating Hormone (FSH)
- Leutenizing Hormone (LH)
- Progesterone
- Androstenedione



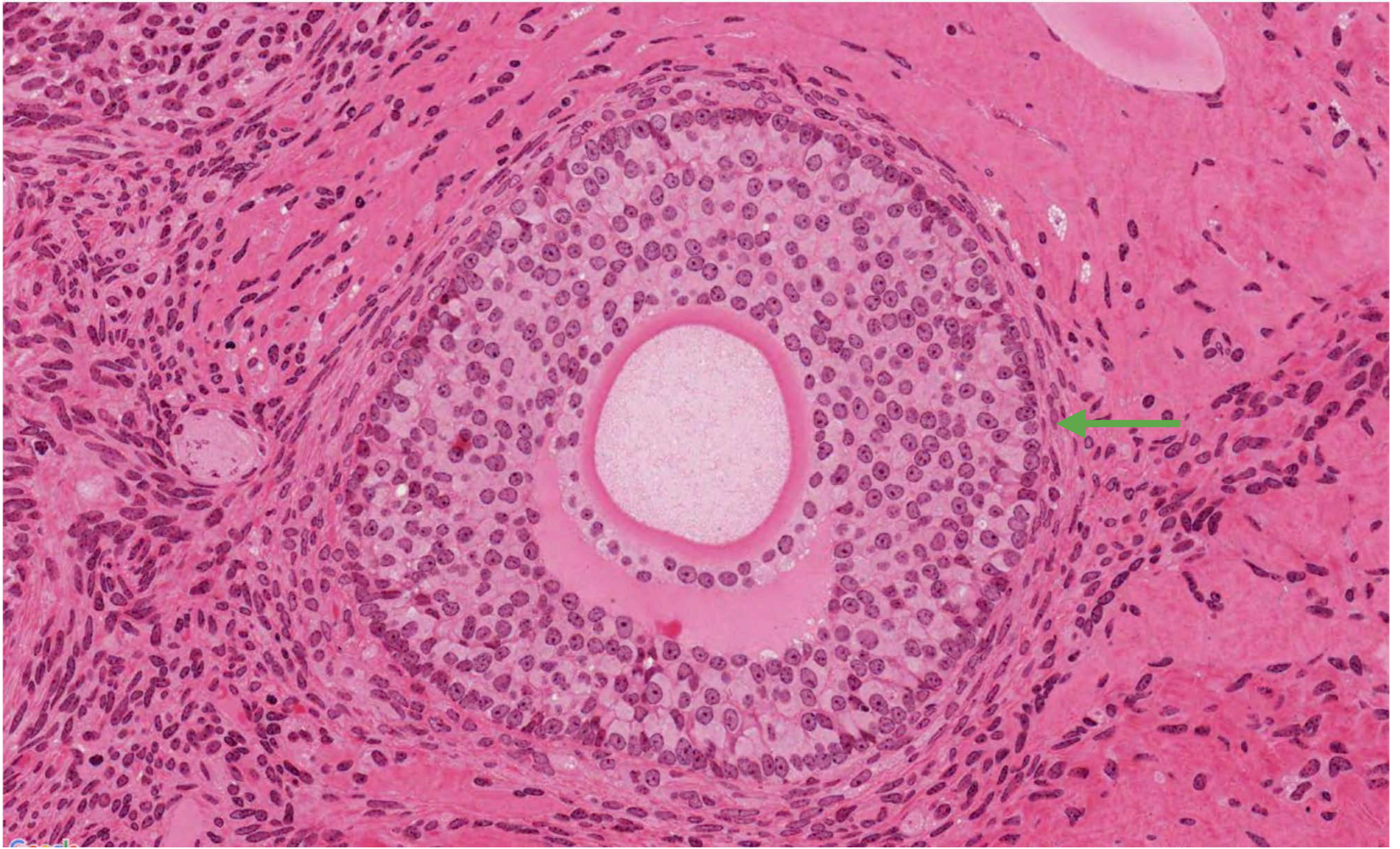
2. What change in hormonal levels gives rise to this structure?

- Increase in Progesterone
- Increase Estrogen
- Decrease in Leutenizing Hormone (LH)
- Decrease in Follicle-Stimulating Hormone (FSH)



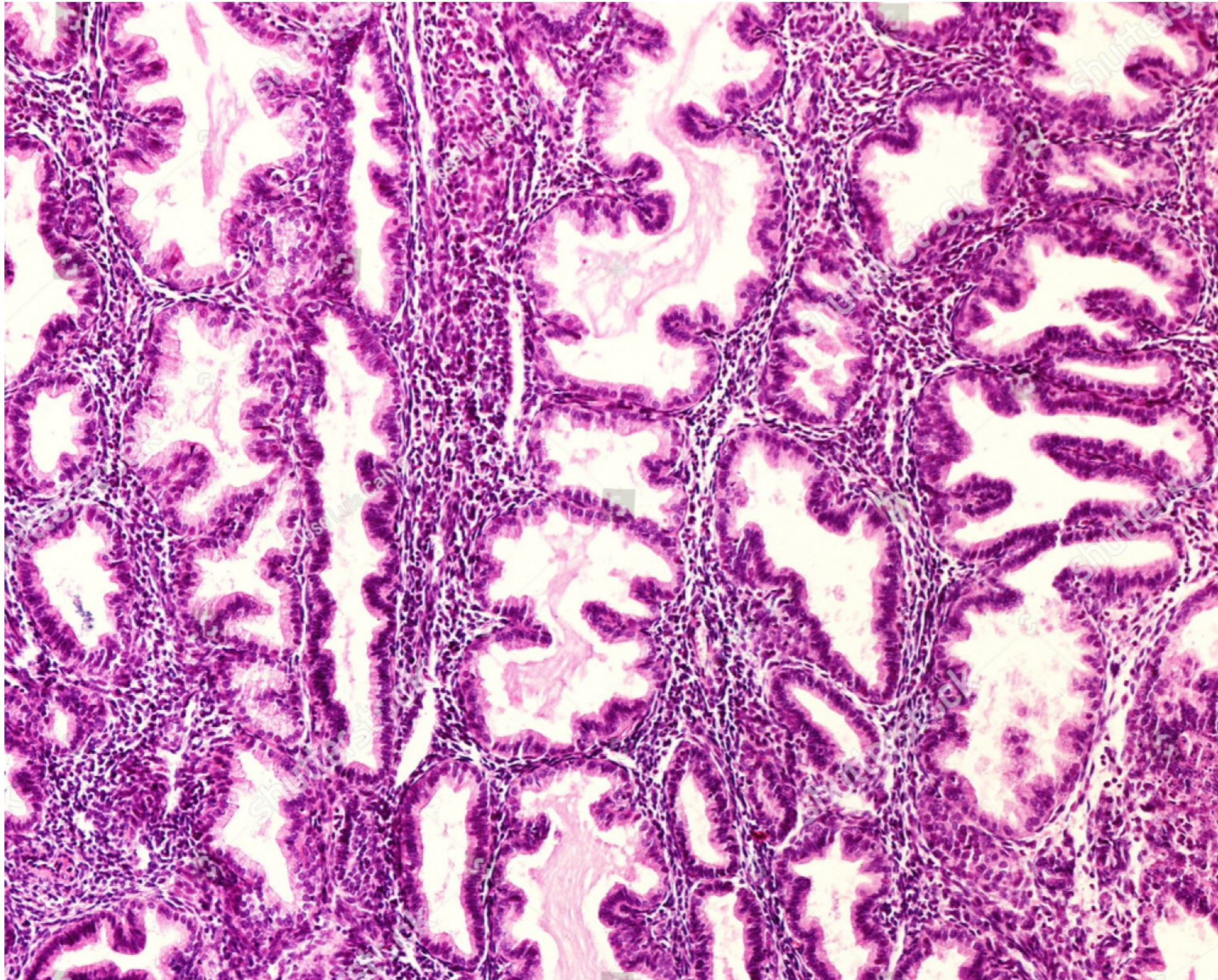
What do these cells produce?

