

# Female and Male Reproductive Systems



**BIOLOGICAL GOAL:  
PRODUCTION OF THE NEXT GENERATION OF  
THE SPECIES  
PART 2**



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# Ovarian Cortex

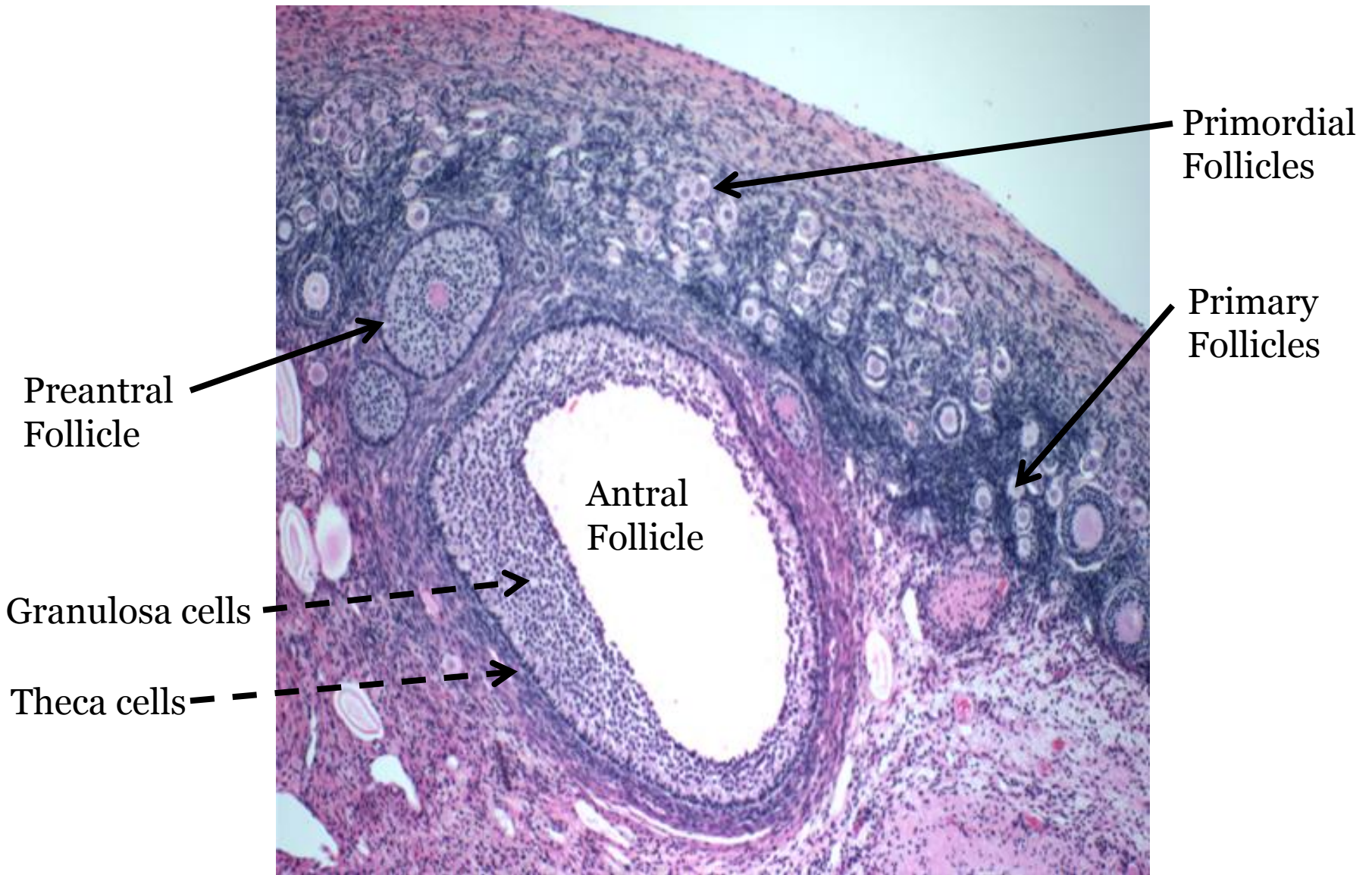
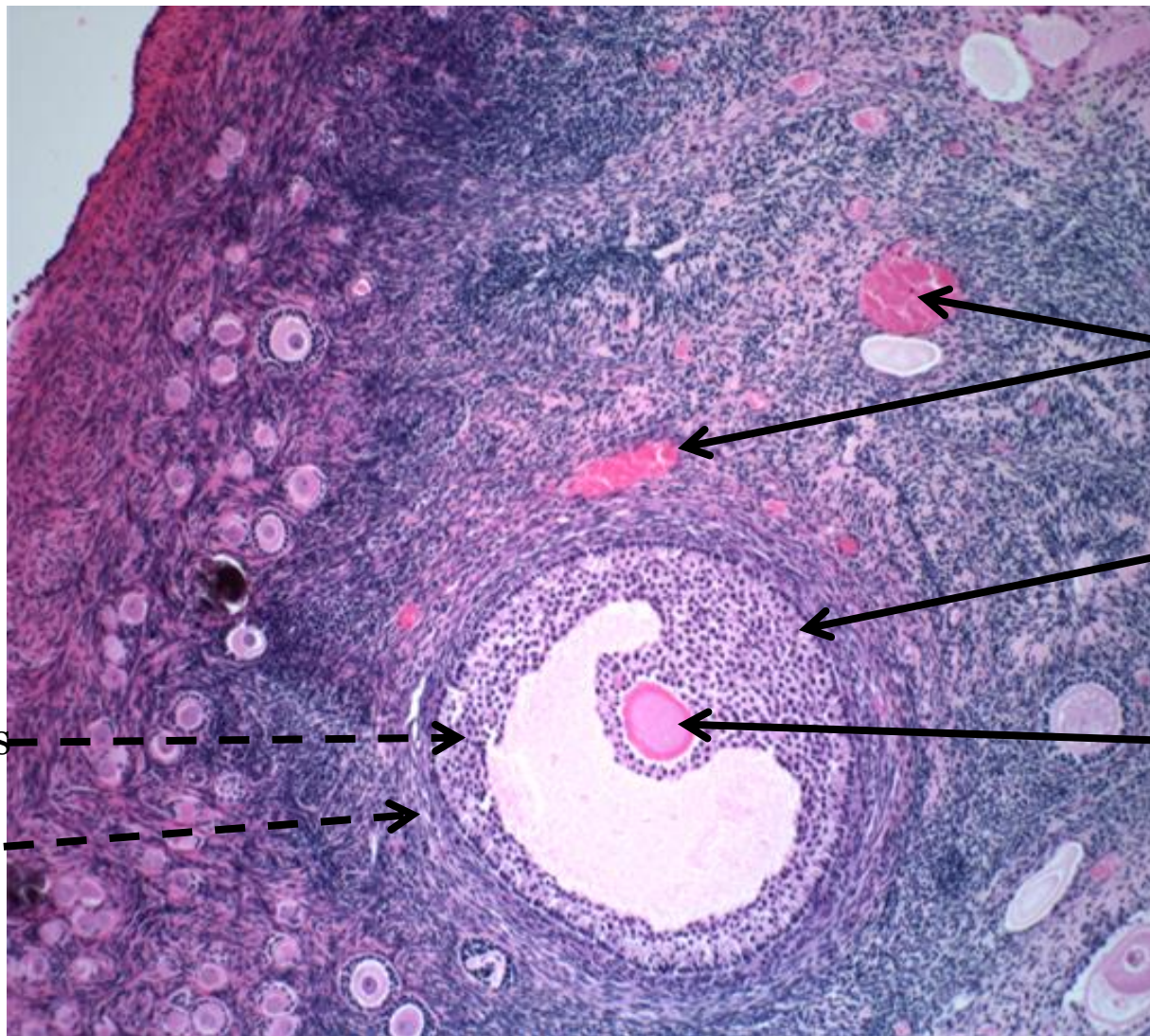


