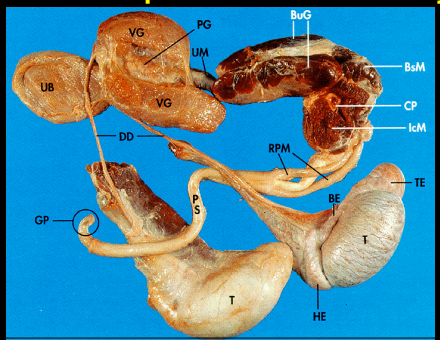
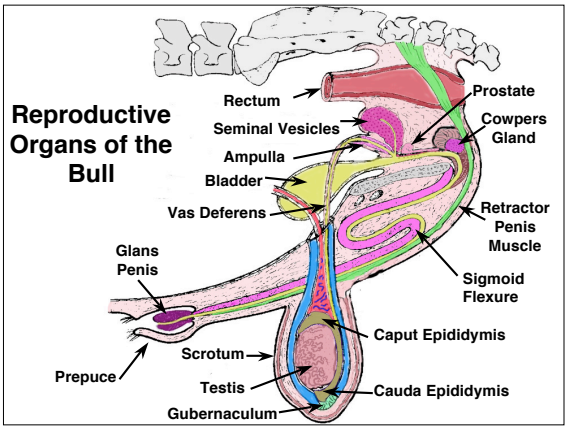
Animal / Dairy Science 434