- Cholesterol
- Leutenizing Hormone
- Androgens
- Estrogen



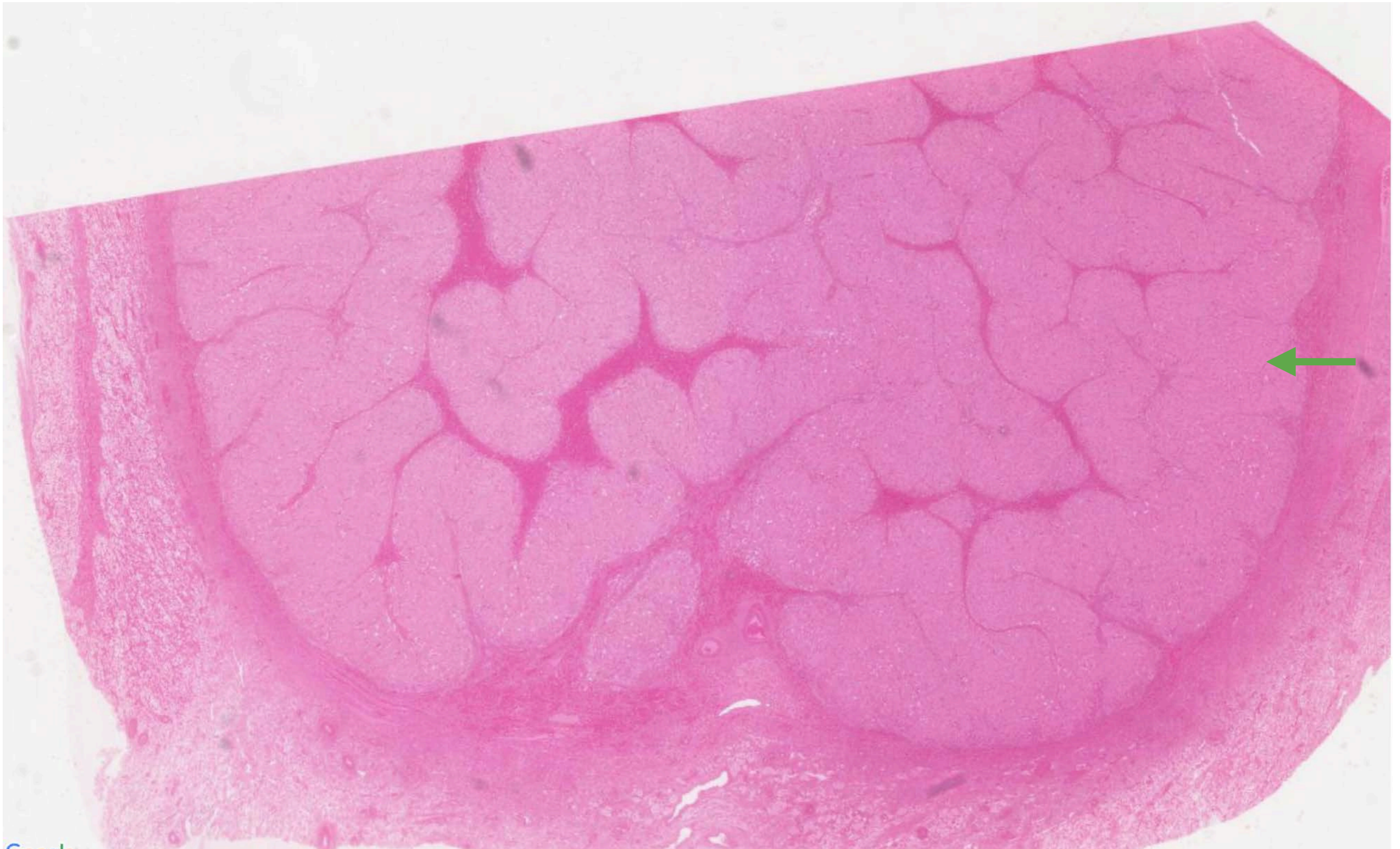
4. At this time, which hormone is primarily stimulating these cells?

- Leutenizing Hormone
- Adrenocorticotrophic Hormone
- Estrogen
- Progesterone



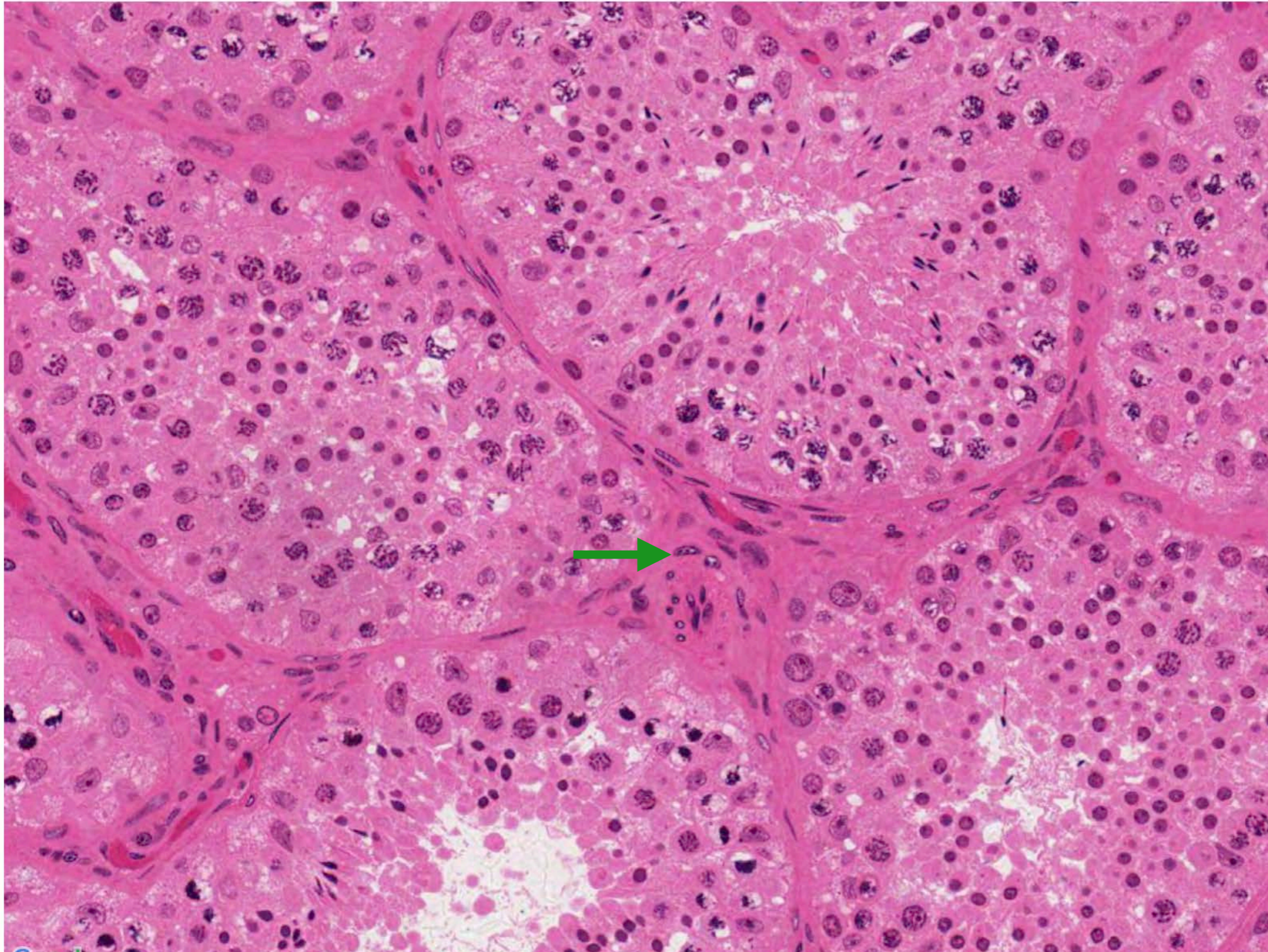
5. Which hormone do these cells primarily produce?

