

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ



الحلقة الأولى

قَبْلَ الْبَدَايَةِ

Welcome



د. أحمد مختار حامد ابودهب

مدرس بقسم الاشعة التشخيصية - كلية الطب - جامعة سوهاج

مدرب بالمجلس الاعلى للجامعات المصرية

استشاري الاشعة التشخيصية بمستشفى سوهاج العسكري و عيادات هيئة الشرطة

محاضر بالاكاديمية الطبية الافتراضية السعودية (Virtual Medical Academy)

مدير العيادات الجامعية بالمجمعة بمدينة سوهاج الجديدة (سابقا)

مدير العيادات الجامعية بالمجمعة بمدينة سوهاج الجديدة (سابقا)

▶ و الان

تفضل بتقديم نفسك





الجامعة



علم = احترام





سلوكيات مرفوضة مطلقا



الخيار لك في

!! طريقة المعاملة معك



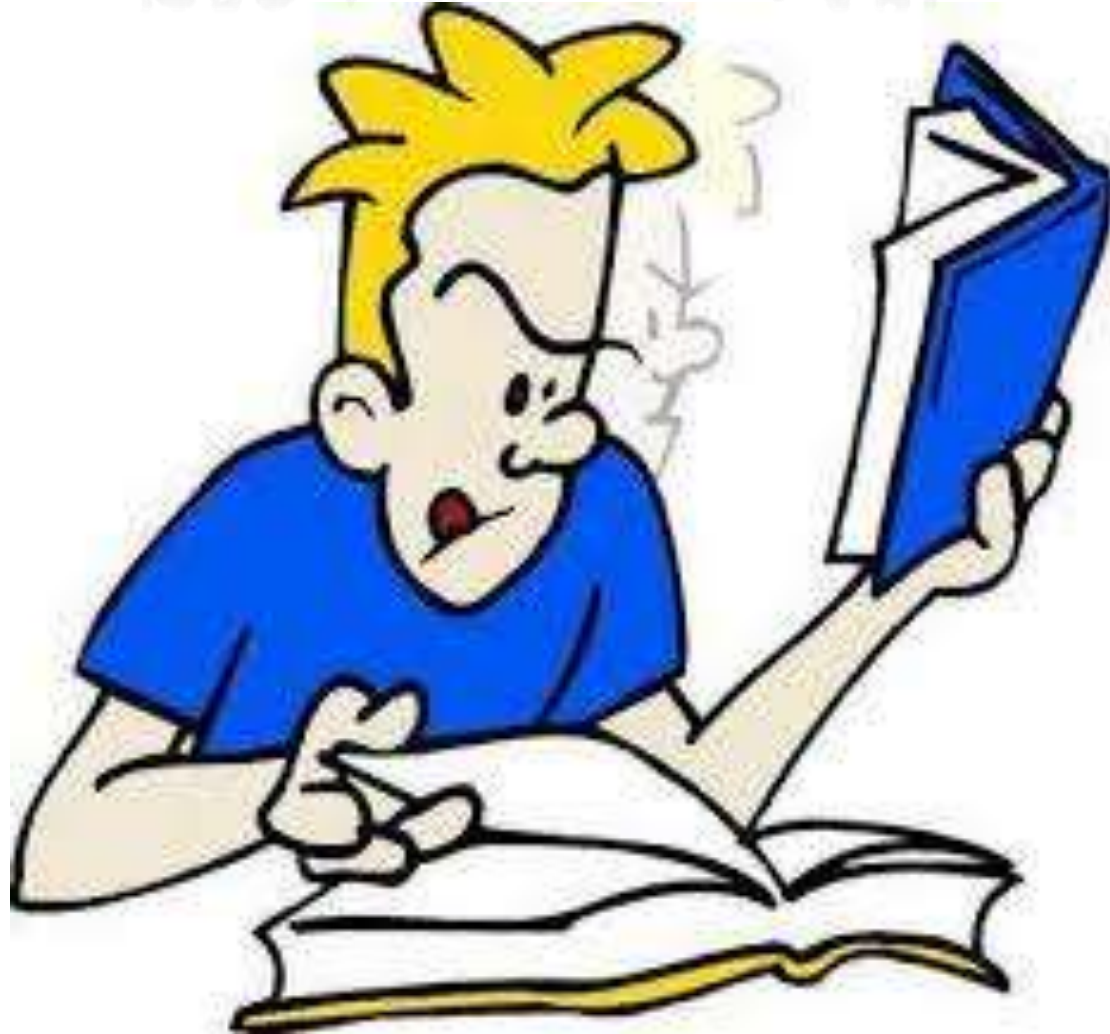


English
Grammar

-
- ▶ **Don't Panic**all things are simple & easy with understanding



افهم ... لا تحفظ





التعليم مسؤولية المؤسسة التعليمية

و لكن الاحتراف

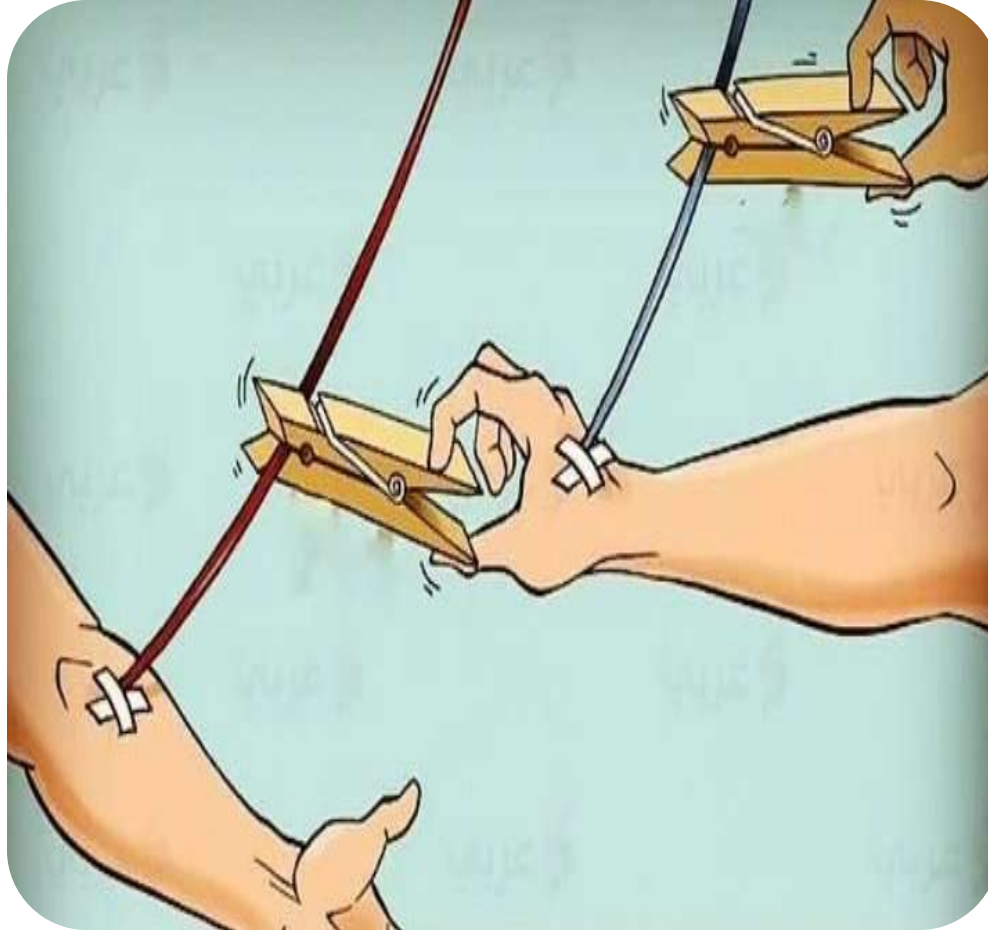
مسؤوليتك انت



حافظ على سلامة و عرض مرضاك



فکما تدين ... تدان !!



لا تحسب { العلم }

ينفع وحده ما لم يُتَّوَجَّ به { أخلاق }



كلاهما وحده لا يكفي