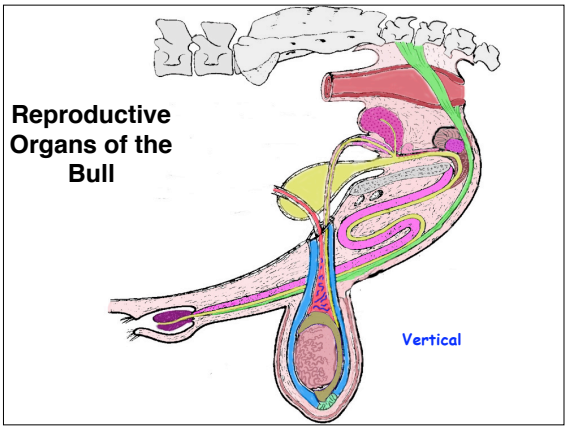
Lec 4: Comparative Male Anatomy

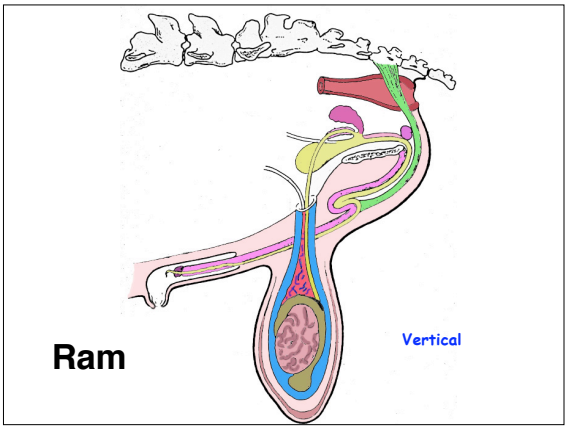


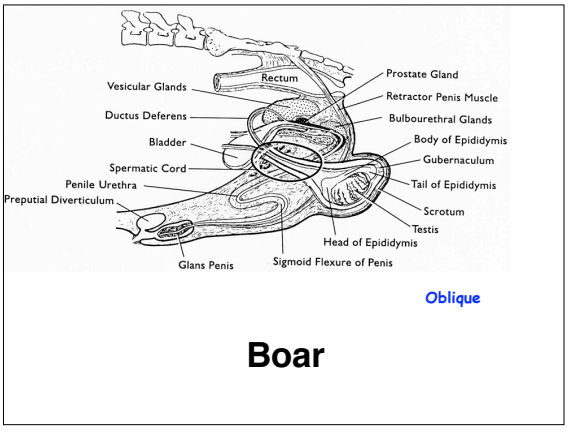
Testis

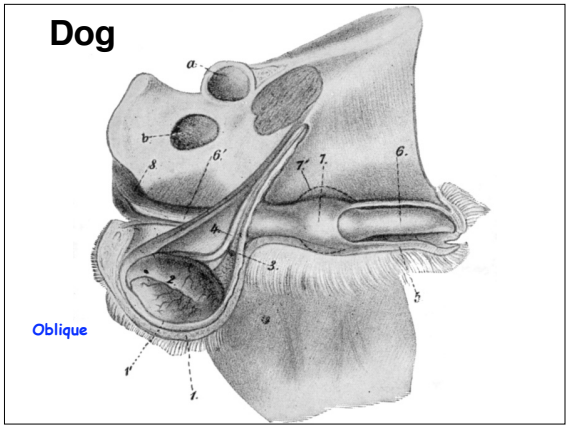
Species	Testis Wt. (grams)	% Of Body Wt.	Orientation
bull	300+	.03	vertical
ram	250	.3	vertical
boar	350	.2	oblique
stallion	200	.03	horizontal
dog	25	.2	oblique
rabbit	2.5	.1	vertical
human	25	.03	vertical