- Estrogen
- Progesterone
- Follicle-Stimulating Hormone (FSH)
- Androgens



6. Which hormone do cells in this region produce?

- Leutenizing Hormone (LH)
- Follicle-Stimulating Hormone
- Testosterone
- Androstenedione



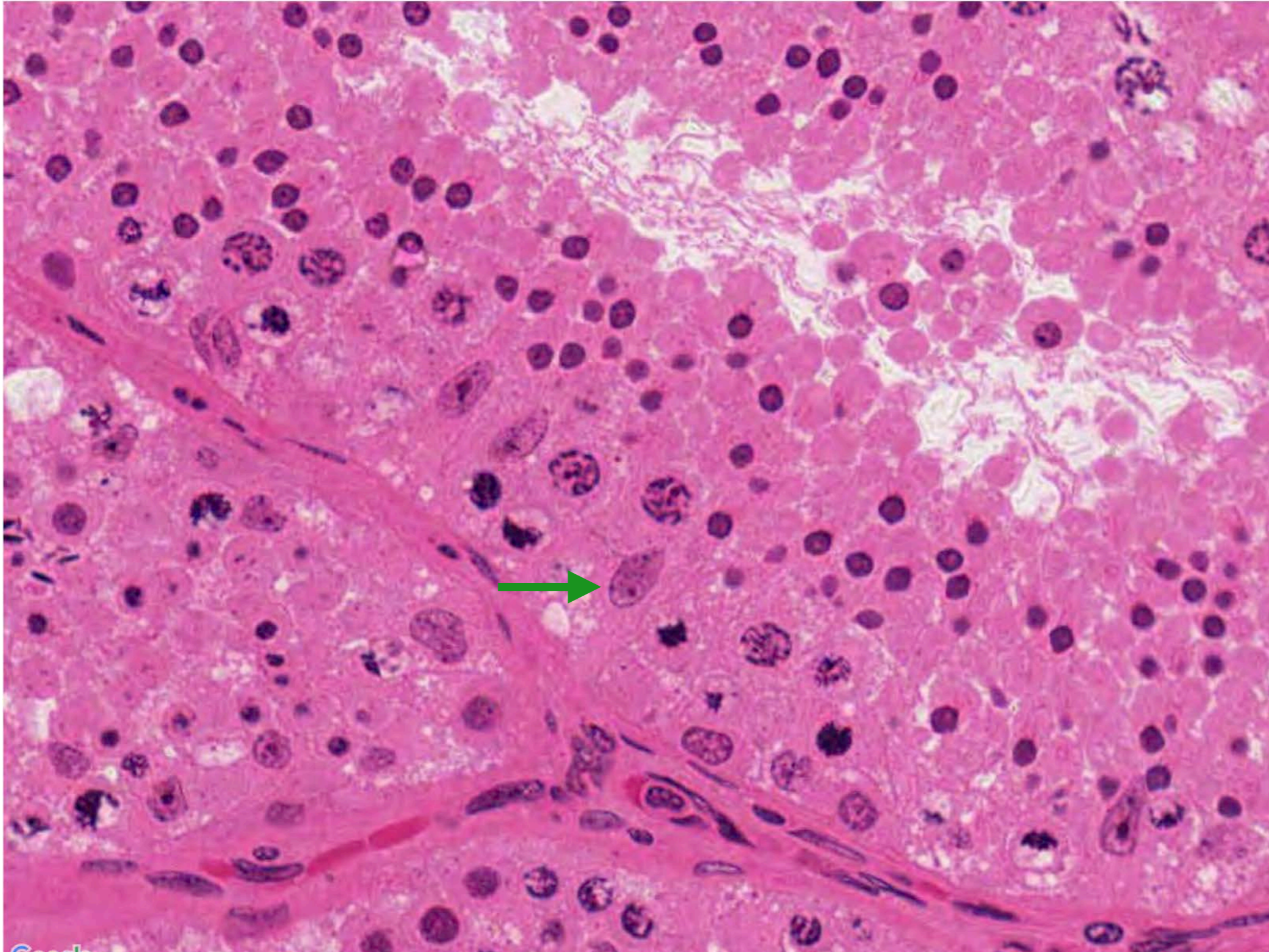
7. What event in sperm development occurs here?

- Motility of spermatozoa
- Formation of the acrosome
- Building of flagellum
- Condensation of nucleus



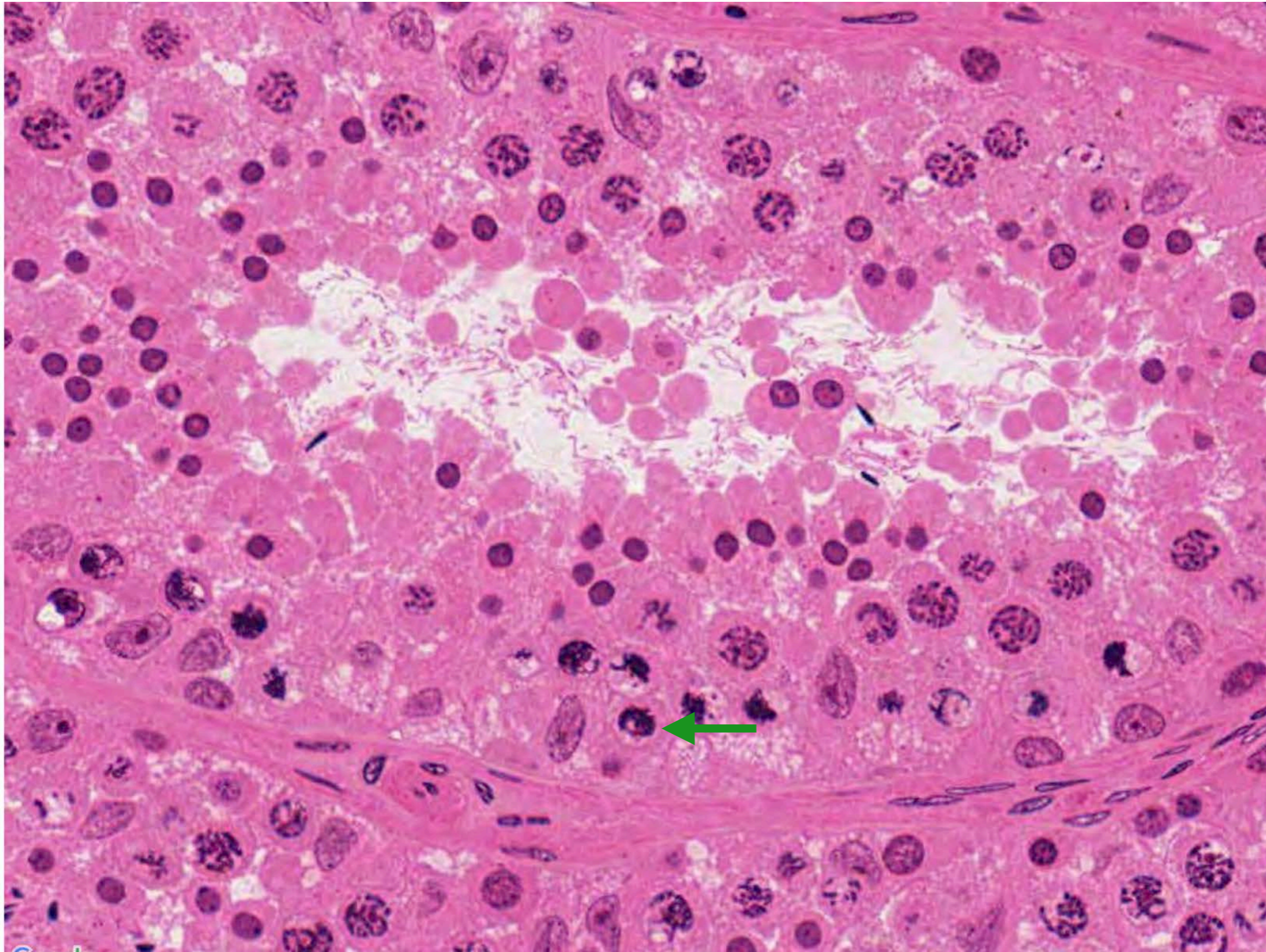
8. What does this cell produce?

