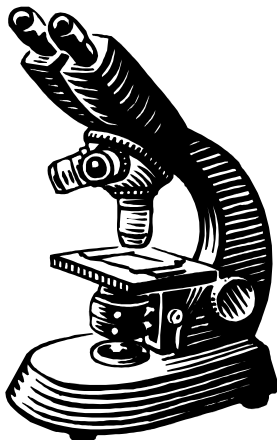
Bio& 242:
Unit 2 / Lab 1

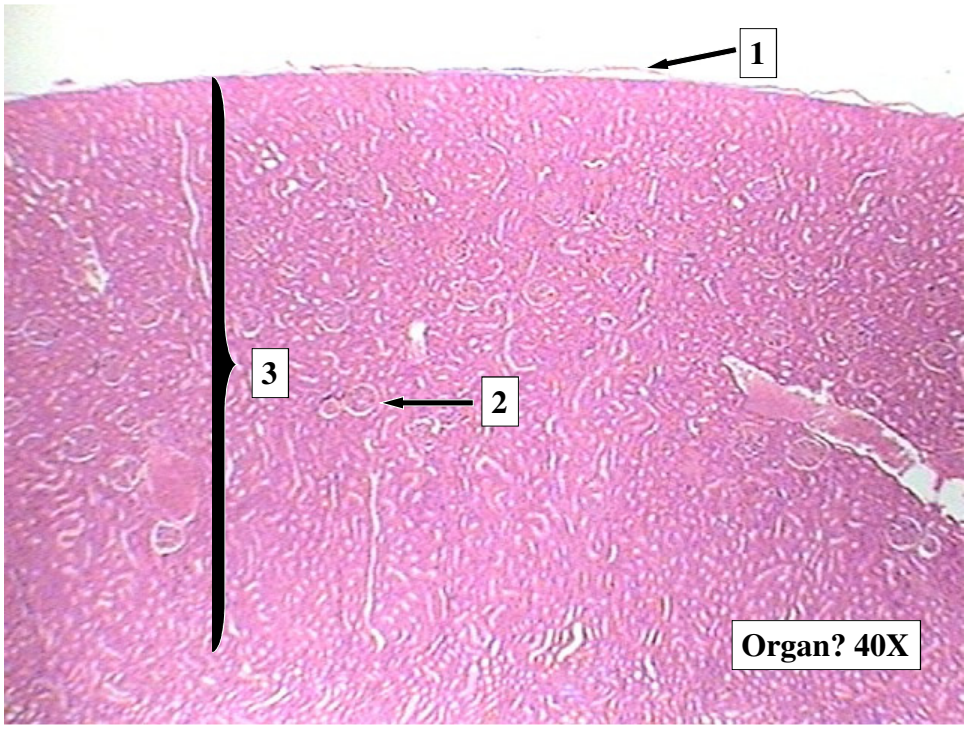


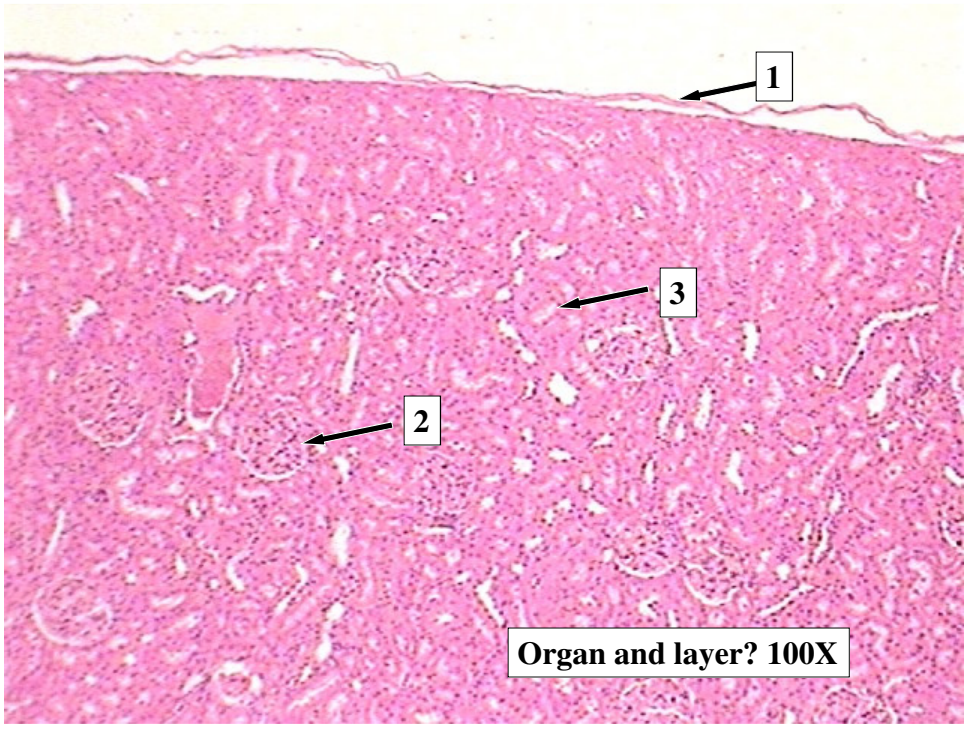
Histology Slides for the Urinary System