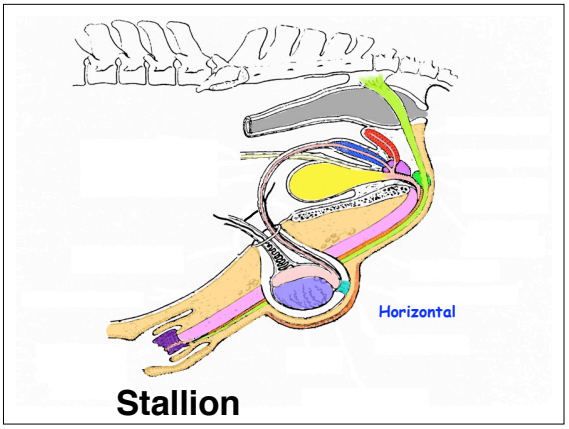


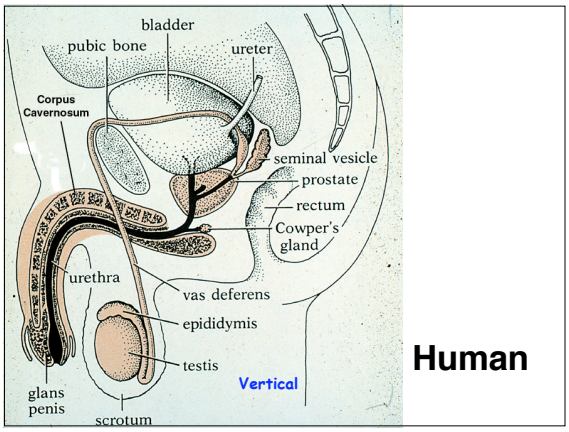


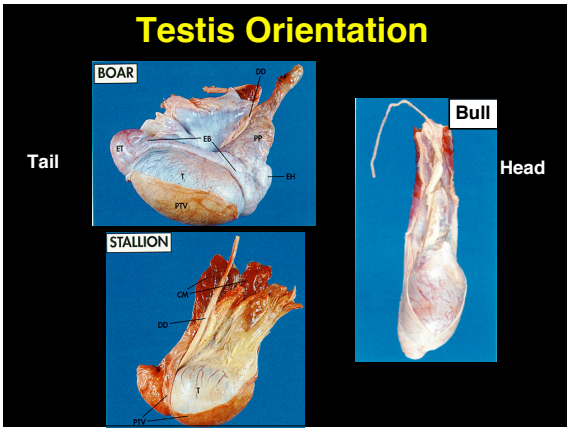






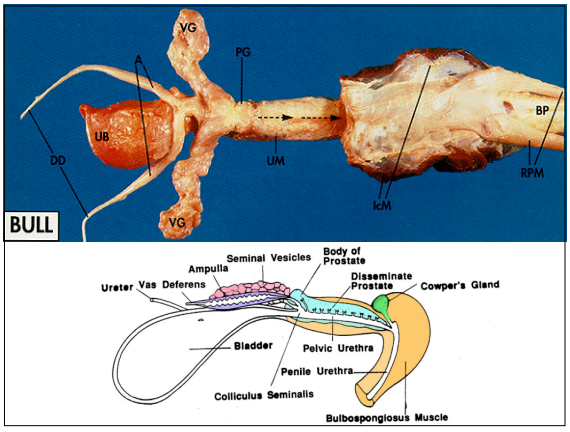


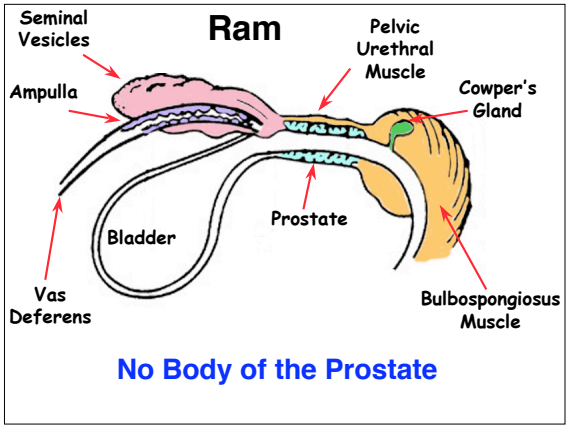


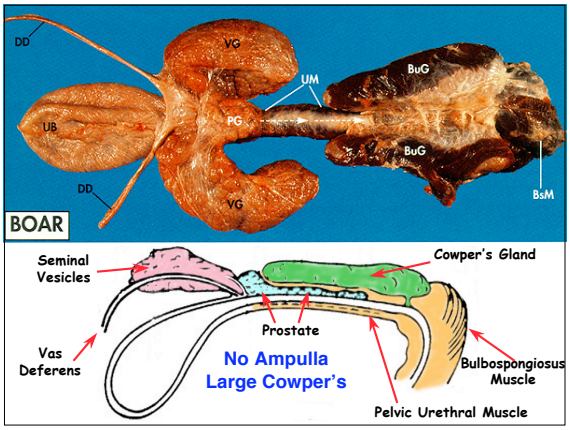


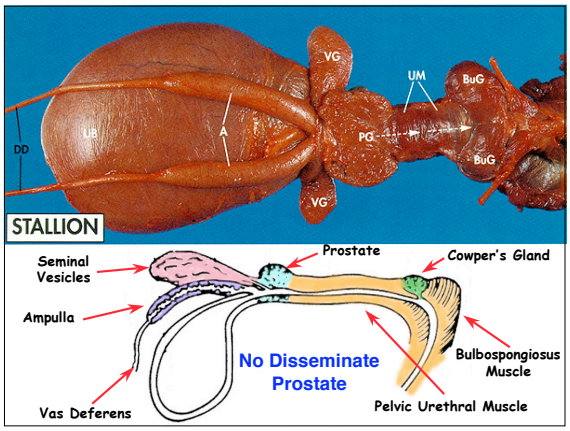
Testis

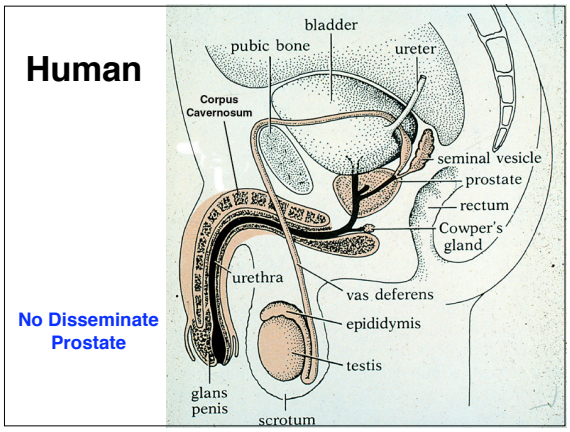
Species	Testis Wt. (grams)	% Of Body Wt.	Orientation
bull	300+	.03	vertical
ram	250	.3	vertical
boar	350	.2	oblique
stallion	200	.03	horizontal
dog	25	.2	oblique
rabbit	2.5	.1	vertical
human	25	.03	vertical