- Testosterone
- Leutenizing Hormone
- Androgen-Binding Protein
- Estrogen



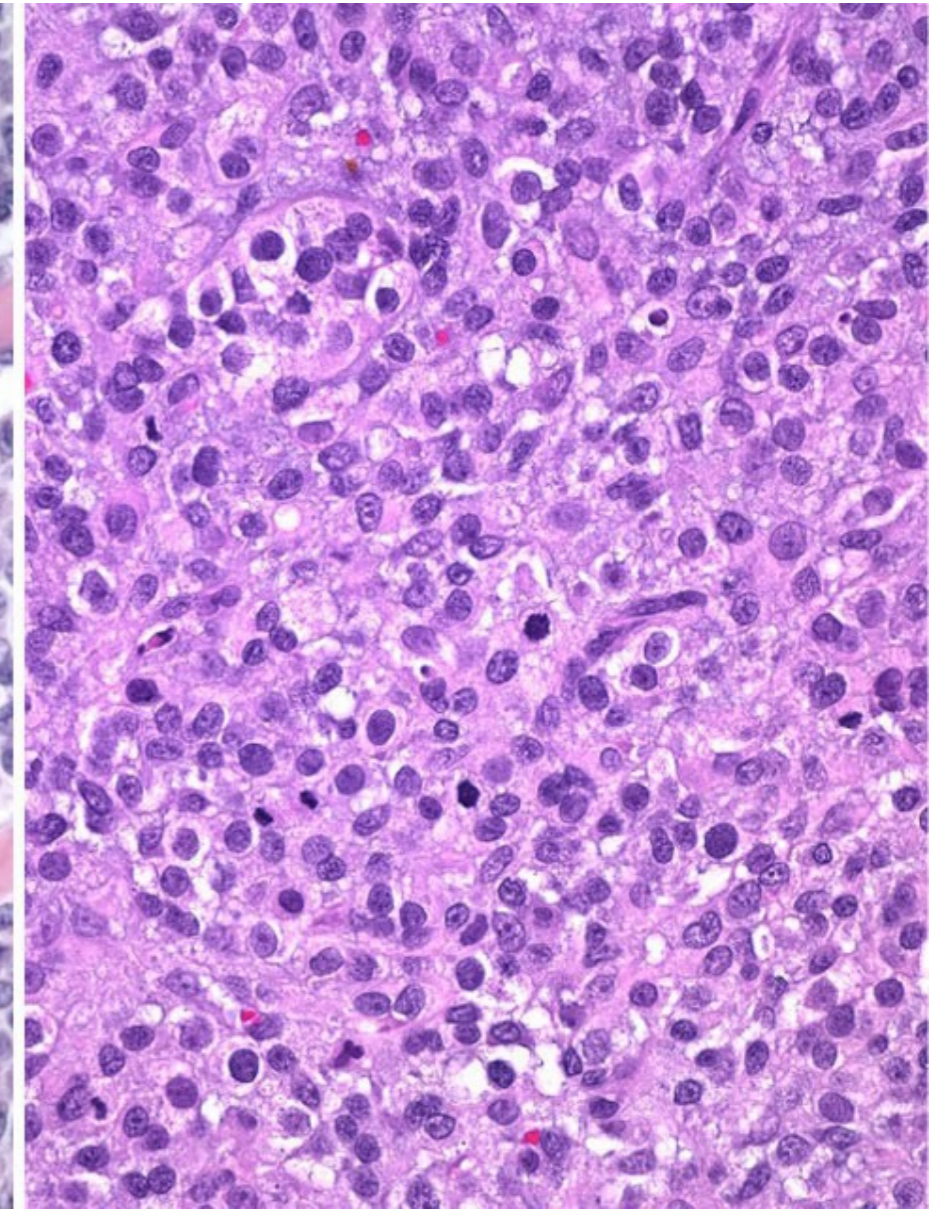
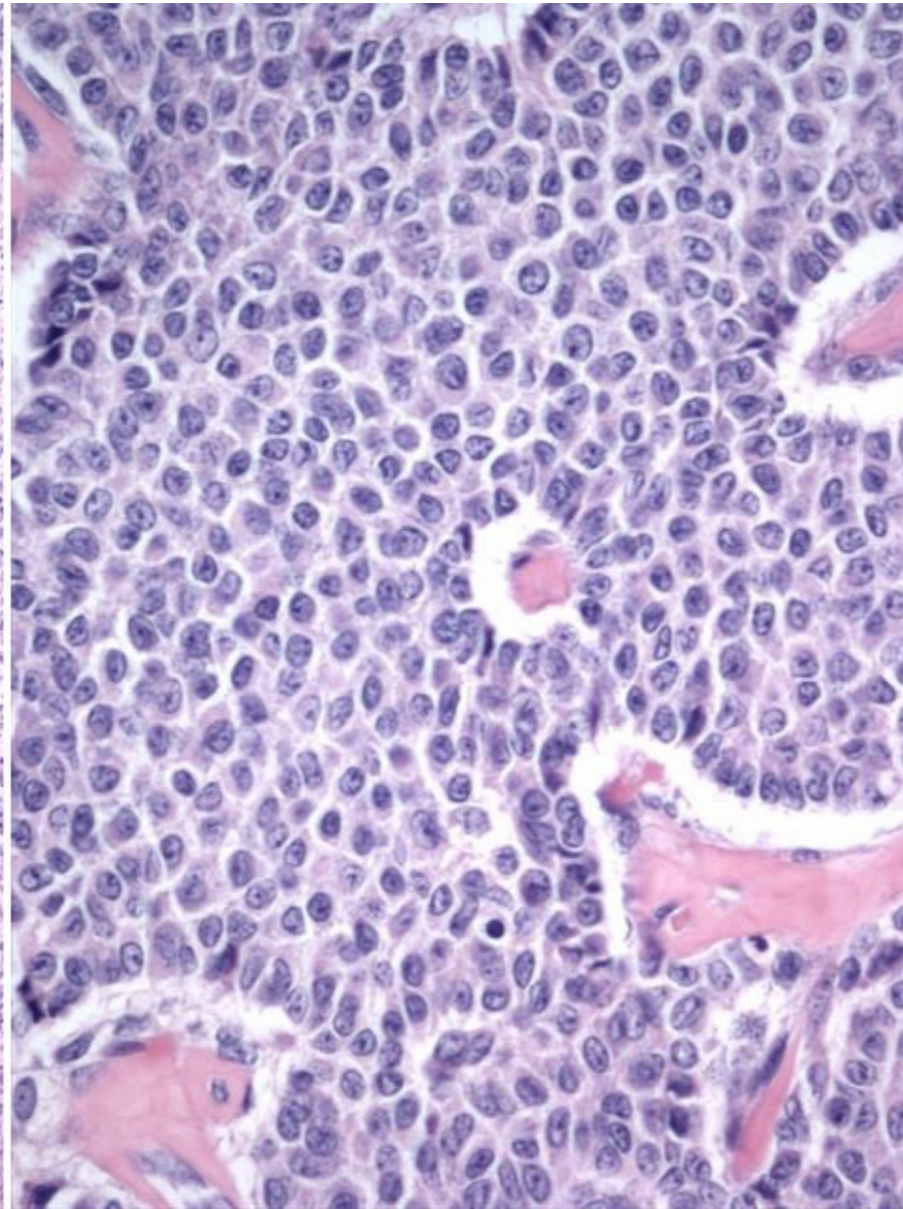
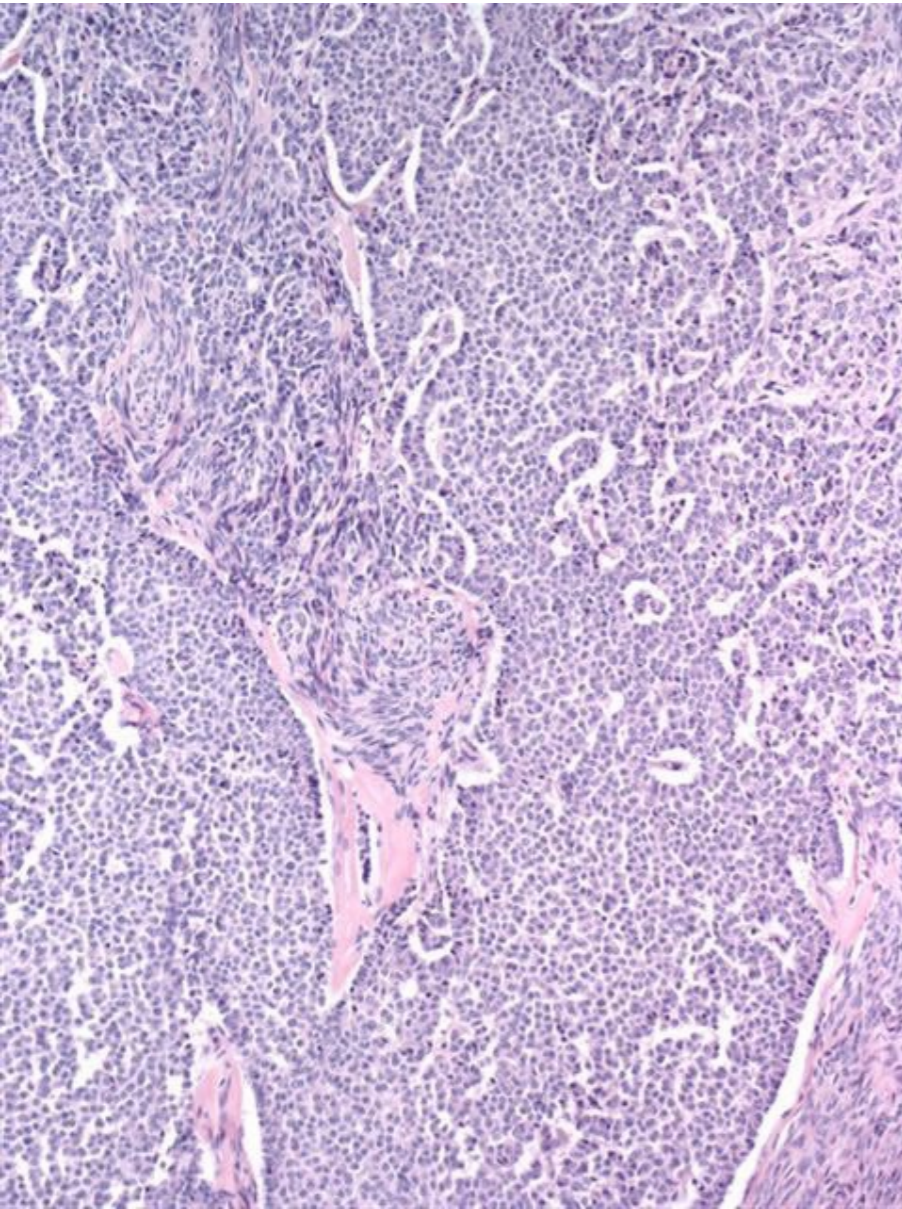
9, In which compartment does this cell reside?

