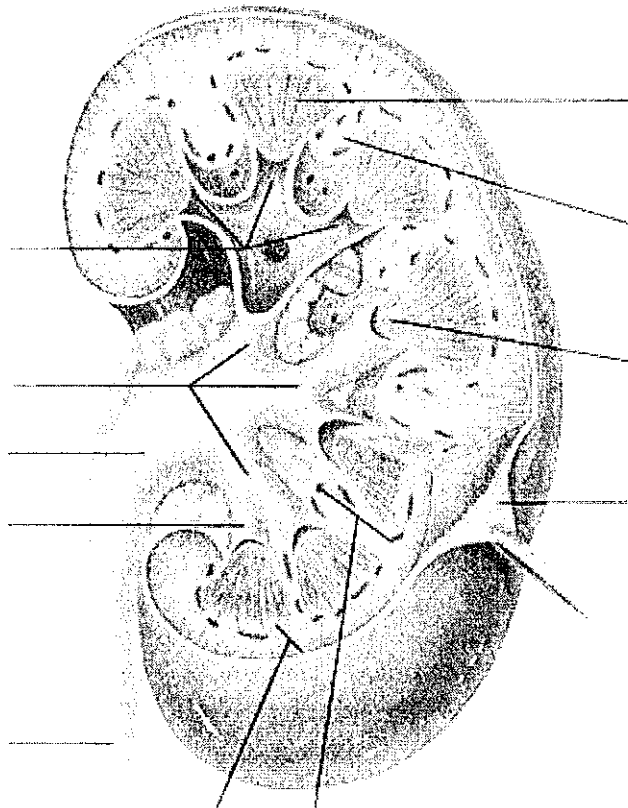


**4.01 Structures of the kidney  
Handout**

Name \_\_\_\_\_  
Date \_\_\_\_\_

**Directions:** Label the listed structures of the kidney. There are extra lines.

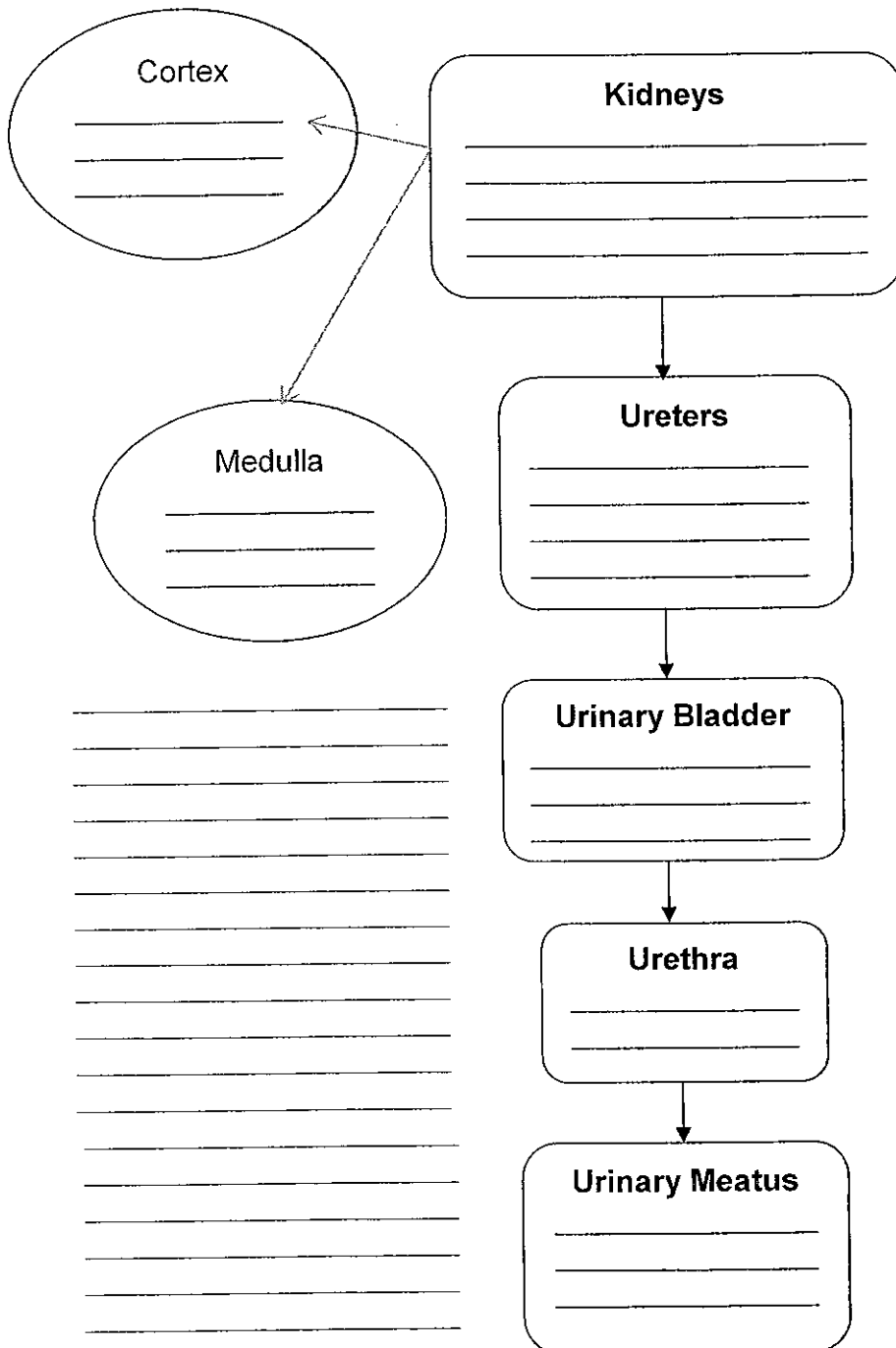
1. Cortex
2. Medulla
3. Ureter
4. Pyramid(Renal)
5. Renal Pelvis