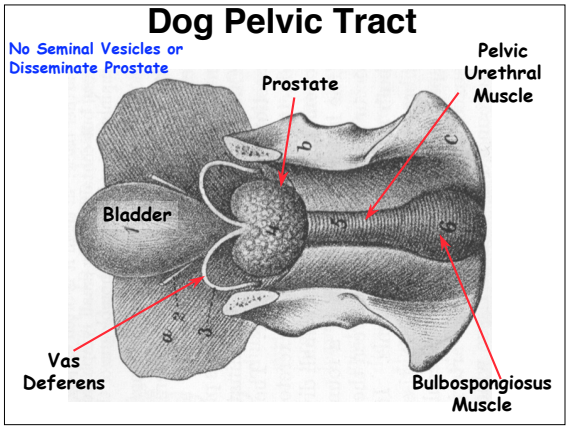












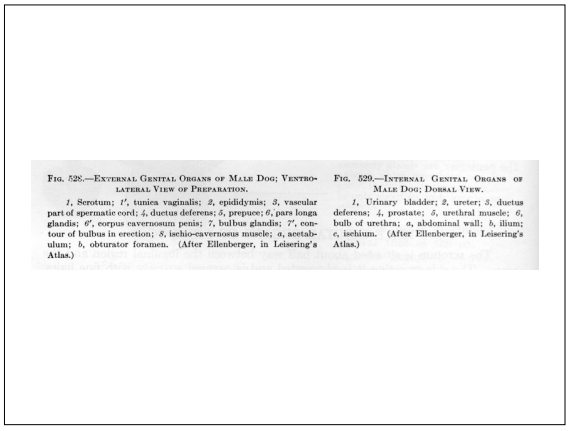


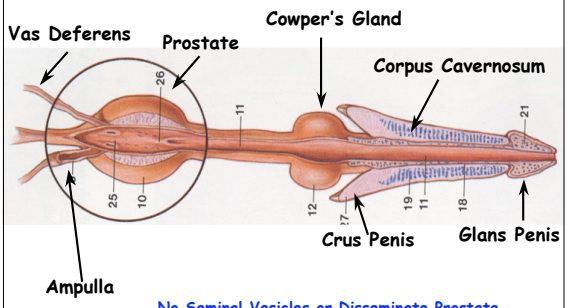
FIG. 528.—EXTERNAL GENITAL ORGANS OF MALE DOG; VENTRO-LATERAL VIEW OF PREPARATION.

1, Scrotum; *1'*, tunica vaginalis; *2*, epididymis; *3*, vascular part of spermatic cord; *4*, ductus deferens; *5*, prepuce; *6*, pars longa glandis; *6'*, corpus cavernosum penis; *7*, bulbus glandis; *7'*, contour of bulbus in erection; *8*, ischio-cavernosus muscle; *a*, acetabulum; *b*, obturator foramen. (After Ellenberger, in Leisering's Atlas.)

FIG. 529.—INTERNAL GENITAL ORGANS OF MALE DOG; DORSAL VIEW.

1, Urinary bladder; *2*, ureter; *3*, ductus deferens; *4*, prostate; *5*, urethral muscle; *6*, bulb of urethra; *a*, abdominal wall; *b*, ilium; *c*, ischium. (After Ellenberger, in Leisering's Atlas.)

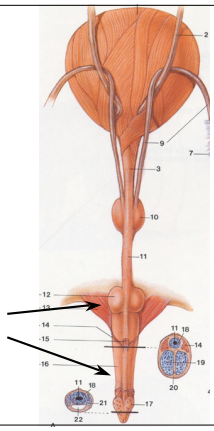
Cat (Tom) Reproductive Tract



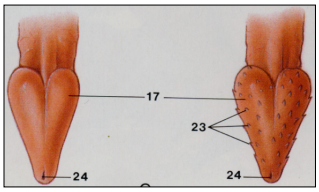
No Seminal Vesicles or Disseminate Prostate

Cat (Tom) Reproductive Tract

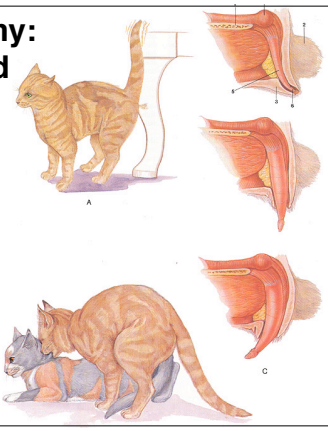
Note how close the cowper's gland is to the penis in the cat.



