

# **Clinical Diagnosis & Investigations**

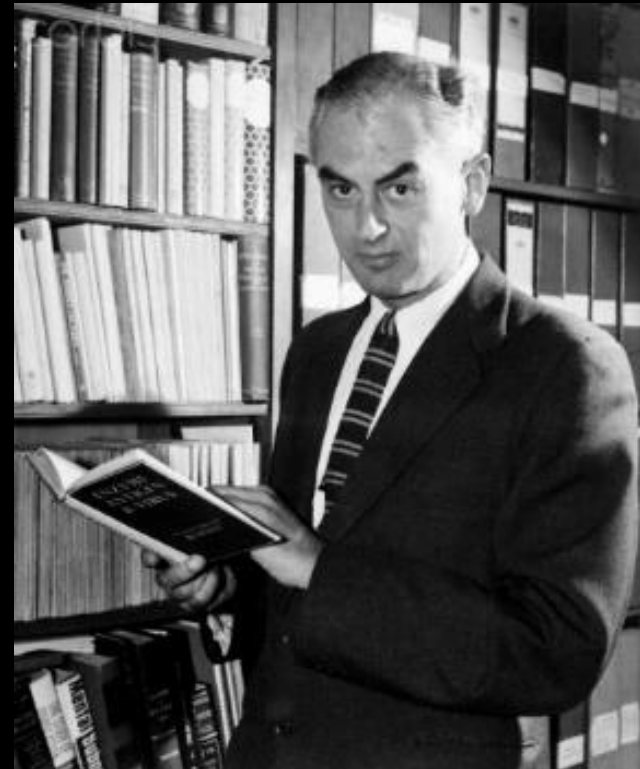
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# Clinical Diagnosis & Investigations

Sir Peter Medawar

**Hypothesis ( under+ thesis)**  
**Is supposition of an idea**

- Do we need to assess Pt.???
- No body is perfect
- Provisional diagnosis in few seconds
- Analyse your thought during history & examination



# Clinical Diagnosis & Investigations

- Can we use computers or not?
- **GIGO**
- **Garbage In Garbage Out**
- Useful only if critical information entered

# Examination

- Relax environment
- Not in rush
- Try to relax your pt.
- If you find a sign confirm it
- Examine whole system
- Repeat examination before action
- Record your findings in full
- -ve as important as +ve

# Diagnosis

- Signs & Symptoms reliable or not?
- Contradictory features
- Extra effort
- Text book picture rarely present
- Daunting declaration – no disease
- Need to be extremely confident
- Look at joy & happiness
- Carefully selected investigations

# Diagnosis Not Made

- Do not rush for complex investigations
- Productive method put aside previous notes
- Take a fresh start
- Every body has own way to take history
- Repeat clinical examination
- Right investigations at right time
- Not always possible to make diagnosis before action (Surgery)

# Selection of Investigations

- Sensitivity & specificity
- Sensitivity= No of cases of condition detected by a test/total no. of cases in population studied
- Specificity= No. of true negative results / total no. of negative results
- **Simplicity** (Air under diaphragm in erect chest)
- **Safety**--- Bowel perforation(Colonoscopy, Ba or CT ??? )
- **Cost** ( Liver Metastasis US or CT)
- **Acceptability** -Non invasive more acceptable
- **Availability**- Gold standard no ideal
- **Routines & protocols**
- **Limitations & Complications**