ثق في نفسك..... و افخر بمهنتك و اعمل على التقدم فيها





مؤسسة مجدى يعقوب
لأمراض وأبحاث القلب



مؤسسة مستشفى
سرطان الأطفال
57357
Children's Cancer Hospital Foundation



المواد الدراسية التخصصية

The WHO manual of diagnostic imaging

RADIOGRAPHIC
TECHNIQUE AND
PROJECTIONS

CLARK'S POSITIONING IN RADIOGRAPHY

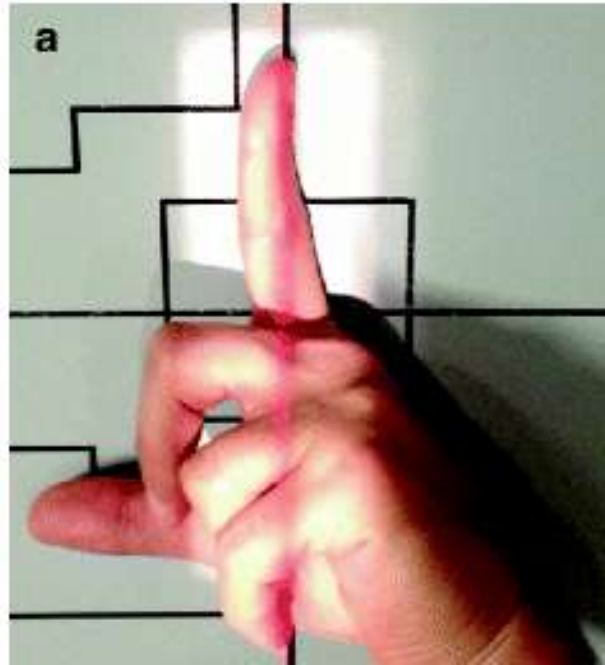


CLARK'S

A STEWART WHITLEY • CHARLES SLOANE • ADRIAN D. MOORE • CHRISSEY
POCKET HANDBOOK FOR
RADIOGRAPHERS



CHARLES SLOANE • KEN HOLMES
CRAIG ANDERSON • A STEWART WHITLEY





WeissOrtho.com





make a gif.com

make a gif.com



848 125 8832

makeagif.com

makeagif.com



make a gif.com
www.making.com

make a gif.com

A beam of light from a flashlight illuminates the text "DARK ROOM" in a dark space. The light is brightest on the left side of the text and fades out to the right. The text is in a simple, white, sans-serif font. The background is black with some faint, scattered white specks, possibly representing dust or a dark environment.