Cat Glans Penis



Feline Anatomy: Erection and Mating

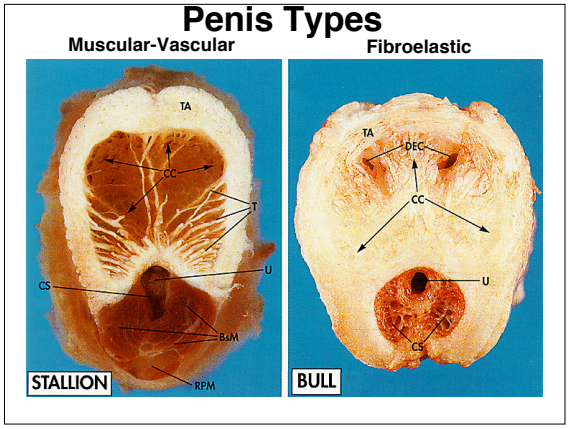


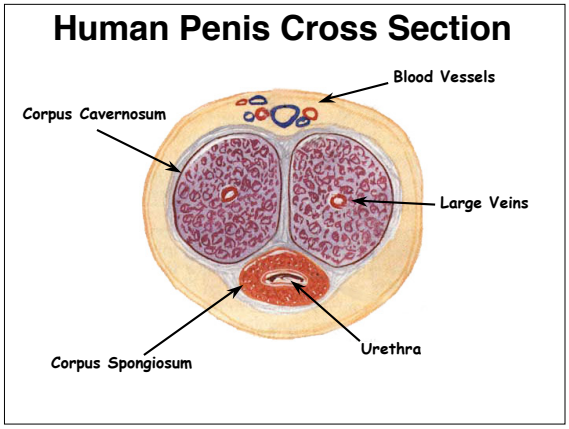
Accessory Glands

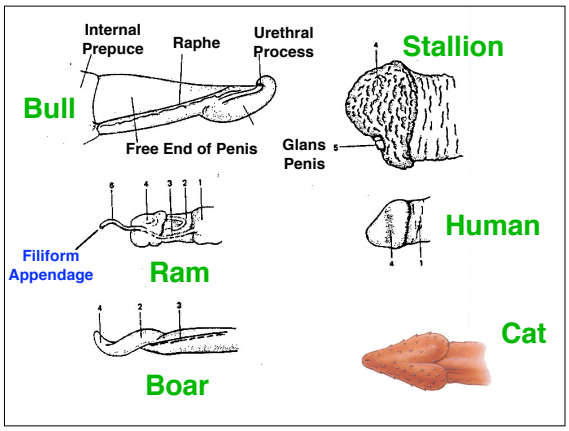
Species	Seminal Vesicles	Prostate body	Prostate disseminate	Cowper's
bull	++	+	+	+
ram	+	-	+	++
boar	+++	+	+	+++
stallion	+++	++	- (+)	+
dog	-	++	-	-
Cat	-	++	-	++
human	+	++	-	+

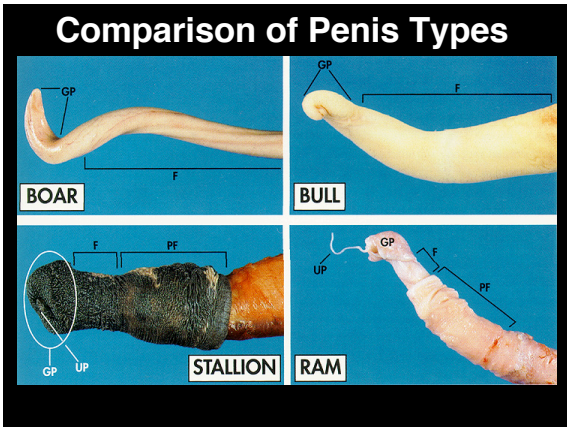
Accessory Gland Secretions

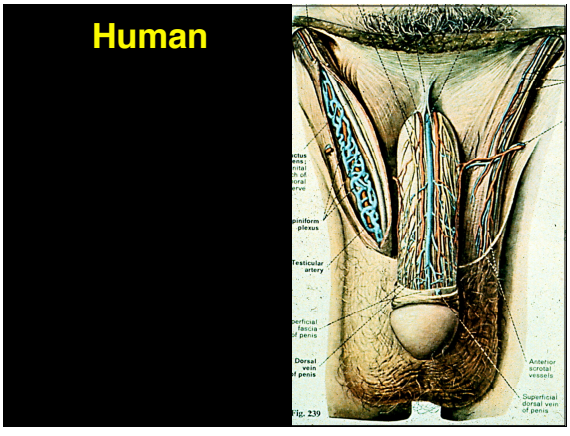
Species	Seminal Vesicles	Prostate Body+ Disseminate	Cowper's
bull	30	6	
ram	8	6	
boar	30	40	30 Gel
stallion	Gel	30	
dog		70	
human	70 Clot	25 Clot Enzyme	