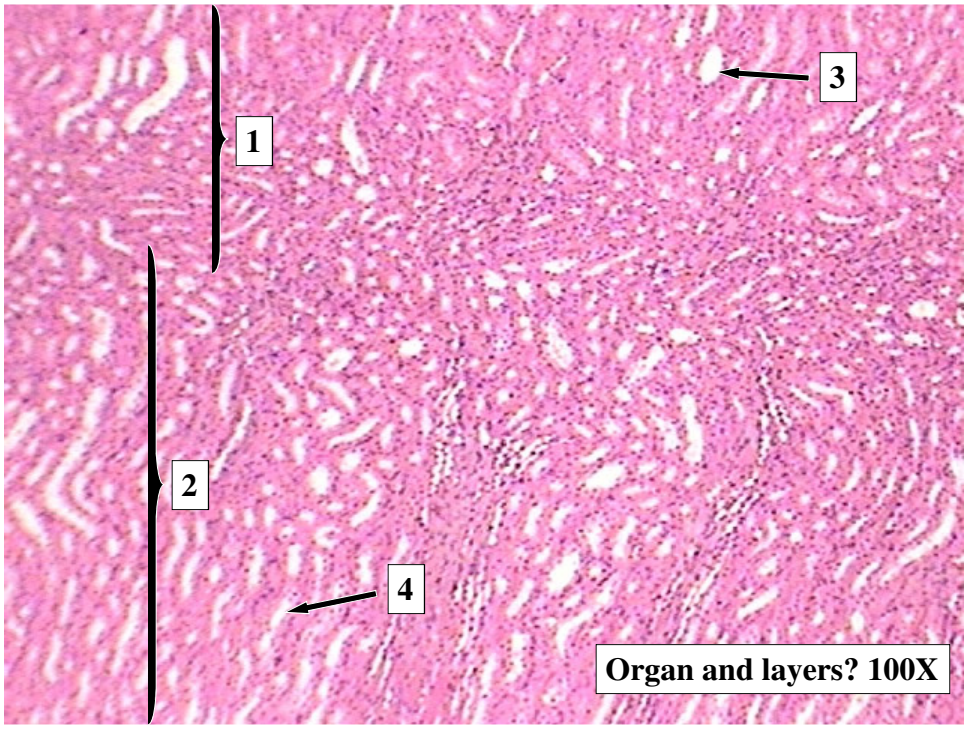
- **Slides are presented in order of magnification**
- **As you view the following slides make sure you can accomplish these goals:**