DARK ROOM



X-Ray Film Processing



Dark Room



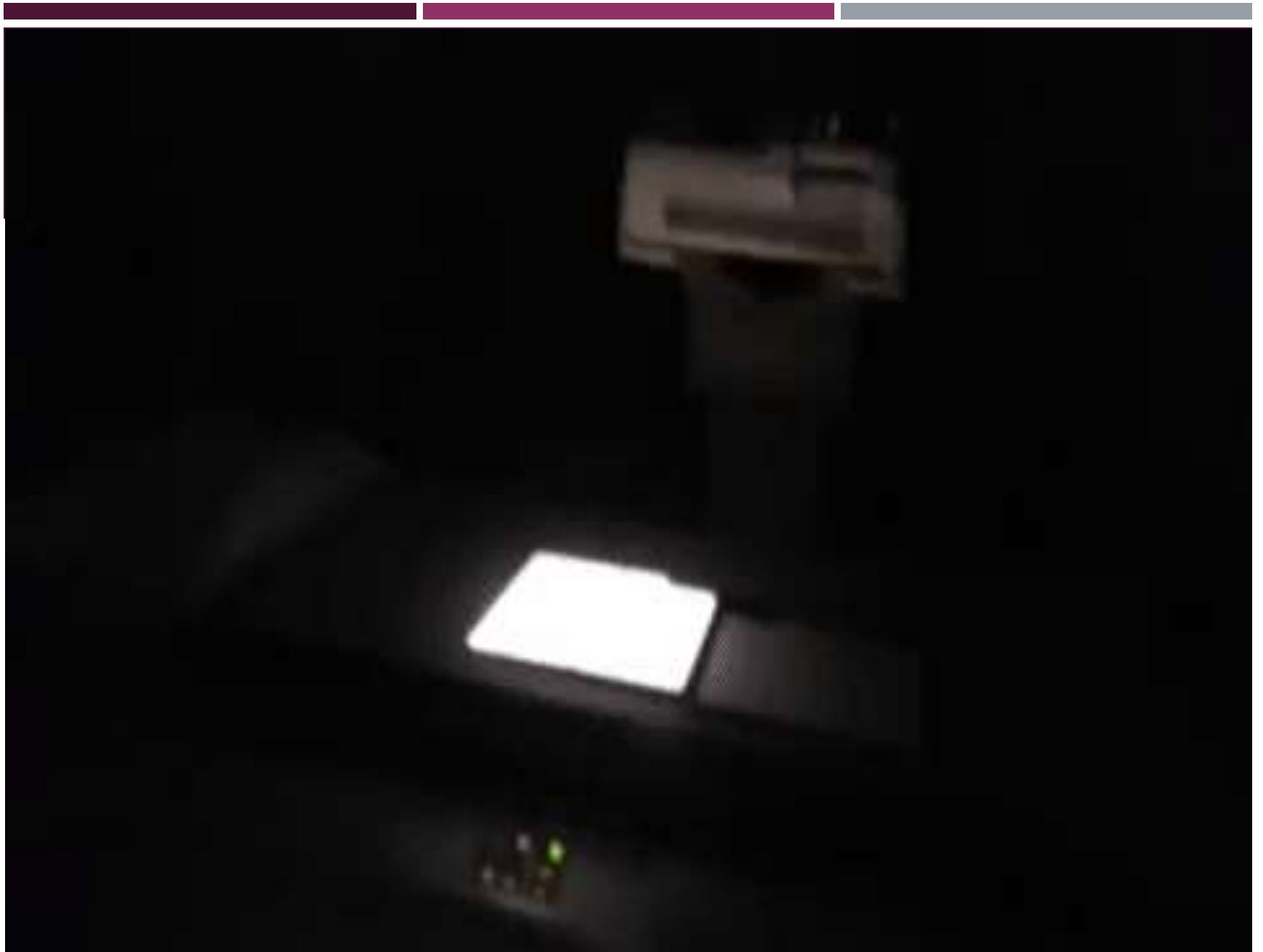






X – RAY





BY

•William Roentgen / 1895



X-Ray

NOBLE PRIZE

1901



ENERGY

X ray

Ionizing
radiation

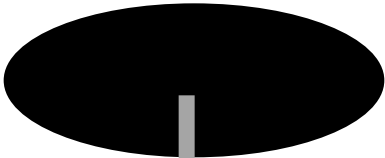


KEY WORD.....OPACITY

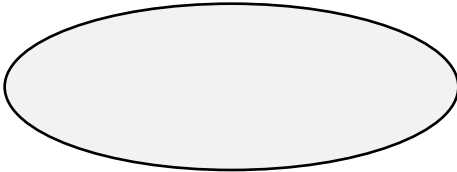


- **Radio-opaque** / **Radio-lucent?**