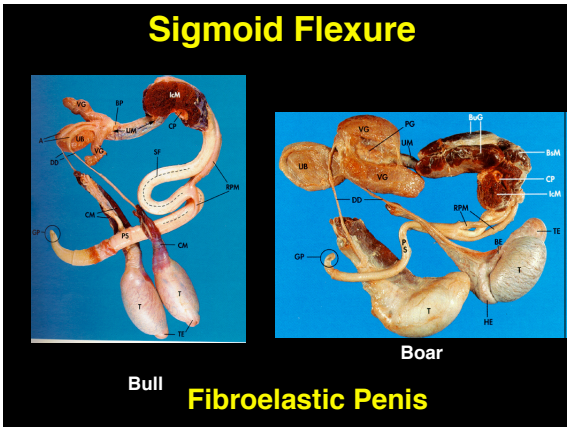

Penis Types
Muscular-Vascular
Fibroelastic
TA
CC
CS
U
BsM
RPM
STALLION
TA
DEC
CC
U
CS
BULL


Human Penis Cross Section
Blood Vessels
Corpus Cavernosum
Large Veins
Corpus Spongiosum
Urethra

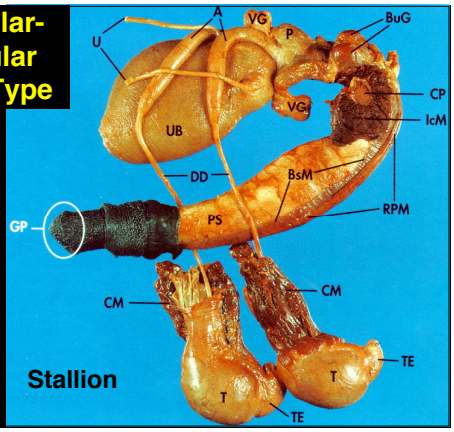

Internal Prepuce
Raphe
Urethral Process
Bull
Free End of Penis
Stallion
Glans Penis
Human
Filiform Appendage
Ram
Cat
Boar


Comparison of Penis Types
GP
F
BOAR
BULL
PF
UP
STALLION
RAM


Human


Sigmoid Flexure
Boar
Bull
Fibroelastic Penis

Muscular-Vascular Penis Type



The Penis

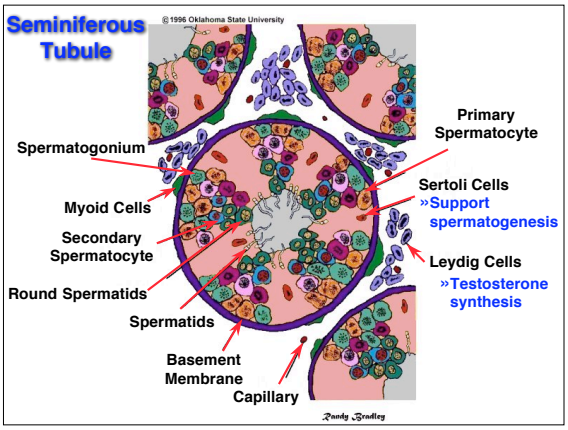
Species	Sigmoid Flexure	Type	Erectile Tissue	Glans
bull	yes	FE	+	Glans
ram	yes	FE	+	Glans
boar	yes	FE	+	not distinct
stallion	no	MV	+++	Large Glans
dog	no	MV	+++	Large Glans
human	no	MV	+++	Large Glans