1. **Can you identify the organ or duct from which the tissue sample was taken?**
2. **Can you identify the specific structures or layers indicated by the numbered arrows or brackets?**

- **At the end of a sequence, you will find the answers to the above for each organ or duct.**


1
3
2
Organ? 40X


1
3
2
Organ and layer? 100X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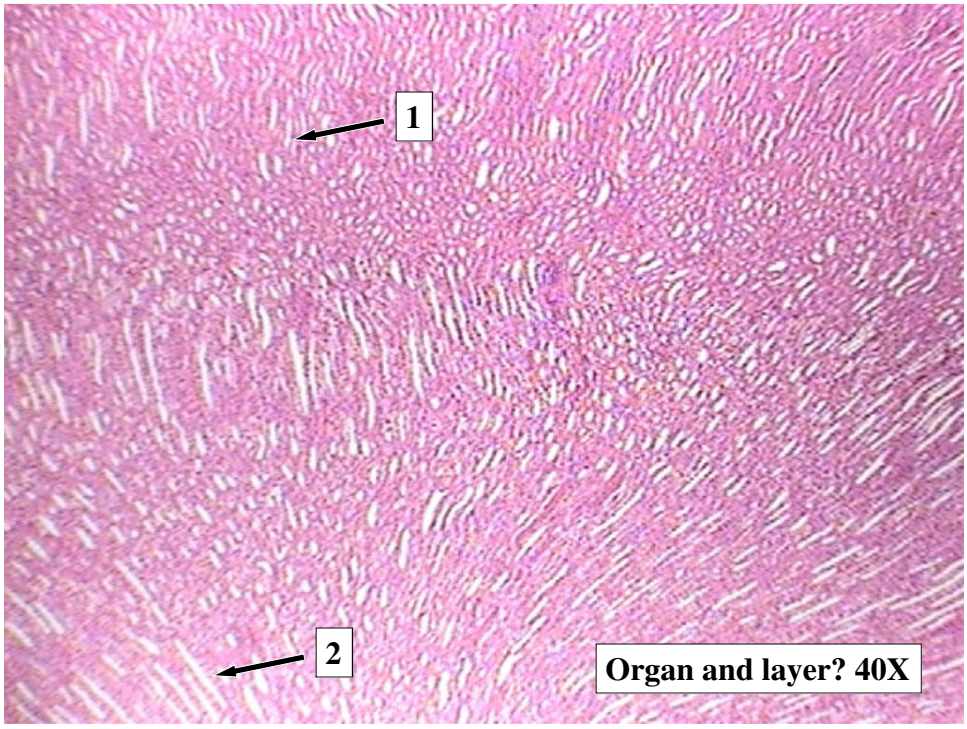
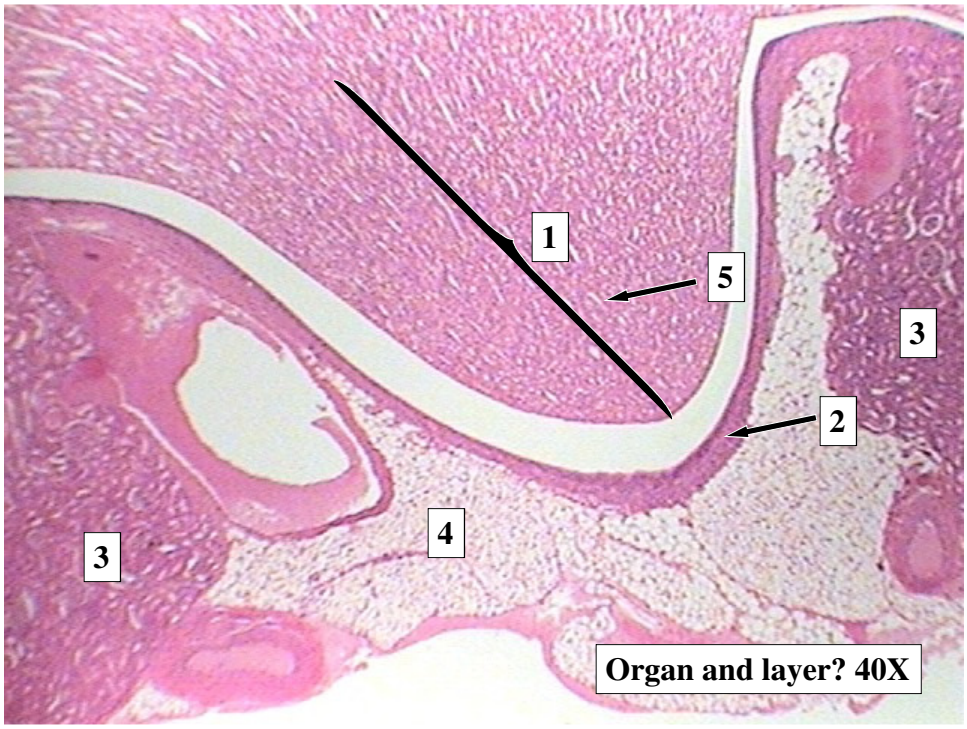
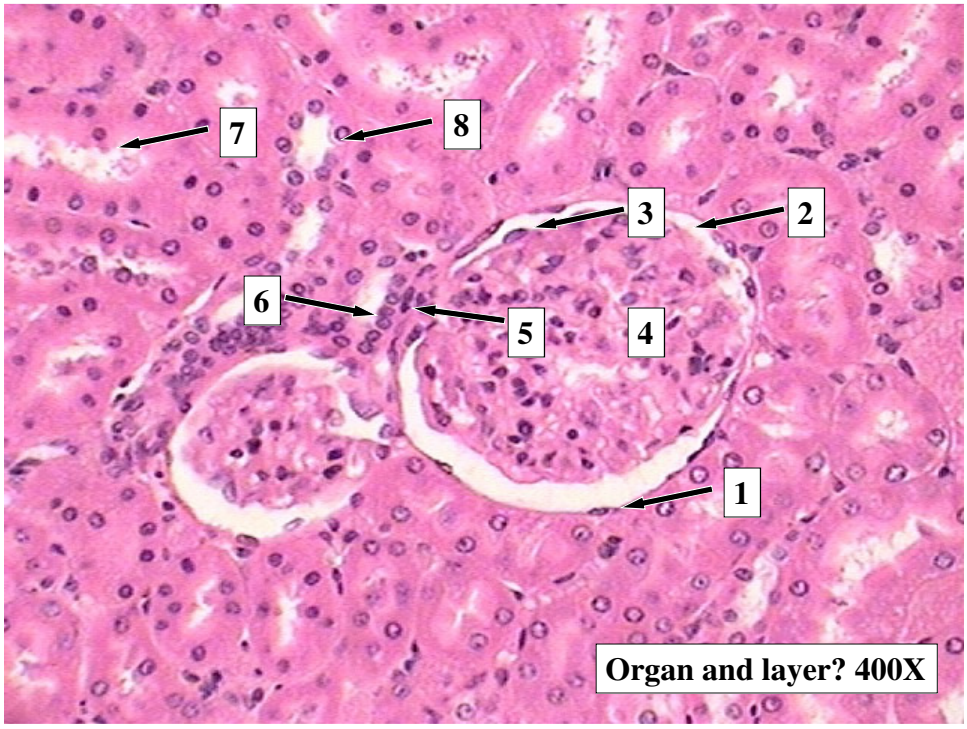
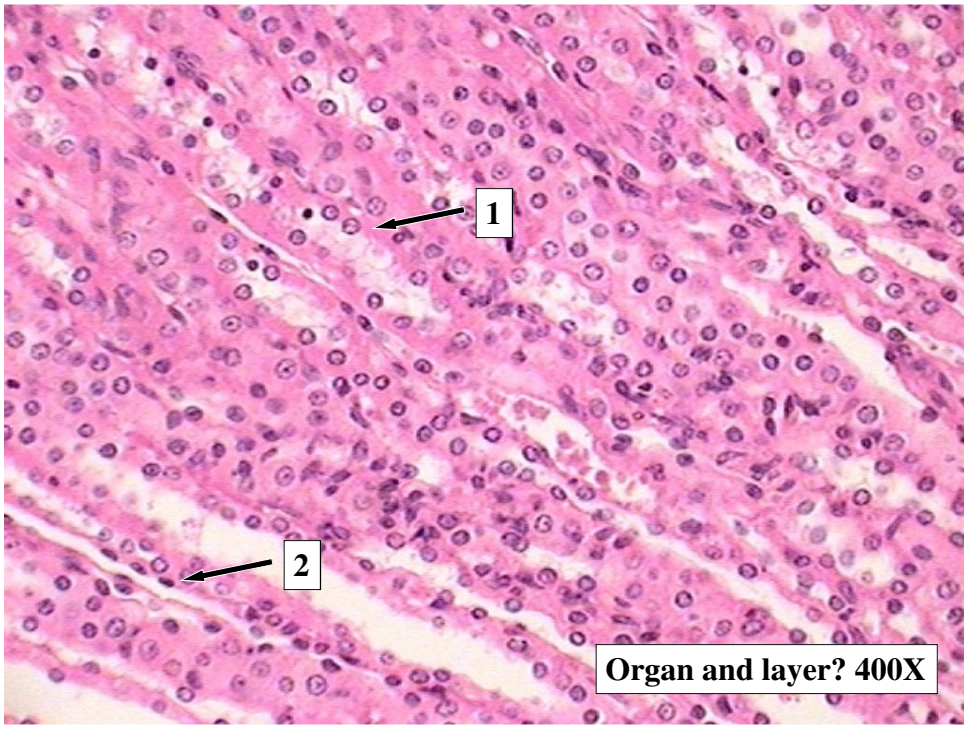
2
3
4
Organ and layers? 100X