Radio-lucent

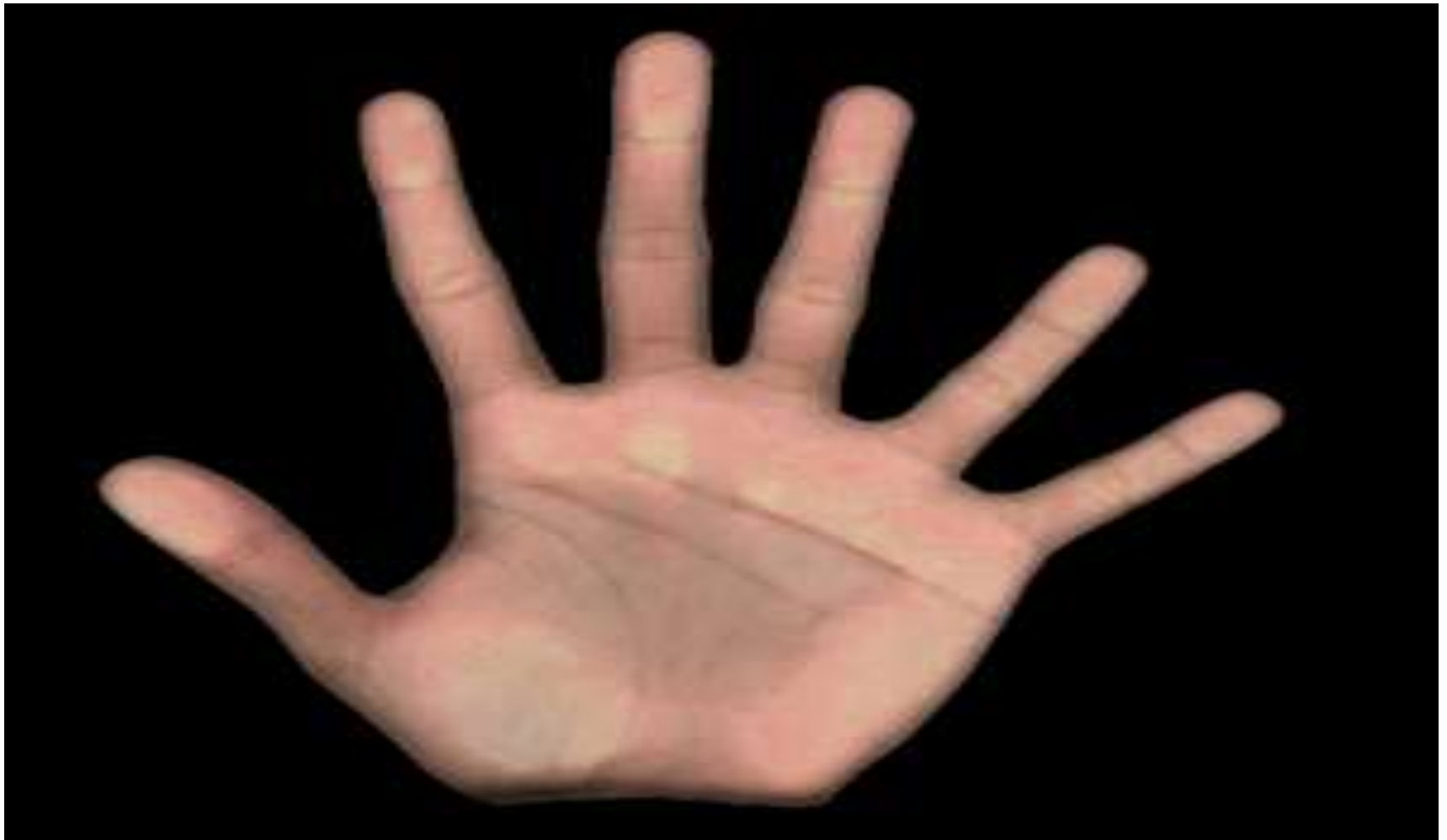


Radio-opaque

X-Ray



X-Ray



cathode

metal
target







Fluoroscopy





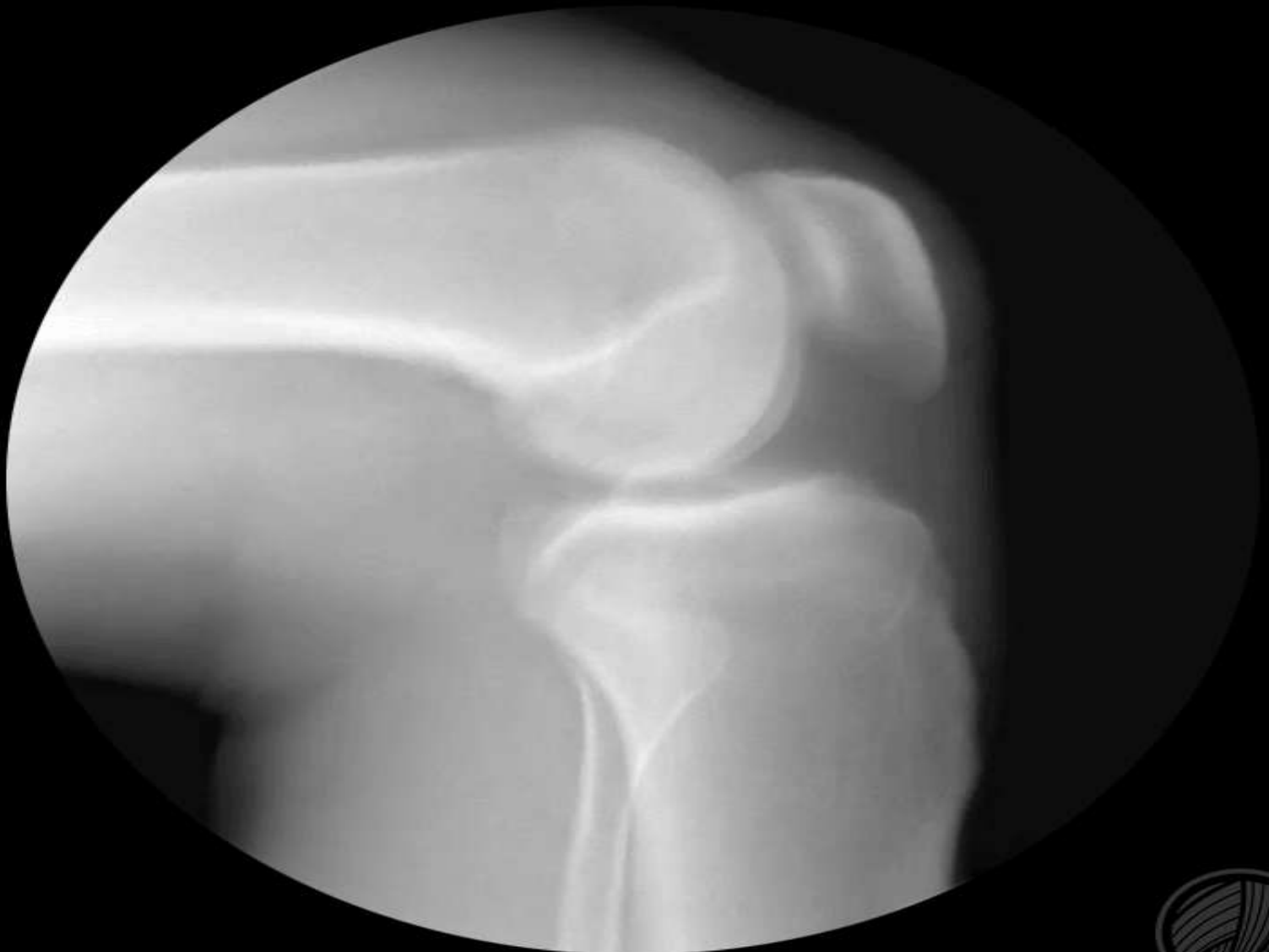


FLOUROSCOPY is used mainly
With contrast “Barium”

“Barium Swallow”

CARM





WeissOrtho.com



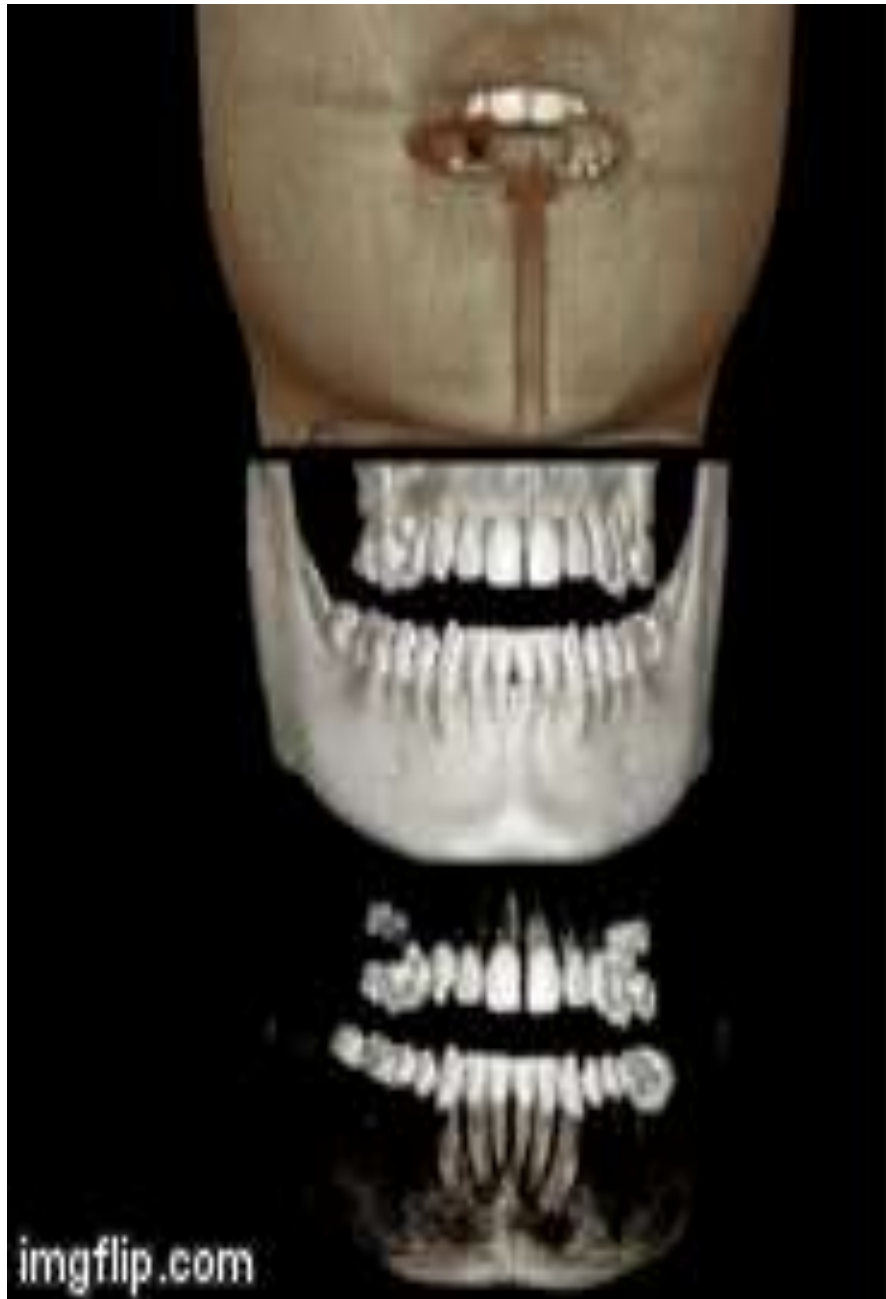
Se:1
Im:1 (F1/1)