**4.01 Structures of the urinary system**  
**Handout**

Name \_\_\_\_\_  
Date \_\_\_\_\_

**Directions:** Record notes and class discussion while viewing the PowerPoint presentation. Use the handout as a study guide.



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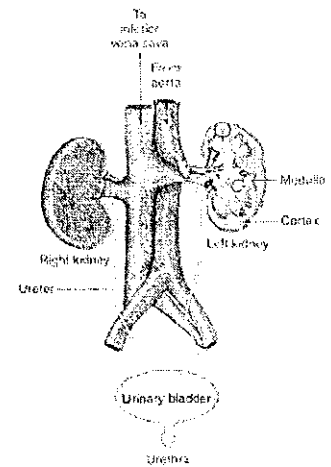
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**4.01 Urinary System Matching  
Handout**

**Name** \_\_\_\_\_  
**Date** \_\_\_\_\_

**Directions:** Match the correct term with its definition. Write the correct letter in the blank next to the term it defines.

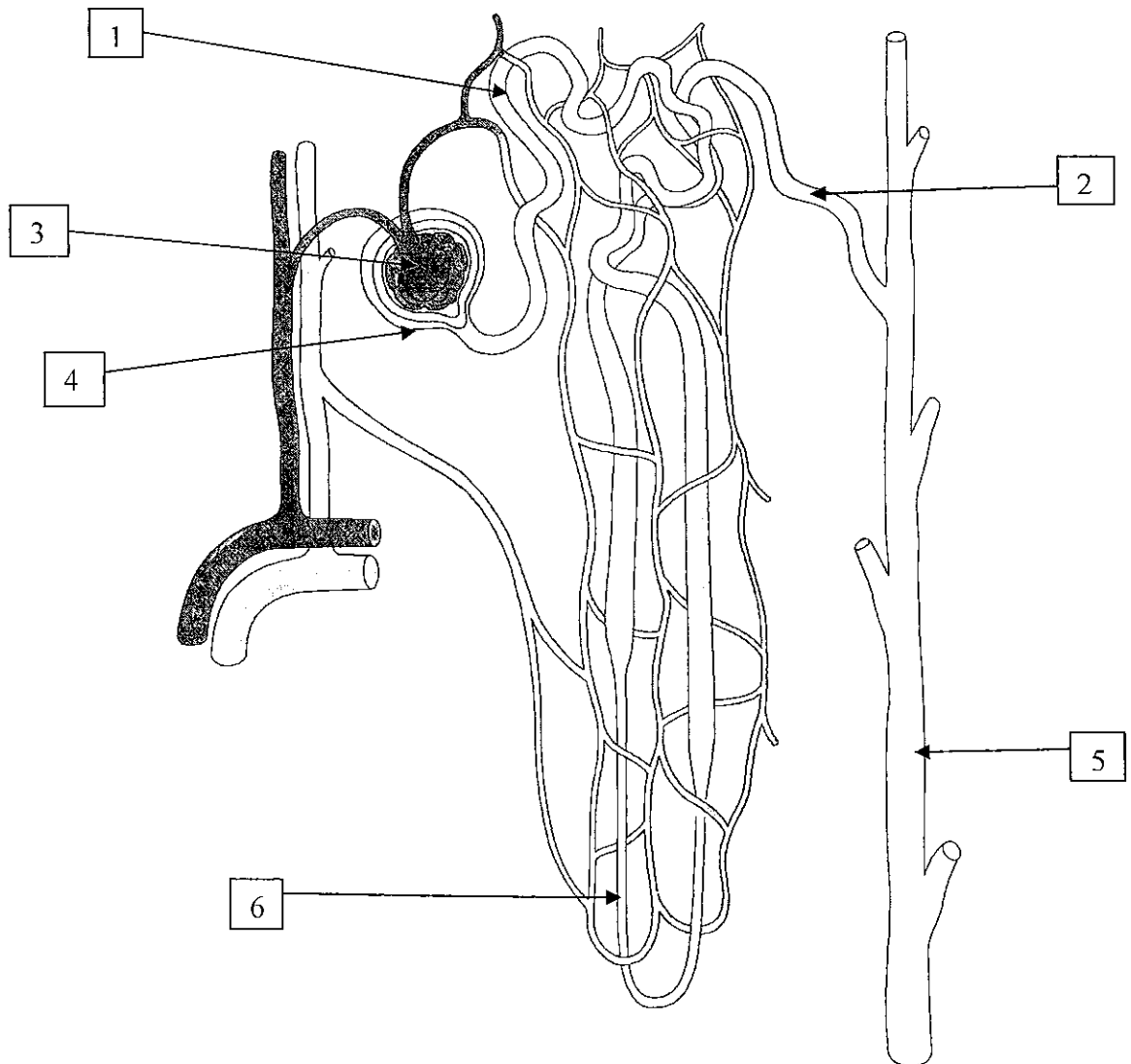
- |                        |   |
|------------------------|---|
| ___ 1. Retroperitoneal | A. Bean shaped major organ of the urinary system        |
| ___ 2. Nephron         | B. Located in the pelvic cavity                         |
| ___ 3. Medulla         | C. Tube that connects the kidney to the urinary bladder |
| ___ 4. Cortex          | D. Tube that connects the bladder to the outside        |
| ___ 5. Kidney          | E. Position of the kidneys                              |
| ___ 6. Urinary bladder | F. Outer layer of the kidney                            |
| ___ 7. Ureter          | G. End product of the urinary system                    |
| ___ 8. Urethra         | H. Contained in the Bowman's capsule                    |
| ___ 9. Urine           | I. Inner layer of the kidney                            |
| ___ 10. Glomerulus     | J. The functional unit of the kidney                    |

4.01 Structures of the nephron  
Handout

Name \_\_\_\_\_  
Date \_\_\_\_\_

Directions: Label the listed structures of the nephron.

- |          |          |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |



**4.01 Medical Terminology  
Handout**

**Name:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

**Directions:** Review the medical terms and definitions listed below. Use these terms to write "new" compound words in the spaces below. Check your work in your textbook or a dictionary to verify the compound words and the definition of each one.

Medical Term	Definition
calyx-	cup-shaped
-cele	tumor or swelling
dia-	across
glomerulo	resembles a little ball of yarn
hydro	water
lith-	stone
-malacia	softening
neo-	new
nephr	kidney
olig	scanty
poly-	many, much
pyelo	renal pelvis
ren	kidney
-tripsy	crushing
-uria	urine

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**4.02 Urinary System Matching Quiz**  
**Handout**