1
2
Organ and layer? 40X


1
5
3
2
4
3
Organ and layer? 40X


7
8
3
2
6
5
4
1
Organ and layer? 400X



Tissue from Kidney slides 2-8

Slide # 2: Cortex of the Kidney (40X)

1. **Renal Capsule**
2. **Renal Corpuscle with Bowman's Capsule**
3. **Cortex of the Kidney**

Slide # 3: Cortex of the Kidney (100X)

1. **Renal Capsule**
2. **Renal Corpuscle with Bowman's Capsule**
3. **X-section through a Proximal or Distal Convoluted Tubule**

Tissue from Kidney slides 2-8

Slide # 4: interface of Cortex and Medulla of the Kidney (100X)

1. **Renal Cortex**
2. **Renal Medulla**
3. **X-section through a Proximal or Distal Convoluted Tubule**
4. **Longitudinal section through a thick portion of the Loop of Henle or collecting duct**

Slide # 5: Medulla of the Kidney (40X)

1. **Longitudinal section through a thick portion of the Loop of Henle or collecting duct**
2. **Longitudinal section through a collecting duct**

Tissue from Kidney slides 2-8

Slide # 6: Medulla of the Kidney and Minor Calyx (40X)

1. **Renal Papilla**
2. **Wall of the Minor Calyx demonstrating transitional epithelium**
3. **Areas of Renal Cortex with Renal capsules**
4. **Portion of the Renal Sinus filled with Adipocytes**
5. **Papillary duct within the Renal Papilla**

Tissue from Kidney slides 2-8

Slide # 7: Renal Cortex (400X)

1. **Parietal Epithelium of Bowman's Capsule**
2. **Capsular Space where filtrate collects**
3. **Nucleus of a podocyte**
4. **Glomerulus of a Renal Corpuscle**
5. **Juxtaglomerular cells of a Juxtaglomerular Apparatus**
6. **Macula Densa of a Juxtaglomerular Apparatus**
7. **X-section through a Proximal Convoluted Tubule (Note presence of Microvilli)**
8. **X-section through a Distal Convoluted Tubule**