Study Date:2015-02-04
Study Time:오후 2:44:27
MRN:
DOB:
Sex:



39 KV

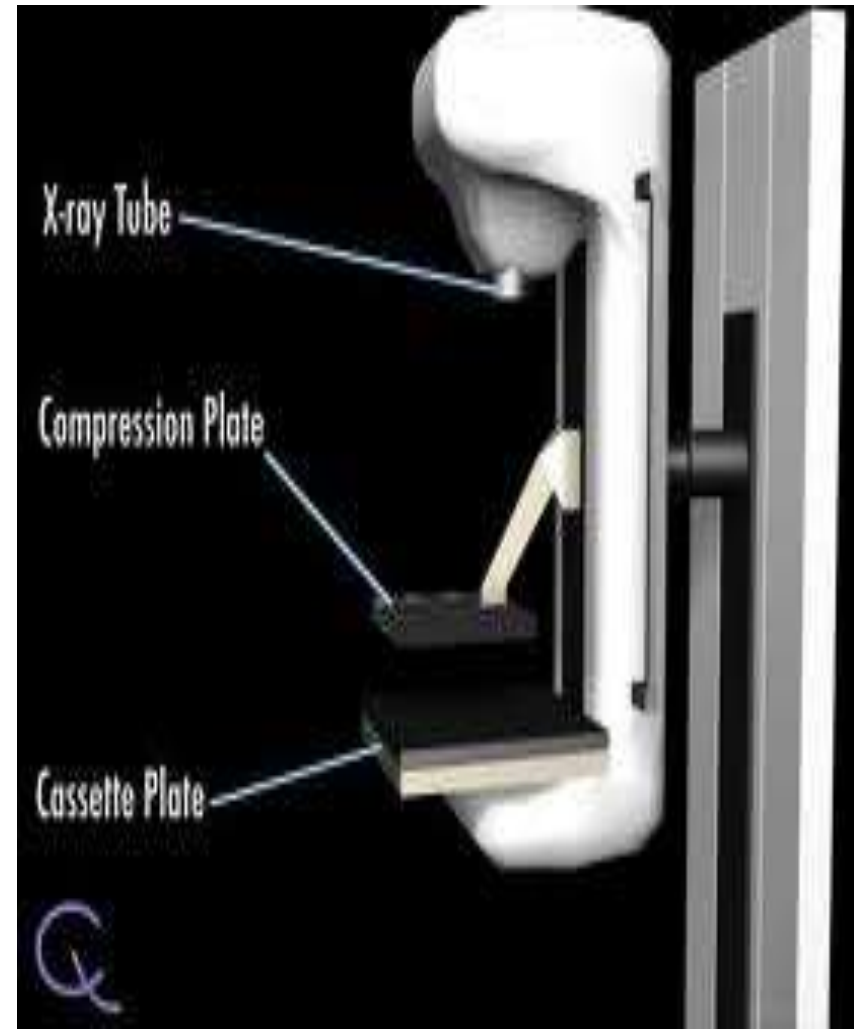
C128
VV256



“ANGIOGRAPHY”