**Name** \_\_\_\_\_  
**Date** \_\_\_\_\_

**Directions:** Match the following terms and with their functions.

- |                                       |   |
|---------------------------------------|---|
| _____ 1. Retroperitoneal              | A. The process of removing nitrogenous waste material, certain salts, and excess water from the blood.                      |
| _____ 2. Excretion                    |   |
| _____ 3. Nephron                      | B. Performs filtration  |
| _____ 4. Glomerulus                   | C. The opposite of reabsorption   |
| _____ 5. Filtrate                     | D. The basic structural and functional unit of the kidney.  |
| _____ 6. Secretion                    | E. Located behind the peritoneum.   |
| _____ 7. Urinalysis                   | F. Under the control of the hypothalamus, this hormone increases the permeability of water in distal and collecting tubules |
| _____ 8. Aldosterone                  |   |
| _____ 9. Diuretics                    | G. A hormone released by the kidneys when blood pressure drops.   |
| _____ 10. Renin                       |   |
| _____ 11. Proximal convoluted tubules | H. A fluid consisting of water, glucose, amino acids, some salts and urea.  |
| _____ 12. Filtration                  | I. An examination of the urine  |
| _____ 13. Bladder                     | J. Stores urine until about 500cc has accumulated   |
| _____ 14. ADH                         | K. The first step in urine formation  |
| _____ 15. Cortex                      | L. Adrenal hormone that controls urinary secretion  |
|                                       | M. Contains the nephrons  |
|                                       | N. Where 80% of the water filtered out of the blood by the glomerulus is reabsorbed   |
|                                       | O. They increase urinary output by inhibiting the reabsorption of water.  |

**4.01 Key Terms Related to Urinary System Functions  
Handout**

Name \_\_\_\_\_  
Date \_\_\_\_\_

Key Term	Definition	Relevance to Health
anuria	absence of urine	
diuretic	drug that increases urinary output	
dysuria	painful urination	
enuresis	bedwetting	
filtrate	fluid that has passed through a filter	
glycosuria	presence of glucose in urine	
hematuria	presence of blood in urine	
incontinence	involuntary urination	
micturate	to urinate	
nephralgia	pain in a kidney	
neurogenic bladder	damage to the nerve that controls the bladder	
nocturia	frequent urination at night	
oliguria	reduced production of urine	
polyuria	excessive urination	
pyuria	pus in the urine	
uremia	presence of urinary waste products in the blood	
urinalysis	examination of the urine	
urinary catheterization	insertion of a sterile tube into the urinary bladder	
urinary retention	inability to urinate	
urinate	emptying of urine from the urinary bladder	
void	emptying of urine from the urinary bladder	

## 4.02 Medical Decisions

### Handout

Name \_\_\_\_\_

Date \_\_\_\_\_

### Directions:

You have been assigned to a Medical Decisions Board for a university hospital. Today, your decision involves a very common dilemma: four patients in complete renal failure, all in need of a kidney transplant and there is only one kidney. Your assignment is to determine who gets the available kidney? Your teacher will inform you of the due dates for each part of the process.

Date \_\_\_\_\_ Read information about kidney transplants, either in your textbook, in other class print materials, in your school's media center, or on the Internet

Date \_\_\_\_\_ Work with your group using the guidelines for HOSA's Creative Problem Solving event to determine who gets the kidney.

Date \_\_\_\_\_ Present your decision and rationale to a group of judges or your class.

All of the following patients are compatible recipients for the kidney to be transplanted. The kidney donor was a 17 year old male who was killed in a car crash. The parents have requested that the kidney be transplanted in a teenager.

Name, Age and Occupation	Renal Status	Other Medical factors	Financial Status	Social Factors
<b>Mary Greaves</b> 54 Housewife	Dialysis: 15 years Transplant waiting list: 7 years	Arthritis Post-menopausal hormone replacement Hypertension Overall health – Fair	\$46,000/yr Medicaid	<ul style="list-style-type: none"> <li>▪ Has 6 grown kids, all supportive</li> <li>▪ Husband is reformed alcoholic with stable income and in good health, age 60</li> </ul>
<b>Michelle Mantle</b> 35 Former tennis pro	Dialysis: 1 year Transplant waiting list: 6 months	Multiple sclerosis – 2 years – Mod. Overall health – Fair	Net worth – 20 million dollars No insurance	<ul style="list-style-type: none"> <li>▪ High profile patient would bring much media attention to the medical center</li> <li>▪ Potential exists for financial gain for the medical center, publicity for organ donations</li> </ul>
<b>Phyllis Puckett</b> 19 College student	Dialysis: 2 years Transplant waiting list: 9 months	Overall health – Good Regularly uses cocaine, other illegal substances have been present in blood specimens	Parents: \$120,000/yr Blue Cross/Blue Shield	<ul style="list-style-type: none"> <li>▪ Parents are supportive</li> <li>▪ Patient resists medical regimen as prescribed by physicians</li> </ul>
<b>Geri Sanchez</b> 43 Auto mechanic	Dialysis: 7 years Transplant waiting list: 2 years	Overall health – Excellent	\$25,000/yr Managed care – will cover 50% of costs	<ul style="list-style-type: none"> <li>▪ Has 16 year old son in school who lives in the home</li> <li>▪ Wife died of Leukemia in 1995</li> </ul>