Tissue from Kidney slides 2-8

Slide # 8: Renal Medulla (400X)

1. **Longitudinal section through a collecting duct (note the Cuboidal epithelium)**
2. **Longitudinal section through a thin Loop of Henle (note the Squamous epithelium)**


3
1
2
4
Duct? 40X


2
1
3
Duct? 400X

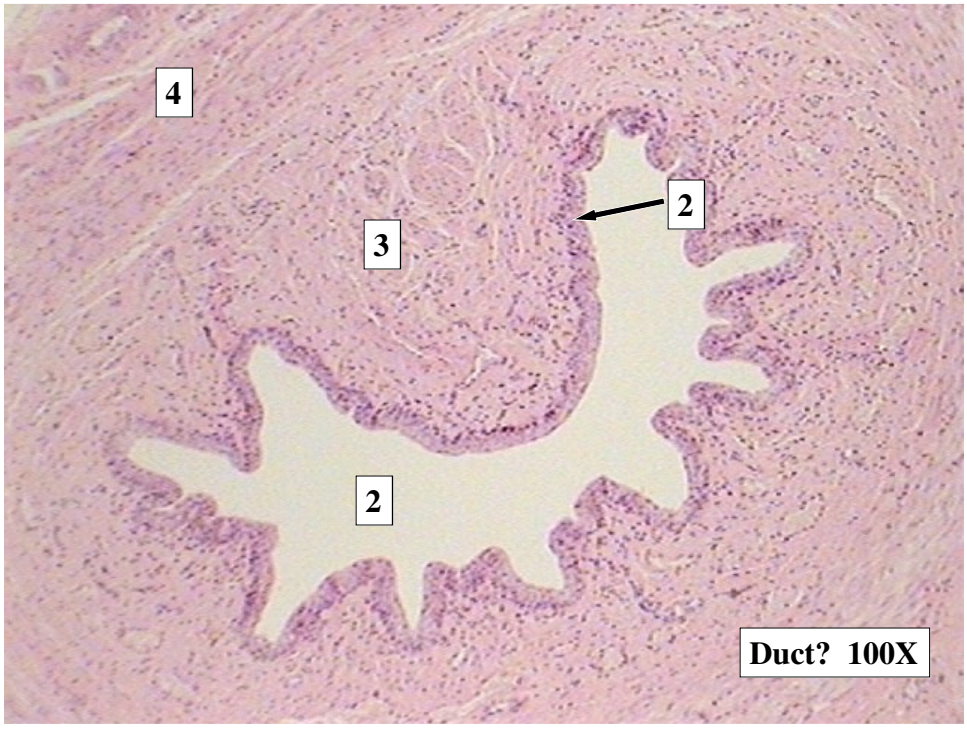
Tissue from Ureter slides 14-15

Slide # 14: X-Section of the Ureter (40X)

1. **Lumen of the Ureter**
2. **Transitional Epithelium**
3. **Lamina Propria**
4. **Smooth Muscle**

Slide # 15: X-Section of the Ureter (400X)