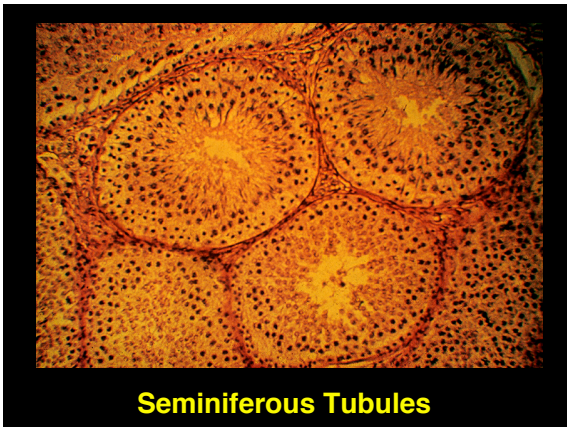
Erection and Ejaculation Characteristics

Species	Speed of Erection	Ejaculate Time	Semen Volume	Sperm Conc.	Sperm Number
bull	rapid	short	medium	medium-high	medium
ram	rapid	short	small	high	medium
boar	rapid	long	large	low	high
stallion	slow	moderate	large	low	medium
dog	slow	long	large	low	low
human	slow	moderate	medium	low	low

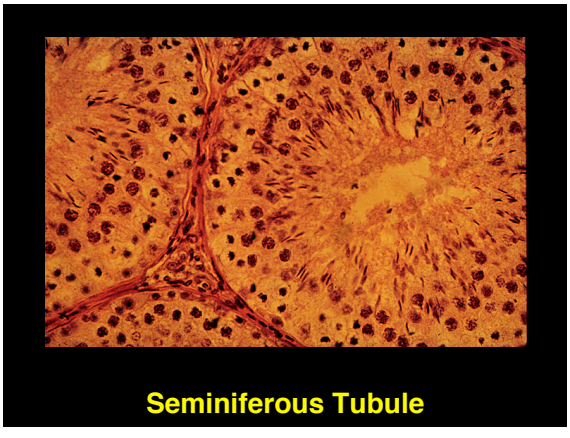
Large Testes = high sperm numbers
Large accessory glands = large volume of the ejaculate with lower concentration of sperm