- Basal
- Adluminal
- Interstitium
- Basement membrane

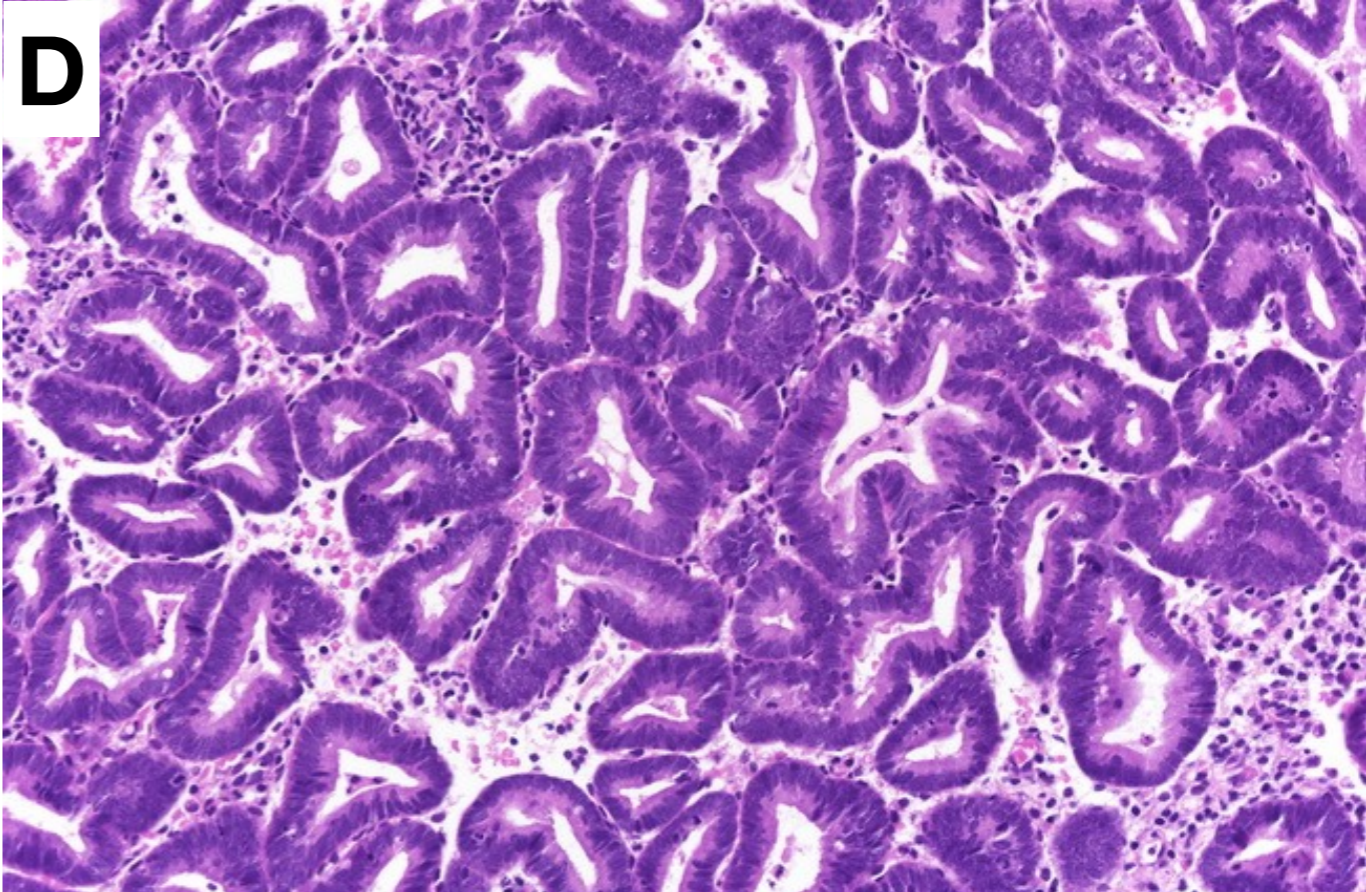