1. **Lumen of the Ureter**
2. **Transitional Epithelium**
3. **Lamina Propria**



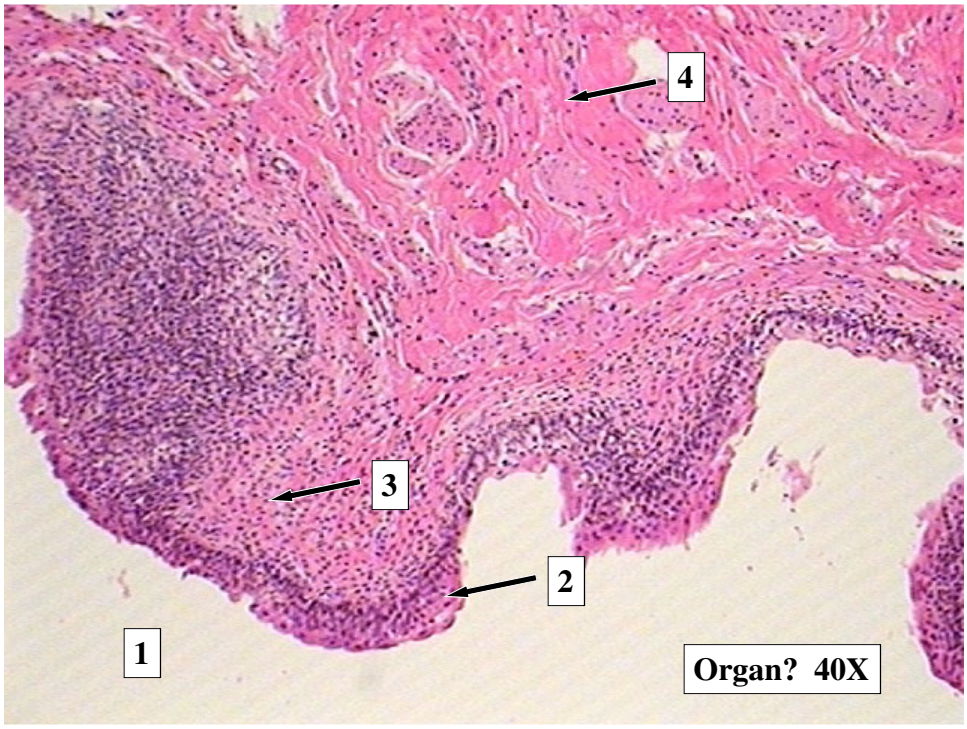
Tissue from Urethra slides 17-18

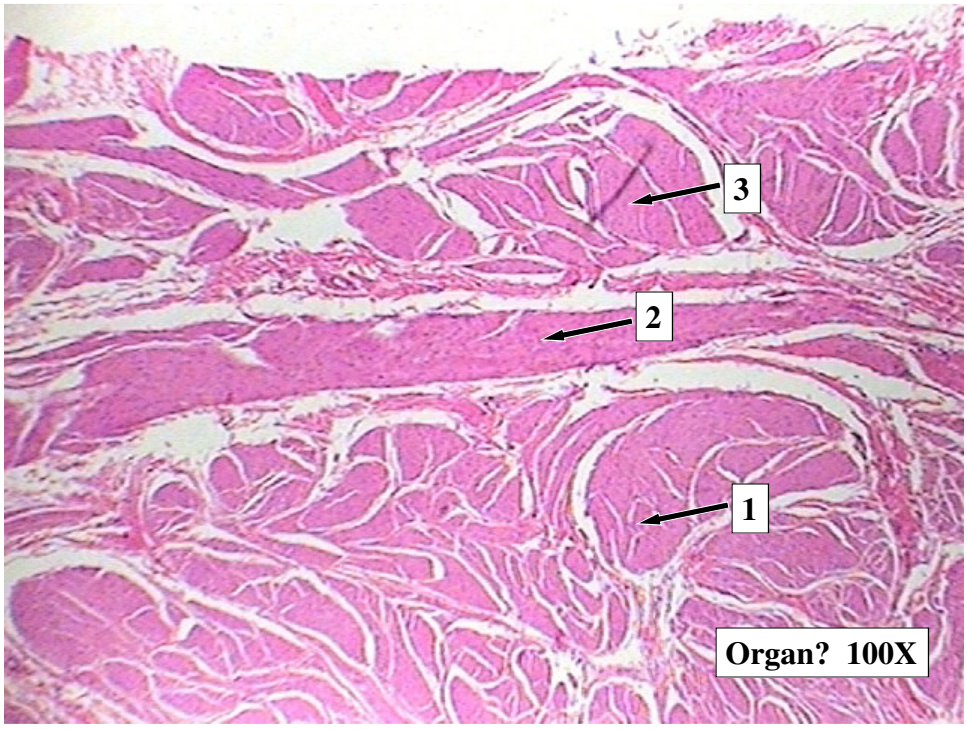
Slide # 17: X-Section of the Urethra (100X)