Photo: Mary Zelinski, PhD, ONPRC



# Ovarian Cortex



Blood vessels

Antral Follicle

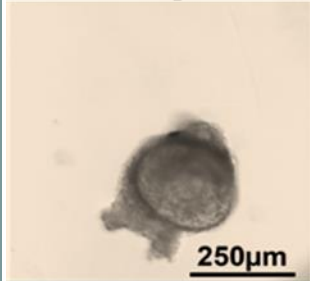
Oocyte

Granulosa cells

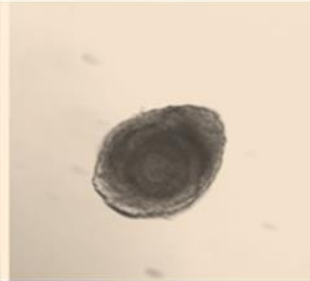
Theca cells

# *In Vitro* Primary Oocyte Growth in its Follicle

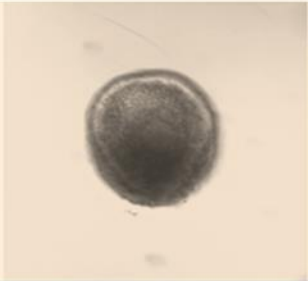
Secondary  
Follicle  
**day1**



**wk1**



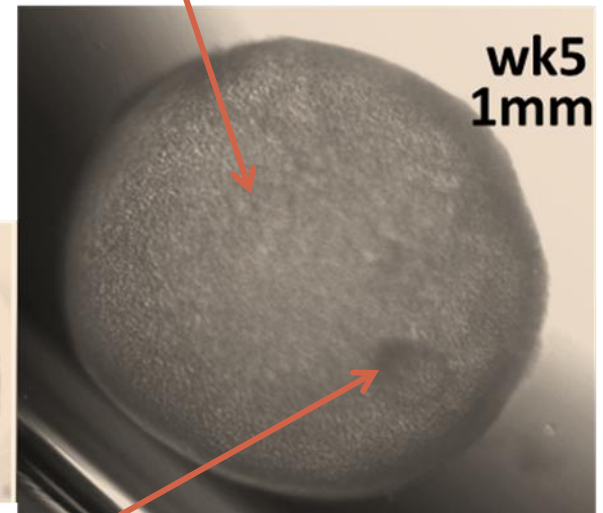
**wk3**



**wk4**



Antral Follicle  
entering Follicular  
Phase of the cycle



Primary Oocyte  
Germinal Vesicle stage of meiosis

# How Do Oocytes Develop?



Primary oocyte with its nucleus arrested at prophase I of meiosis I. Clinically called **Germinal Vesicle (GV)**.



Primary oocyte undergoing meiosis I – nucleus and nucleolus have disappeared. Clinically called **Metaphase I (M1)**.



Secondary oocyte with first polar body resulting from meiosis I. Clinically called **Metaphase II (M2)**.