Seminiferous Tubule

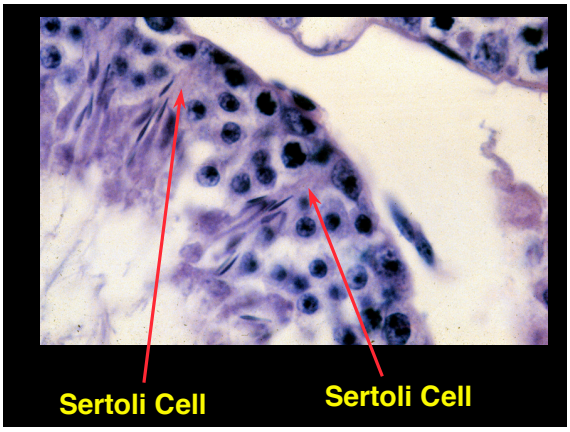


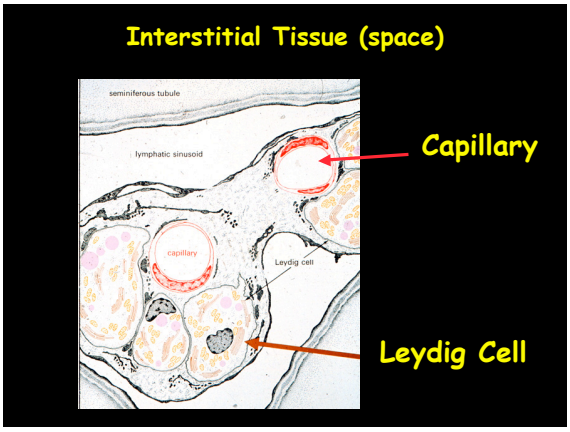


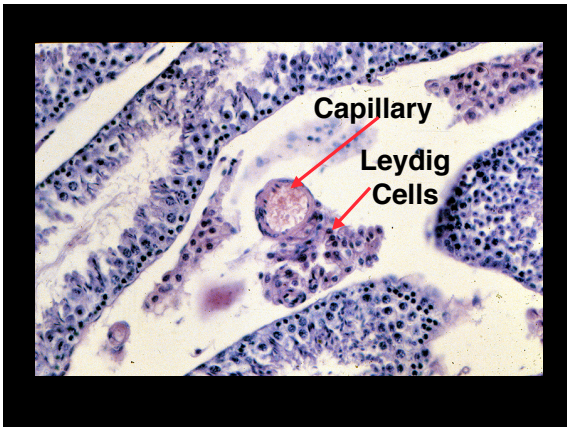
Seminiferous Tubules

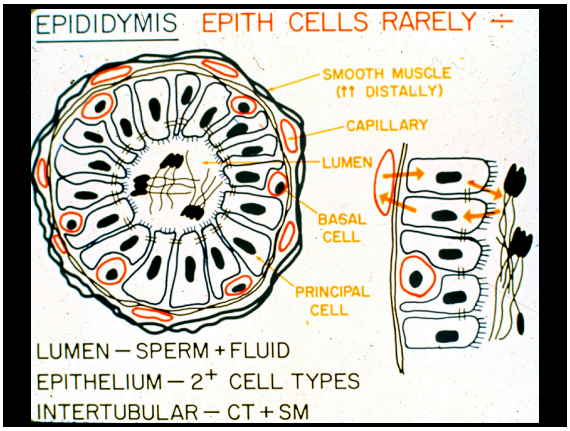


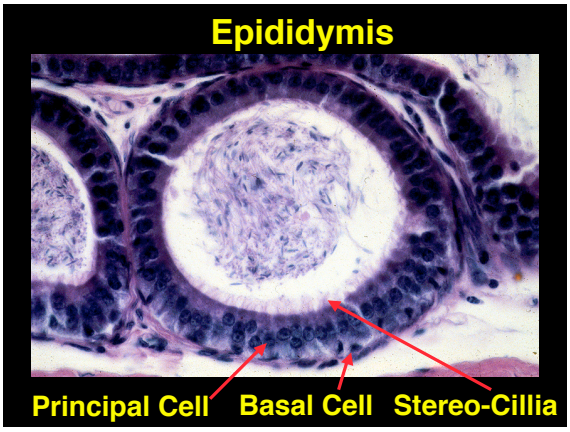
Seminiferous Tubule

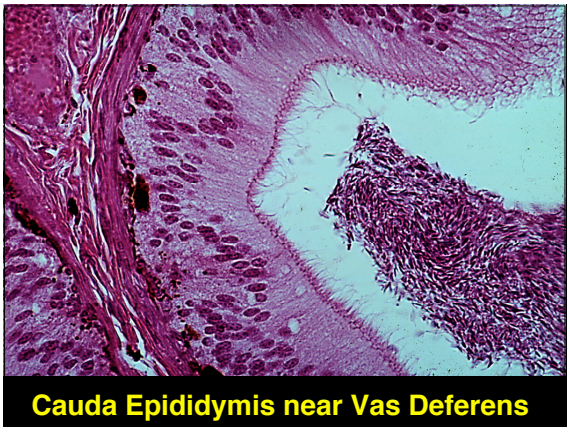

Sertoli Cell
Sertoli Cell

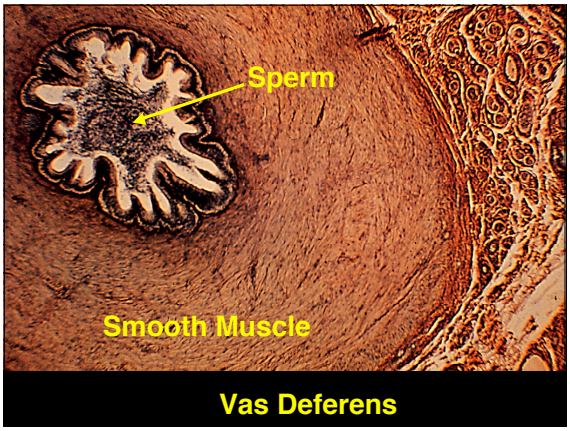

Interstitial Tissue (space)
seminiferous tubule
lymphatic sinusoid
capillary
Leydig cell
Capillary
Leydig Cell


Capillary
Leydig
Cells


EPIDIDYMIS EPITH CELLS RARELY ÷
SMOOTH MUSCLE
(↑↑ DISTALLY)
CAPILLARY
LUMEN
BASAL
CELL
PRINCIPAL
CELL
LUMEN — SPERM + FLUID
EPITHELIUM — 2+ CELL TYPES
INTERTUBULAR — CT + SM


Epididymis
Principal Cell
Basal Cell
Stereo-Cillia


Cauda Epididymis near Vas Deferens



Vas Deferens