MAMMOGRAPHY



Computerized Tomography



BY

- Dr. G. N. Hounsfield in / 1971



Sir Godfrey Hounsfield

1919 - 2004

CT

WON NOBLE PRIZE

1979

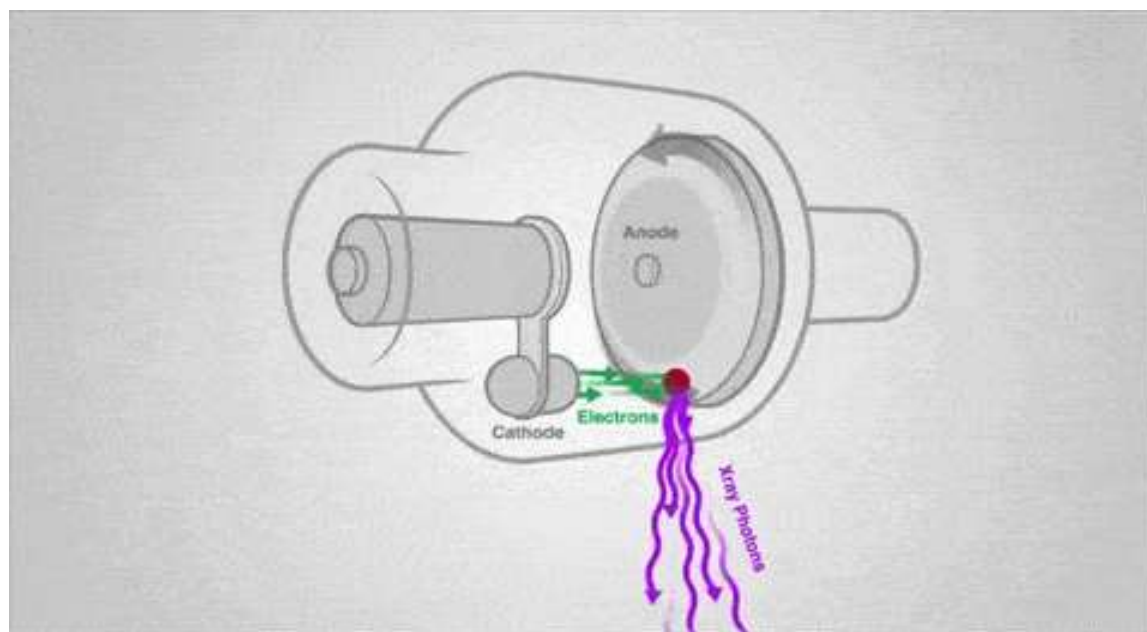


ENERGY

X ray

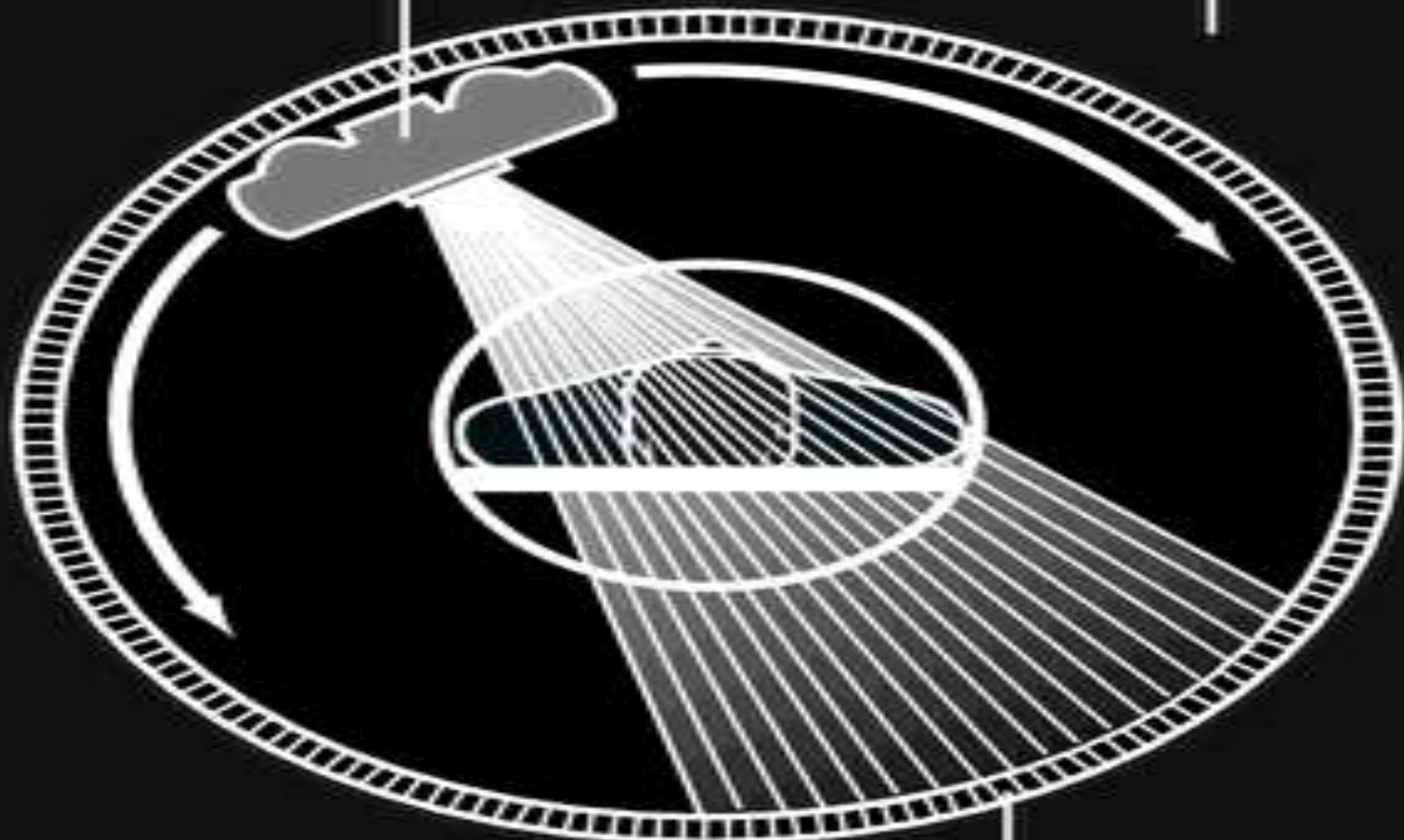
Ionizing Radiation

n



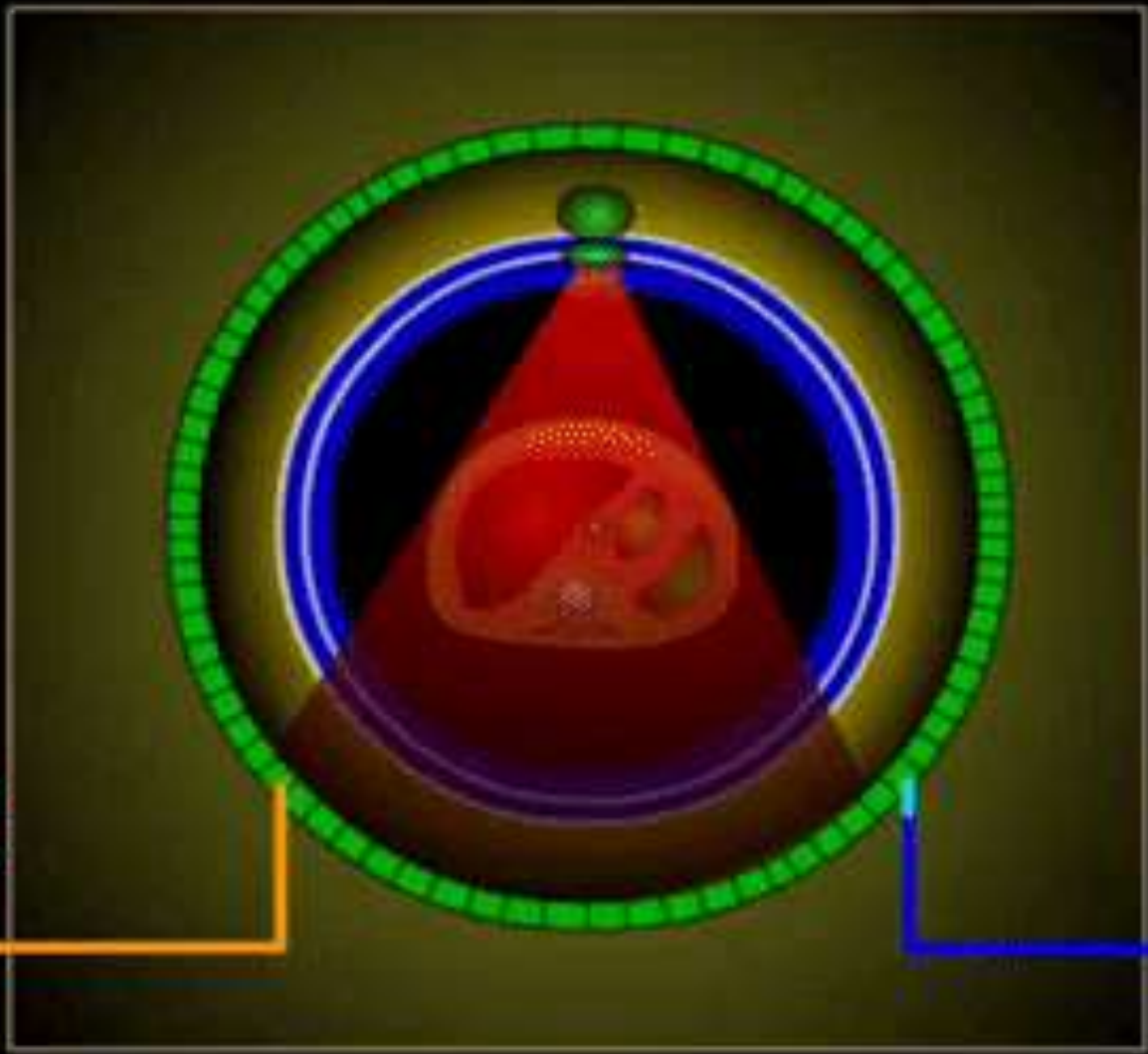
X-ray tube

Gantry



Detectors (fixed)





**POWER
SUPPLY**

**OUTPUT
SIGNAL**

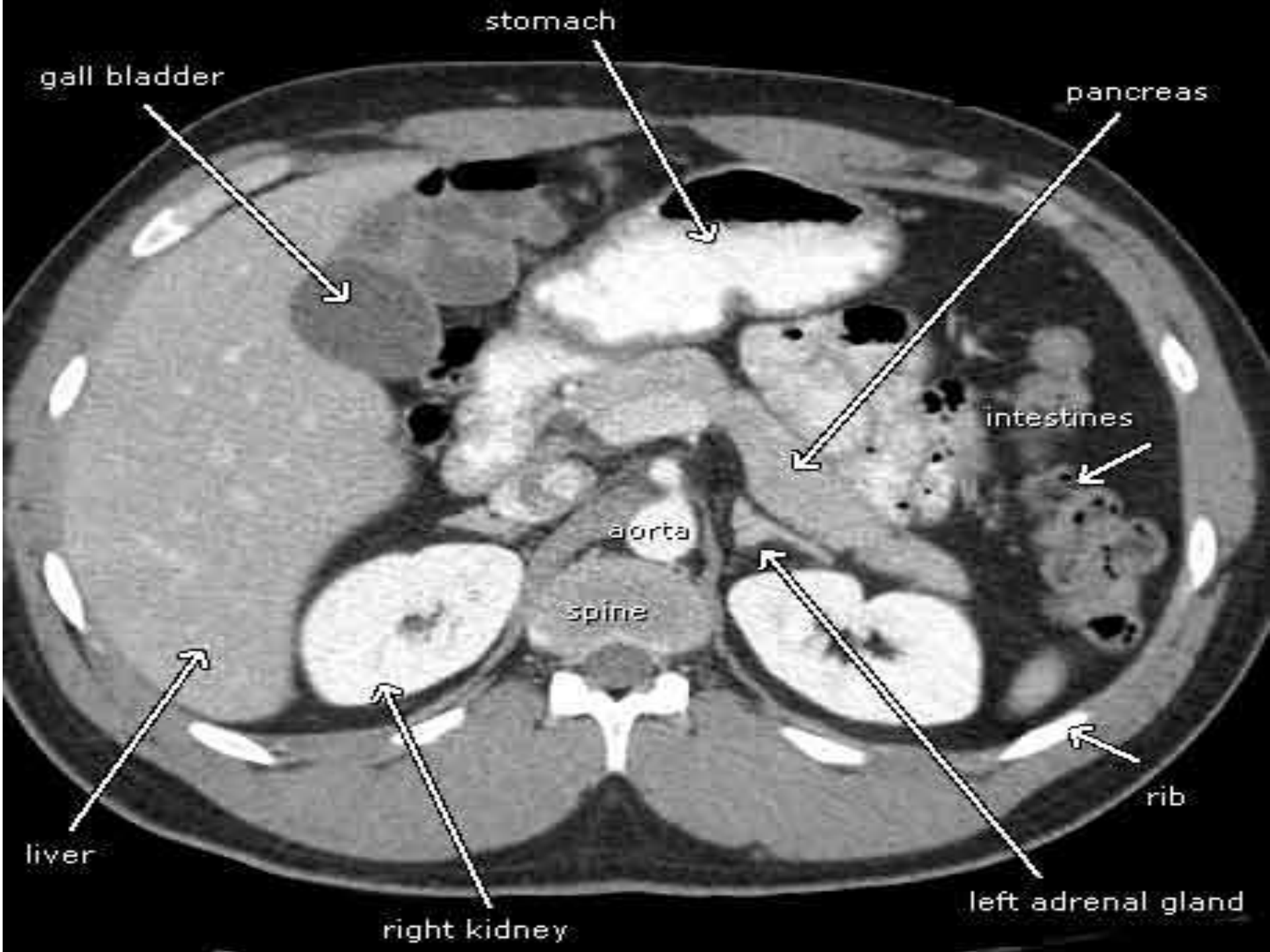
4th Generation

M. Mongkolsuk

11/04/2004