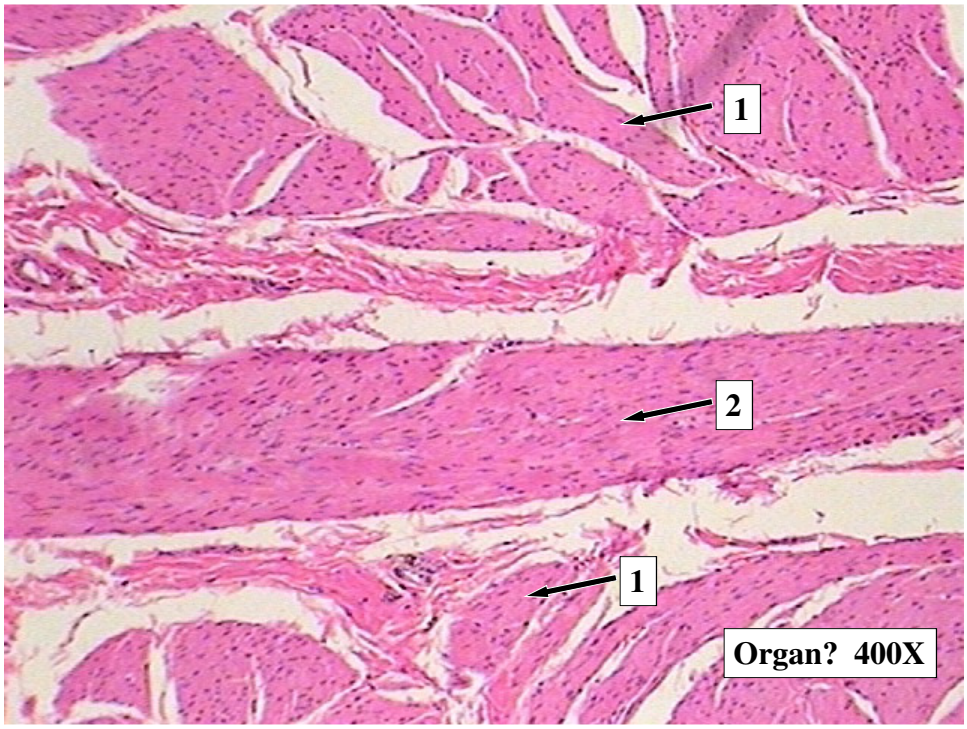
1. **Lumen of the Urethra**
2. **Transitional Epithelium**
3. **Lamina Propria**
4. **Smooth Muscle**

Slide # 18: X-Section of the Urethra (400X)

1. **Lumen of the Urethra**
2. **Transitional Epithelium**
3. **Lamina Propria**


4
3
2
1
Organ? 40X


3
2
1
Organ? 100X



Tissue from Urinary Bladder slides 20-22

Slide # 20: X-Section of the Urinary Bladder (40X)

1. **Lumen of the Urinary Bladder**
2. **Transitional Epithelium**
3. **Lamina Propria**
4. **Submocosa**

Slide # 21: X-Section of the Urinary Bladder Muscularis layer (Detrusor muscle) (100X)

1. **Inner Longitudinal smooth muscle layer**
2. **Circular smooth muscle layer**
3. **Outer Longitudinal smooth muscle layer**

Tissue from Urinary Bladder slides 20-22

Slide # 21: X-Section of the Urinary Bladder Muscularis layer (Detrusor muscle) (400X)

1. **Inner Longitudinal smooth muscle layer**
2. **Circular smooth muscle layer**
3. **Outer Longitudinal smooth muscle layer**