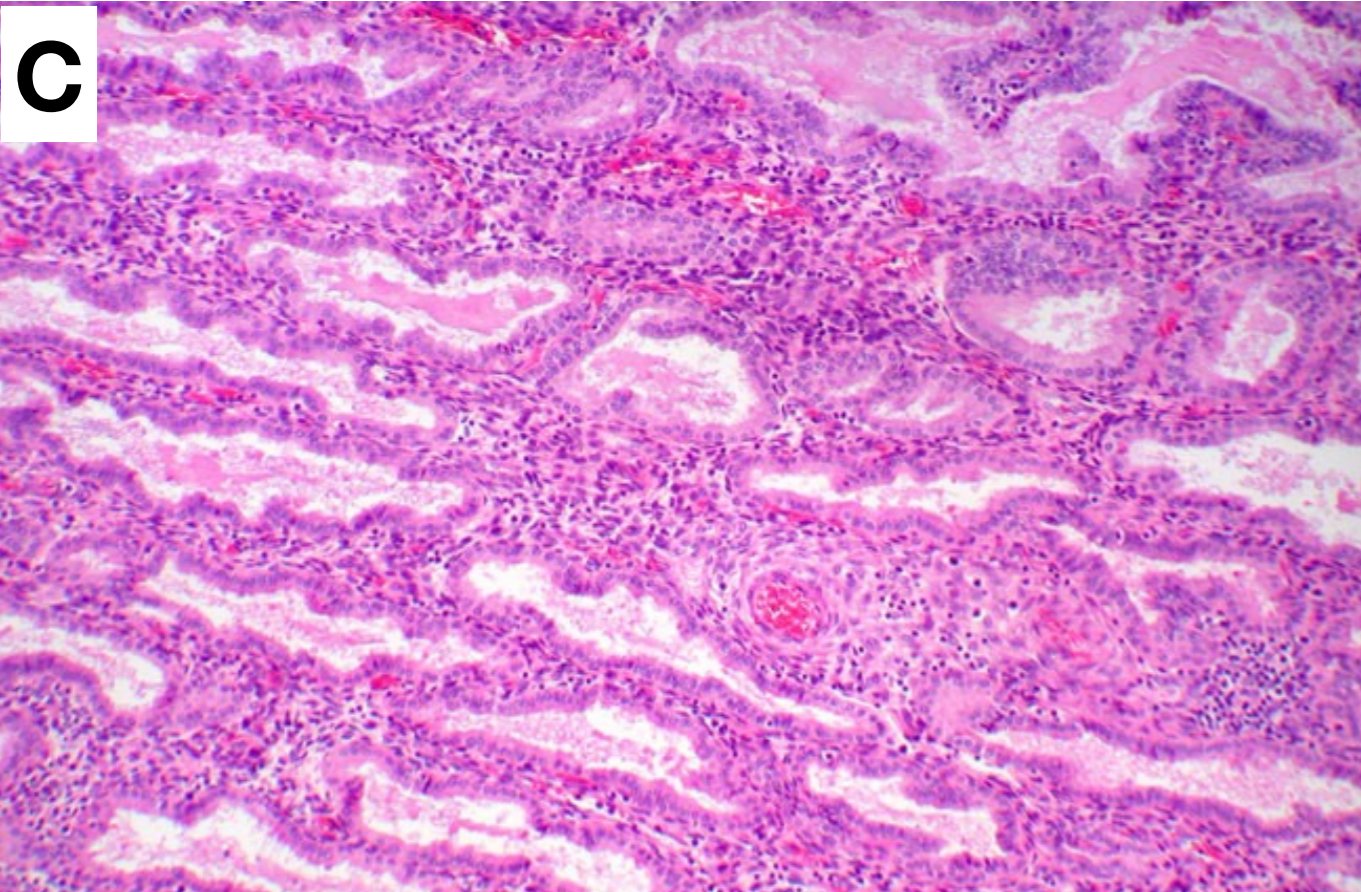
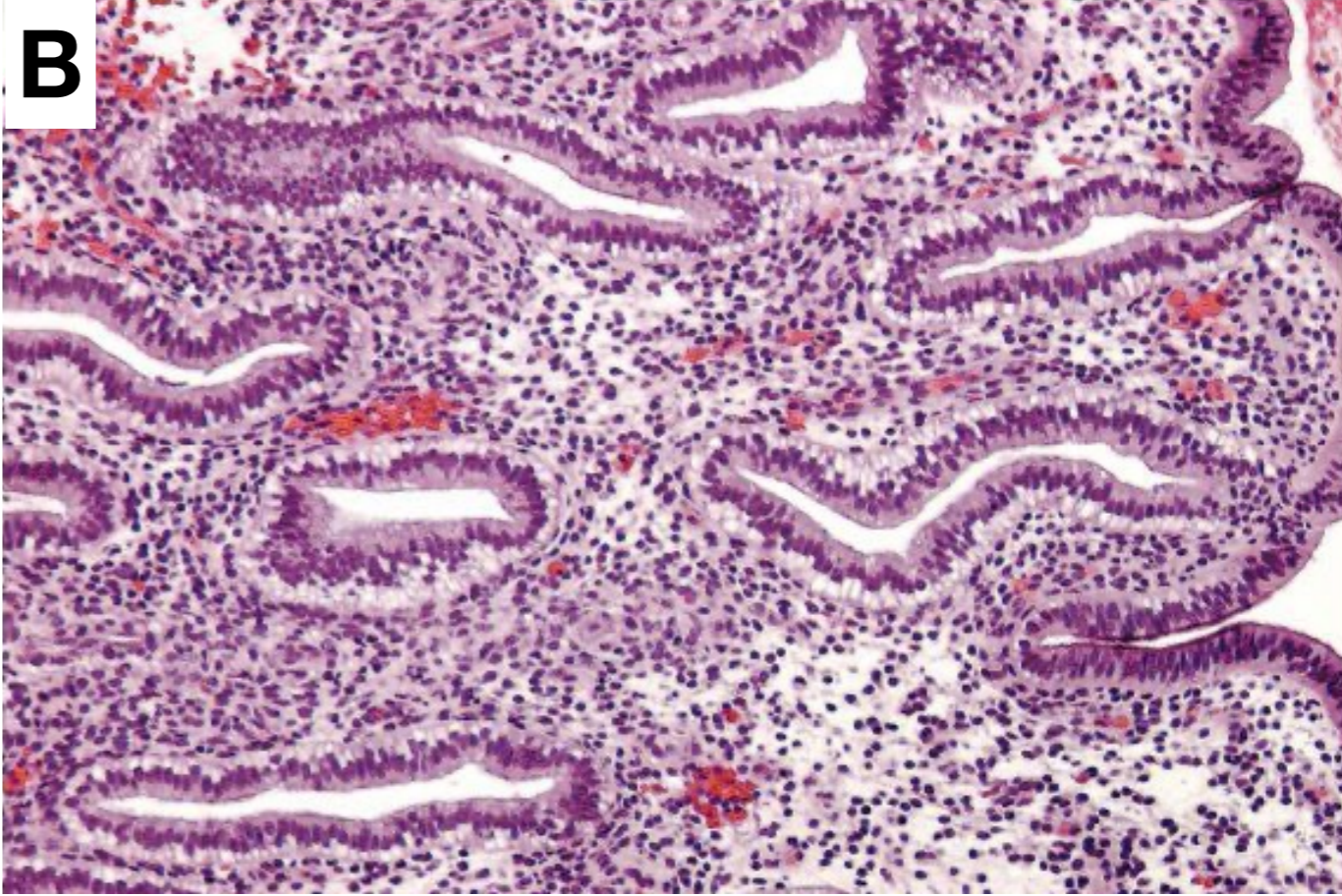
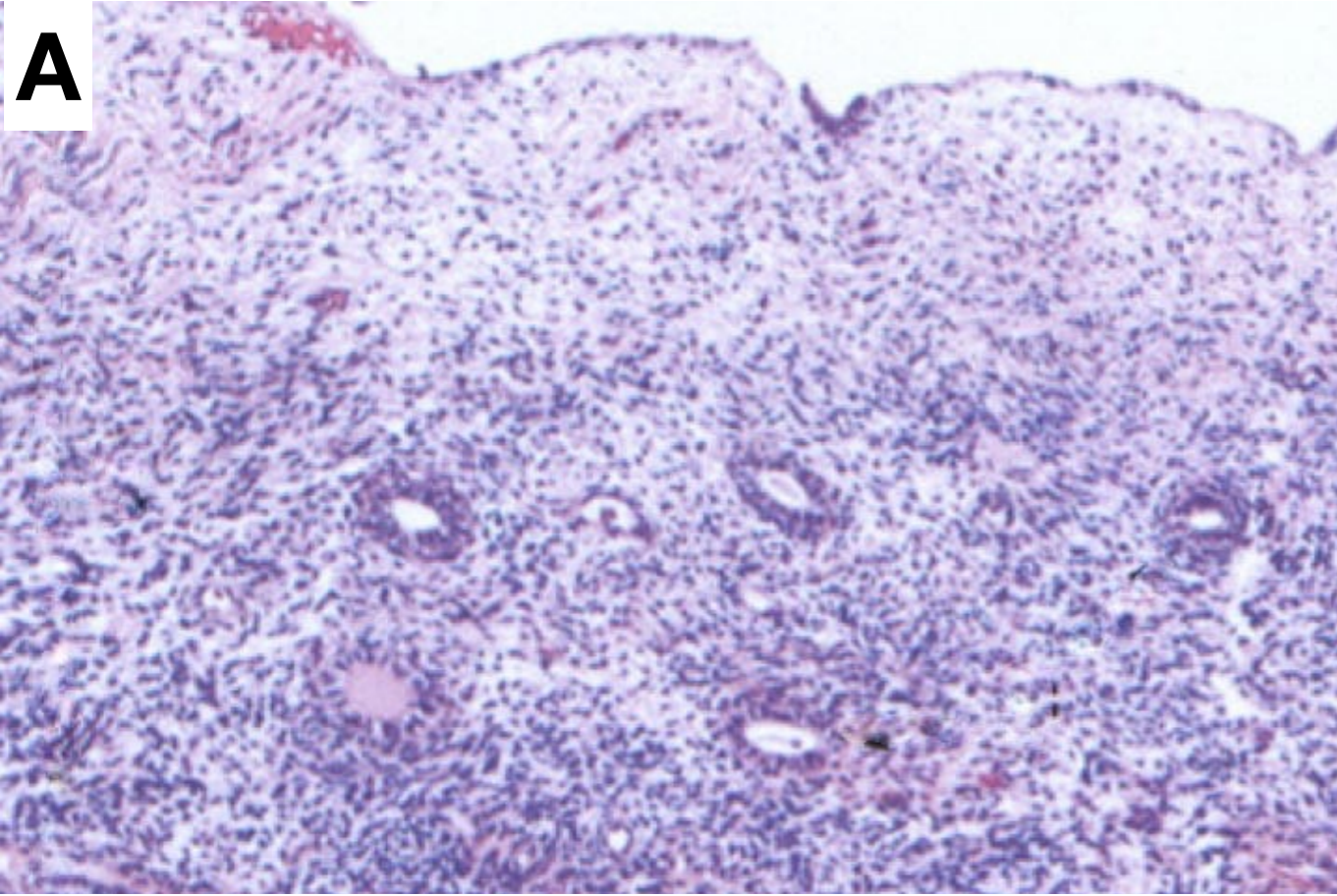