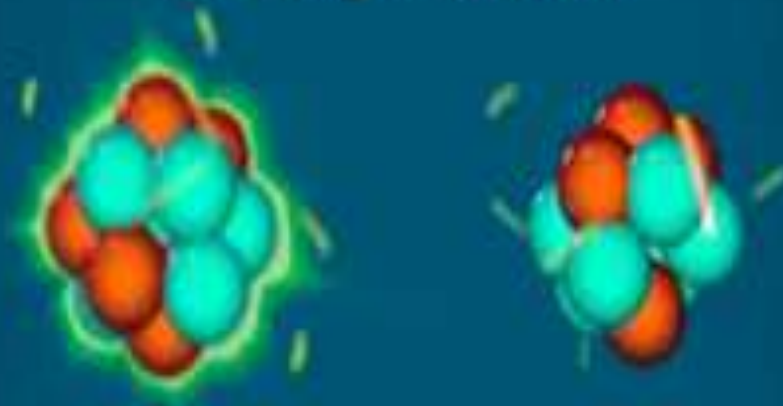
AR



F



Ionizing Radiation





DNA MUTATION

X ray

CT



⚠ CAUTION

X-RAY IN USE

If you are pregnant or
unsure, notify staff
immediately.





4

**BASICS
OF
Magnetic Resonance Imaging**



INVENTORS

- **1946 - Felix Bloch and Edward Purcell** → magnetic resonance phenomena .
- until the 1970s MRI was being used for **chemical and physical** analysis.
- **1971 Raymond Damadian** showed that nuclear magnetic relaxation times of tissues and tumors.



