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SUBJECT	VIVA ASSIGNMENT CLINICAL MEDICINE
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Q No 1

Ans:

Nuclear Medicine:-

The Nuclear medicine imaging uses small amount of radioactive material to diagnose, evaluate or treat a variety of diseases, these include many types of cancers, heart disease, gastrointestinal, endocrine or neurological disorder. and other abnormalities.

P. T. O

## Thyroid diseases-

Thyroid disease is a medical condition that affect the function of the thyroid gland.

The thyroid gland is located at the front of the neck and produces thyroid hormones.

## Role of Nuclear Medicine in the diagnosis of thyroid diseases-

As well as its treatment, nuclear medicine is directly involved in both the diagnosis and treatment of thyroid disease, which requires an understanding of the pathophysiology and management of thyroid disorder in addition to expertise in nuclear methodology.

Thyroid uptake and imaging, the principle nuclear tests in thyroid disease, may be used as follows:

### 1. Differential diagnosis of hyperthyroidism-

A very low thyroid uptake suggests destructive (subacute) thyroiditis, a self-limited disorder, where as a normal or elevated uptake is

consistent with toxic nodular goiter and Graves disease. Scintigraphic characteristics also help differentiate between nodular and Graves disease.

## 2. Function of thyroid nodules-

Fine-needle aspiration biopsy with cytological examination is used routinely to assess for malignancy in thyroid nodules.

Scintigraphy may be of assistance before (FNAB). Hot nodules are generally benign and do not require (FNAB), while cold nodules may be malignant.

## 3. Differential diagnosis of congenital hypothyroidism:-

Scintigraphy combined with ultrasound examination may be used to identify such conditions as thyroid agenesis, dysplasia or monogenesis, and incomplete thyroid descent.

Treatment of Graves diseases and toxic nodular disease with  $^{131}\text{I}$  may require greater clinical involvement and decision analysis compared with thyroid uptake and imaging.

## In case of Treatment:-

The following aspects of treatment are particularly important:-

### 1. Risk:-

Radioiodine treatment may occasionally aggravate hyperthyroidism, Graves ophthalmopathy, and airway obstruction caused by large, nodular goiters. Alternative treatments, including the temporary use of antithyroid drugs, and surgery for nodular goiters, may be considered.

### 2. Radioiodine dose:-

Cure of hyperthyroidism with a single treatment is desirable, though not always possible. Such factors as large goiter, severe hyperthyroidism, and prior prophylthiouracil therapy, may contribute to treatment failure.

### 3. Informed consent:-

A detailed discussion with the patient regarding the clinical risks, outcomes, and side effects of  $^{131}\text{I}$  is a critical component of successful management.

## Q No 2

Ans:

### polycystic Kidney:-

polycystic  
Kidney disease (PKD) is an inherited disorder in which clusters of cysts develop primarily with in your kidneys.

causing our kidneys to enlarge and lose function over time.

Cyst are noncancerous round sacs containing fluid. The cysts very large in size, and they can grow very large. Having many cysts or large cysts can damage our kidneys

It also can cause to develop in your liver and else where in your body. The disease can cause serious complications, including high blood pressure and kidney failure.

### Symptoms:-

polycystic kidney disease symptoms can include:

- High blood pressure
- Back or side pain

- Headache
- Blood in your Urine
- Kidney Stones
- Kidney Failure
- Urinary tract or kidney infections
- A feeling of fullness in your abdomen
- Increased size of your abdomen due to enlarged kidneys.

### Complications:-

- High blood pressure
- Loss of kidney function
- pregnancy complications.
- Growth of cysts in the liver
- Development of an aneurysm in the brain.
- Heart valve abnormalities
- colon problems
- chronic pain.

### Causes:-

people who have PKD were born with it. PKD is almost always inherited from a parent or from both parents.

people of all genders, ages, races, ethnicities and nationalities can have PKD.

Men and women get PKD equally as often.

If you have a blood relative with PKD, you are more likely to have PKD or

carry the gene that causes it.

If you carry the gene that causes PKD but you do not have the disease, you are called a carrier. This is possible with autosomal recessive PKD.

### Can PKD be prevented:-

There is no possible prevention for this disease but somehow we may better our health living style and increase prevention chances.

- Keep a healthy blood pressure
  - Keep a healthy blood sugar level
  - Keep a healthy weight
  - Follow a low-salt, low-fat diet.
  - Limit alcohol.
  - High blood pressure
  - Pain
  - Bladder or kidney infections
  - Blood in the urine
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Q No 3

Answer

Lithotripsy:-

Lithotripsy is a medical procedure involving the physical destruction of hardened masses like kidney stones, bezoars or gall stones.

The term is derived from Greek words meaning "breaking stones".

The lithotripsy is a medical procedure that used shock waves or a laser to break down stones in the kidney, gallbladder, or ureter.

\* The remaining particles of small stones will exit the body when person urinates.

\* It is common develop stones in the kidneys, gallbladder, or ureter. Sometimes stones are small enough to leave the body during urination without a person noticing. Large stones, however can cause pain and block the flow of



of urine.

\* If stones do not pass, they can damage the kidneys and urinary tract, when medications do not help, a lithotripsy procedure can break the stone down into small pieces so they can pass out in the urine.

\* Two types of lithotripsy are extracorporeal shock wave lithotripsy (ESWL) and laser lithotripsy.