Application Questions

1. A 35-year old female presents with abdominal pain and a history of menorrhagia. Ultrasound shows an ovarian solid cystic mass, indicating an ovarian tumor. A blood test reveals above normal levels of inhibin and below levels of FSH. After an oophorectomy, the histological analysis of the tissue reveals the images below. What type of ovarian cell appears tumorigenic?

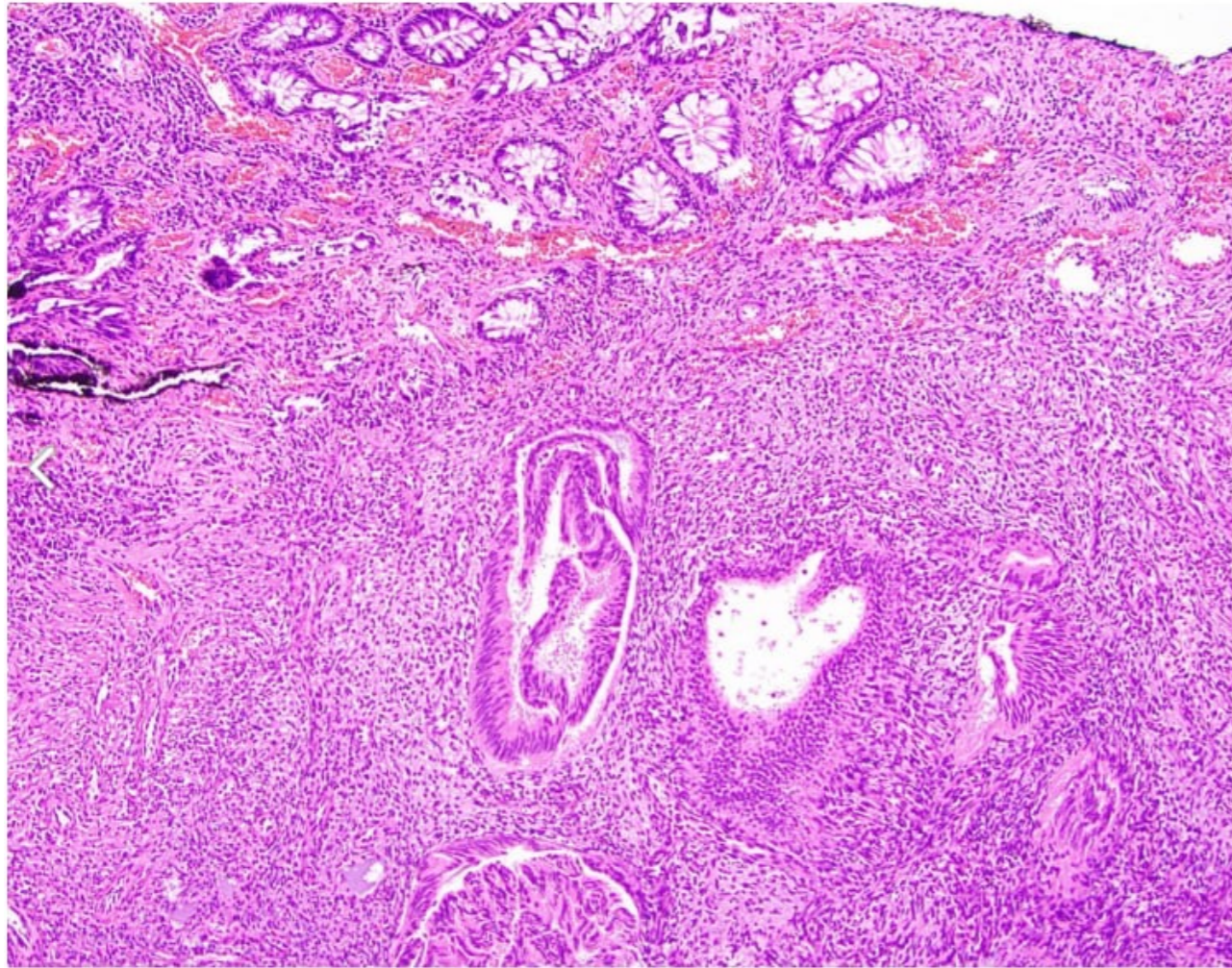


An endometrial biopsy from the patient would most likely resemble which image?