# Sequence & Timing of Investigations

- Organization

Do not order all investigations at same time

## Protocols

Written protocols

But do not be rigid AS WELL

- Urgency

Do not rush – mistakes inevitable



# Practical Use

- 3. Radiological Investigations

- Simple first

- Do we need expensive one or not

- CT or contrast study

- 4. Histopathology

Incision biopsy

Excision biopsy

Wedge biopsy

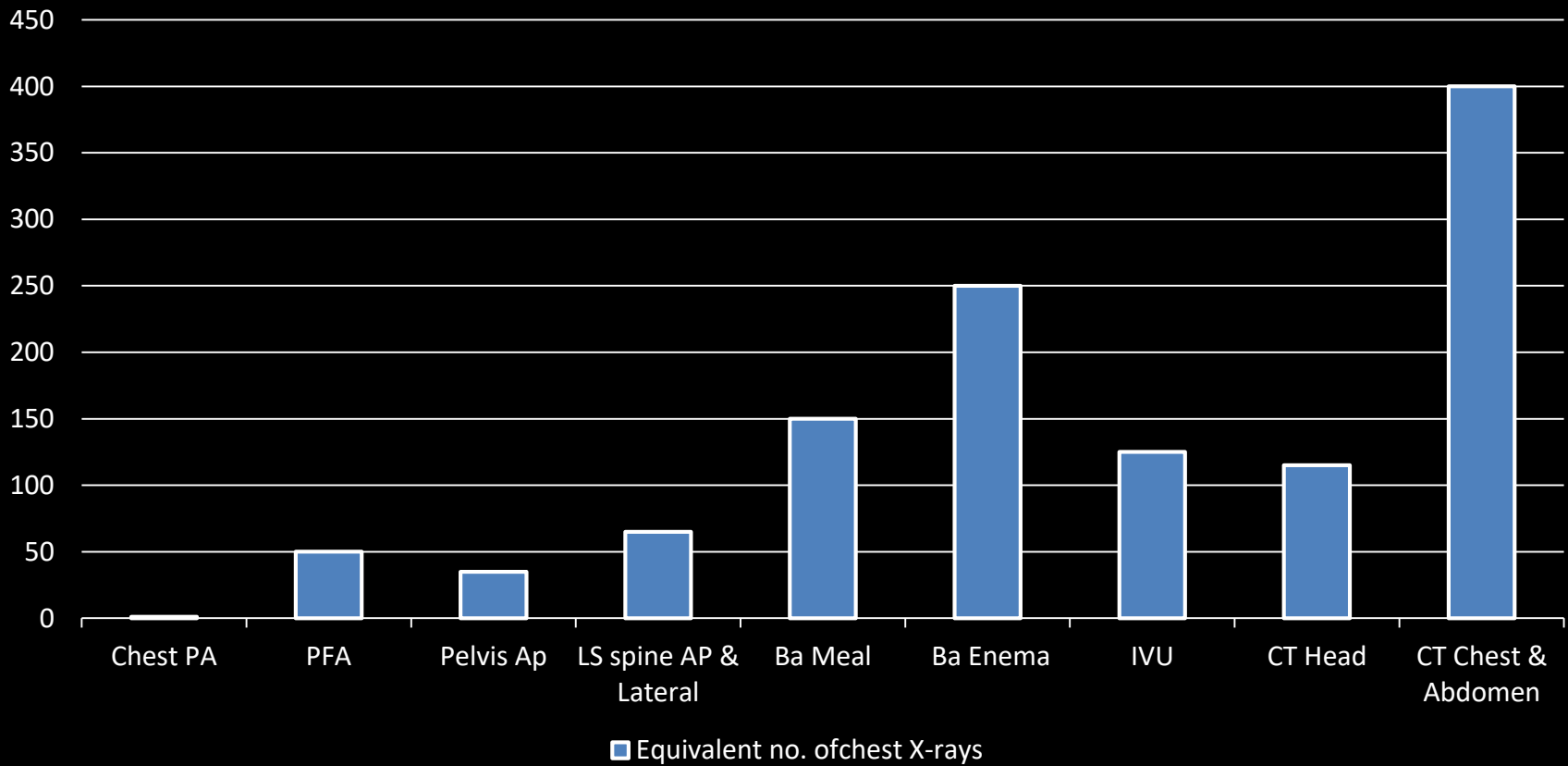
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# Imaging Techniques

- Radiology rapidly expanding
- Very difficult for surgeon to be up to date
- Close relations very important
- Bear in mind cost & availability
- Do not base clinical decisions on radiology **ONLY**
- **Not substitute for clinical skills**
- **Treat Patient Not X-rays**

# Relative Dose of Common Surgical Requests

Equivalent no. of chest X-rays



# Ultrasound

- Use limited by structures as passage of waves obstructed
- Highly operative dependent
- Cannot give images of brain
- Bowel gas can obscure abdominal cavity & retroperitoneal structures

# Radiology

## CT Scan

- Small time
- Better image
- Radiation
- Interventions

## MRI

- Lack of ionizing radiation
- Available
- More expensive than CT
- In Implants cannot be used safely

# Radiology Uses in Surgery

- To aid diagnosis  
erect CXR - air under diaphragm
- CT brain – hematoma
- CT Colonography
- Intervention to treat a disorder or complications – Biopsy, abscess, insertion of stents
- To guide a surgical procedure - fracture reduction
- **Remember cost, effectiveness & safety**

# Thanks

???

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