\* Both procedures can help eliminate both some stones quickly and effectively. The type of treatment a doctor recommends will depend on a range of factors, such as the type of stones and the individual's overall health.

### Therapeutic or diagnostic tools:-

It is a therapeutic tool against the kidney or other organs stone.

### General criteria of performing this procedure:-

Lithotripsy treats kidney stones by sending focused ultrasound

energy or shock waves directly to the stone just located with fluoroscopy (a type x-ray movie) or ultrasound (high frequency sound waves)

The shock waves break a large stone into smaller stones that will pass through the urinary system.

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Q no 4:

Ans:

Suffix -otomy:

"otomy" or "otomy" refers to the act of cutting or making incision, as in a medical operation or procedure. The suffix -

The suffix -otomy is derived from the Greek "tomia" which means to cutting or sharp or separate.

The terms used in medical dictionary:-

Example:-

**Anatomy:-**

(Ana = to cut) :  
The study of the physical structure of living organisms.

**Autotomy:-**

(auto = self, tomy = to cut) :  
The act of removing an appendage from the body in order to escape when trapped.

**Craniotomy:-**

(Crani = skull, tomy = to cut) :  
Surgical cutting of the skull, typically done to provide access to the brain when surgery is needed.

**Episiotomy:-**

(episi = between, tomy = to cut) :  
Surgical cut made into the area between the vagina and anus to tearing during the P.T.O

child birthing process.

**Gastrostomy:-** (gastro - otomy):

Surgical incision made into the stomach for the purpose of feeding an individual who is incapable of taking in food through normal processes.

**Hysterotomy:-** (hyster - otomy):

Surgical incision made into the uterus.

**Phlebotomy:-** (phleb - otomy):

Incision or puncture made into a vein in order to draw blood.

**Laparotomy:-** (Lapar - otomy):

Incision made into the abdominal wall for the purpose of examining abdominal problem.

**Lobotomy:-** (Lob - otomy):

incision made into a lobe of a gland organ.

## Rhizotomy:

(rhiz - otomy):  
Surgical  
Severing of a cranial nerve  
root or spinal nerve root.  
In order to relieve back pain  
or decrease muscle spasms.

## Tenotomy:

(ten - otomy):  
Incision  
made into the tendon in order to  
correct a muscle deformity.

## Tracheotomy:-

(trache - otomy):  
Incision made into the trachea  
for the purpose of inserting a  
tube to allow air to flow  
to the lungs.

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Q No 5:

Ans:

Urinary tract infection (UTI):-

A urinary tract infection (UTI) is an infection from microbes. These are organisms that are too small to be seen without a microscope. Most UTIs are caused by bacteria, but some are caused by fungi and rare cases by viruses. UTIs are among the most common infections in human.

A urinary tract infection (UTI) is an infection of the urinary system. This type of infection can involve your urethra (a condition called urethritis), kidneys (a condition called pyelonephritis) or bladder (a condition called cystitis).

A urinary tract infection is an infection in any part of your urinary system, your kidneys, ureters, bladder and urethra. Most infections involve the lower urinary tract.

the lithia.

Women are a greater risk of developing a (UTI) than are men

### Symptoms:-

Urinary tract infections do not always cause signs and symptoms, but when they do they may include:

- A strong, persistent urge to urinate.
- A burning sensation when urinating.
- Passing frequent, small amounts of urine.
- Urine that appears cloudy.
- Strong-smelling urine.
- Burning with urination.
- Increased urgency of urination.
- Urine that looks like cola or tea.
- Urine that has a strong odor.
- pelvic pain in women.
- Rectal pain in men.

Symptoms of an upper tract UTI include:

- pain and tenderness in the upper back and sides.
- chills.
- Fever.
- Nausea.

→ Vomiting

## Urinary tract infection (UTI)

### Diagnosis:-

If you have suspect that you have a UTI based on your symptoms, contact your doctor.

Your doctor will review your symptoms and performs a physical examination. To confirm a diagnosis of a UTI, your doctor will test your urine for microbes.

When testing simple, your doctor will look for a large number of white blood cells in your urine. This can indicate an infection, your doctor will also do a urine culture to test for bacteria or fungi. The culture help identify the cause of infection. It can also help your doctor choose which treatment is right for you.

### Types of UTIs:-

An infection can happen in different parts of your urinary tract. Each type has a different name.

P. T. O



based on where it is.

**Cystitis:-**  
(Bladder):

**Pyelonephritis:-**  
(Kidneys):

**Urethritis:-**  
(Urethra):

**Caused:-**

UTI is usually caused by *Escherichia coli* (E-coli) a types of bacteria commonly found in the Gastro intestinal tract.

However, sometime other bacteria are responsible - Sexual intercourse may lead to cystitis, but you do not have to be sexually active to develop it.

**UTI Treatment:-**

Treatment of UTIs depends on the cause & your doctor will be able to determine which organism is causing the infection from the test results used to confirm the diagnosis.

\* In most cases, the cause is bacteria. UTIs caused

by bacteria are treated with antibiotics.

\* In some cases, viruses or fungi are the causes. Viral UTIs are treated with medications called antivirals.

Often, the antiviral Cidofovir is the choice to treat viral UTIs.

Fungal UTIs are treated with medications called antifungals.

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