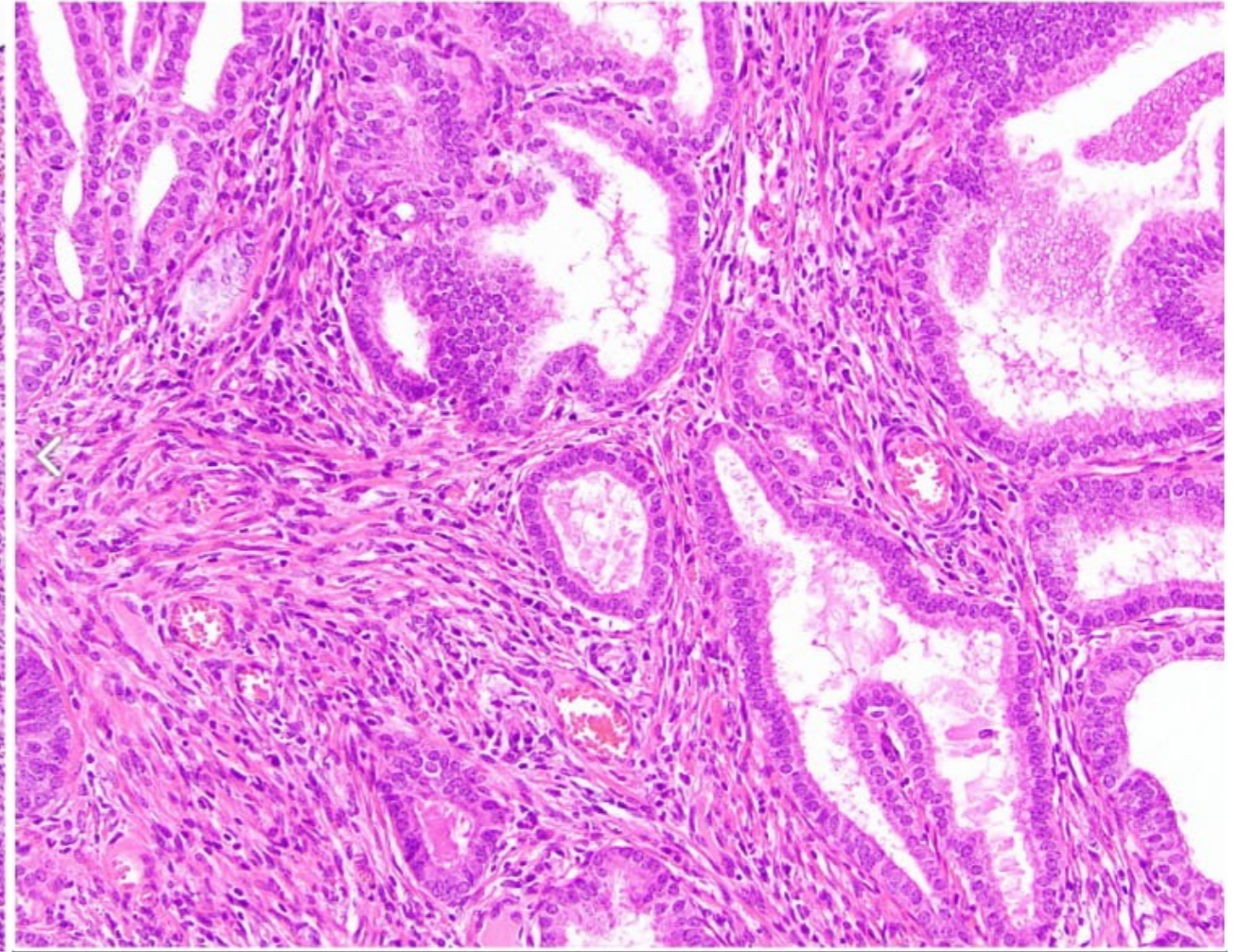


2. A 25-year old female with a history of dysmenorrhea complains of worsening pelvic pain throughout her menstrual cycle, bloating and constipation. Laparoscopy reveals a solid mass in the colon and a biopsy generates the histological images below. Does the image reveal a potential cause of her dysmenorrhea and if so, what pathology do you suspect?

Low Magnification



High Magnification

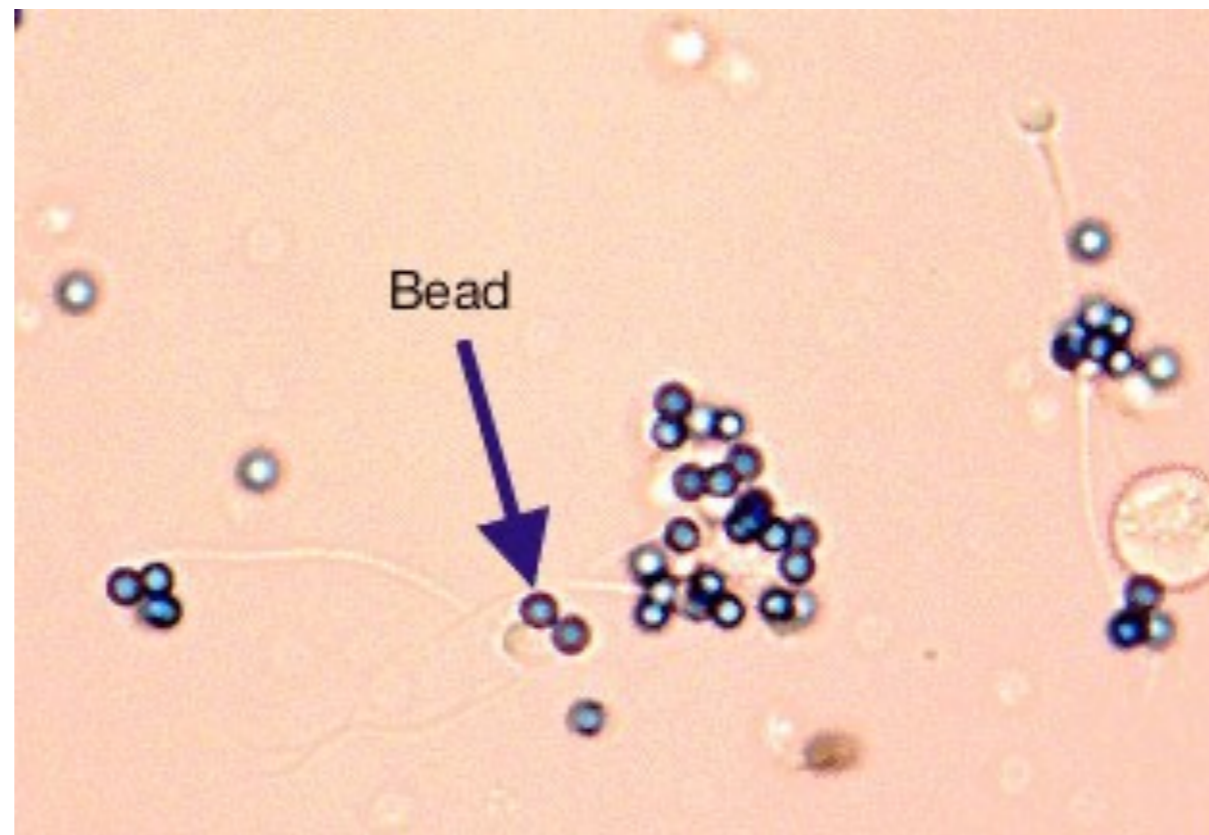


Instead of surgery, the patient elects to try treatment to manage her pain. You start with a NSAID but the patient reports continued pain. You find four drugs listed below that could be used along with the NSAID. Which drug would you choose?

- GnRH agonist
- GnRH antagonist
- Aromatase inhibitor
- Estrogen-progesterone contraceptive

3. You are seeing a male patient who reports having trouble conceiving a child with his wife. An initial examination of the patient's semen reveals normal sperm counts but low sperm motility. To get a better understanding of the pathology, you mix a semen sample with beads that contain on their surfaces antibodies that recognize human IgA and IgG. The image below shows the results. You suspect a genetic mutation underlies the pathology and propose to sequence the patient's genome. His insurance company, however, will only pay for targeted sequencing of one family of the genes. Which set of genes would you choose to sequence?

- Cadherins
- Claudins
- Connexins
- Integrins



4. You see a 6-year old male who has recently exhibited rapid linear growth. A physical exam reveals the presence of pubic hair. A testicular biopsy results in the image below. A genetic analysis would likely reveal a mutation in a gene for which protein?

- GnRH receptor
- FSH receptor
- LH receptor
- Testosterone receptor