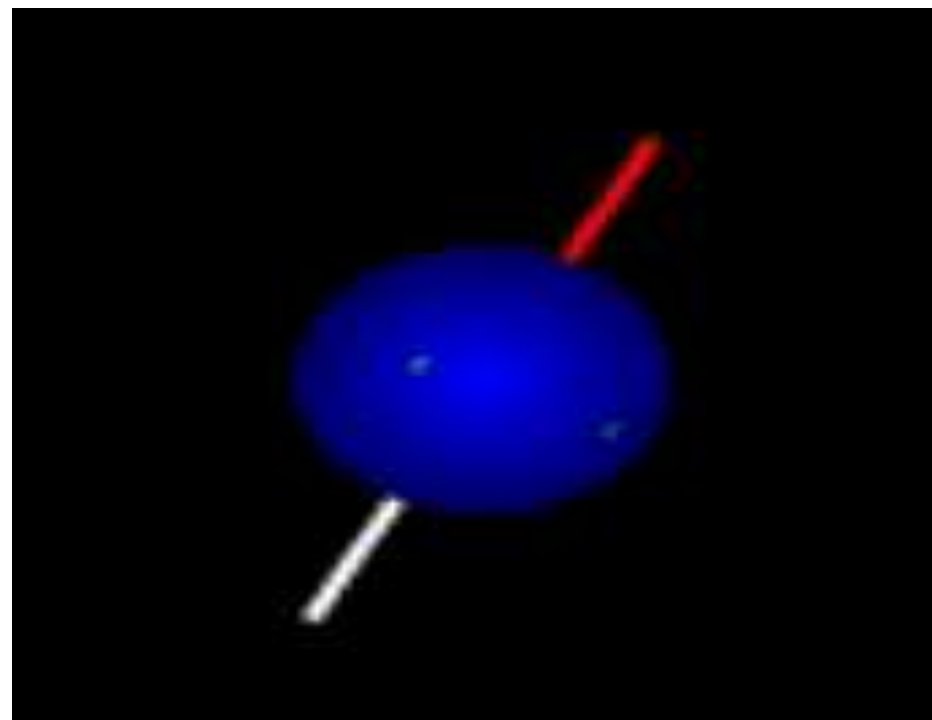
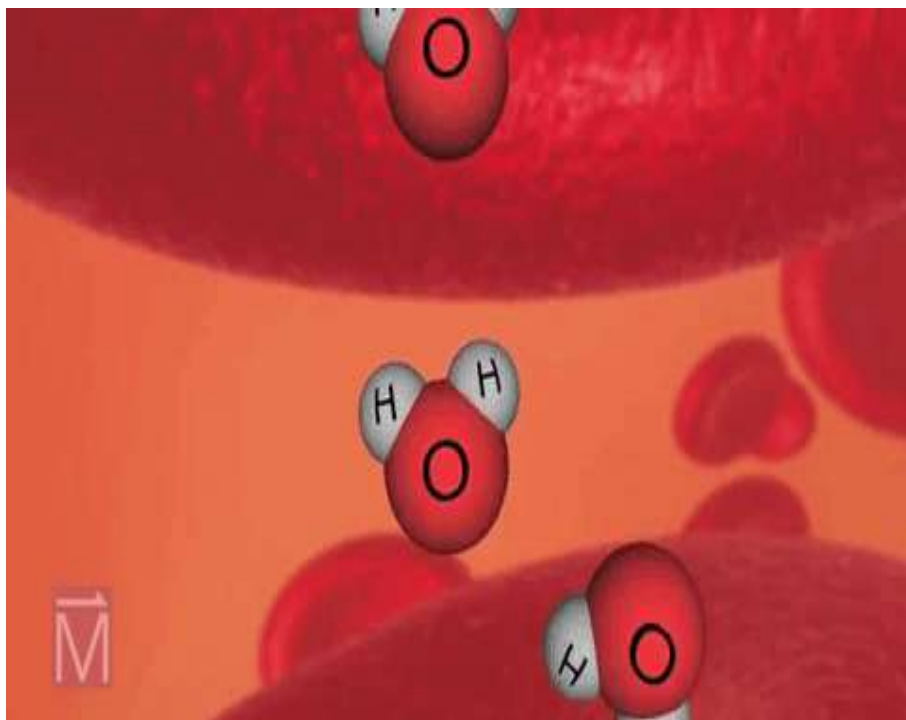
Felix Bloch



Edward Mills Purcell

IDEA

Magnetic Resonance Phenomena



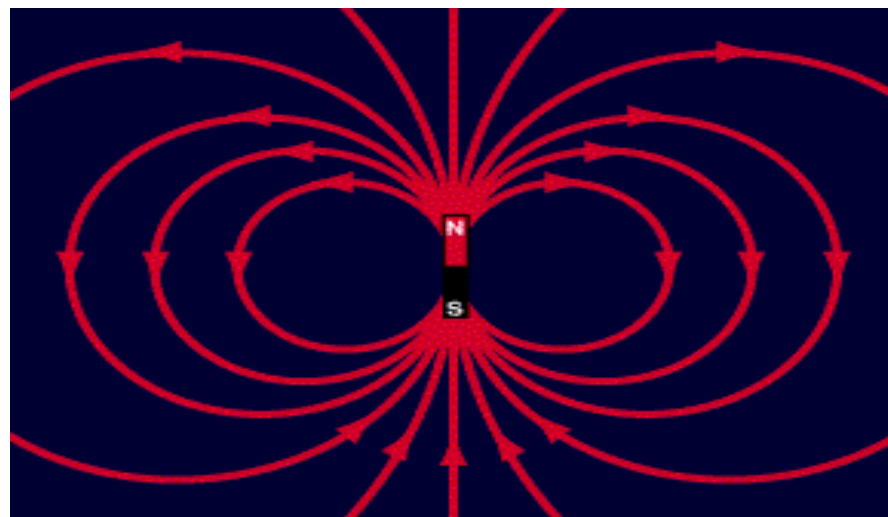
NOBLE PRIZE

1952



ENERGY

STRONG
MAGNETIC
FIELD



RADIO

FREQUENCY



CLOSED MRI



OPEN MRI





VS



EXTREMITY MRI



DYNAMIC MRI



MakeAGIF.com

Contraindications Of MRI

No Iron or Magnetic objects

- Iron Processes.
- Iron F.B.
- Firearm
- **Pacemaker.**
- Vascular **metallic clips.**



DANGER



STRONG MAGNETIC FIELD

Magnet is always on.

Notify the MRI technologist or radiologist if:

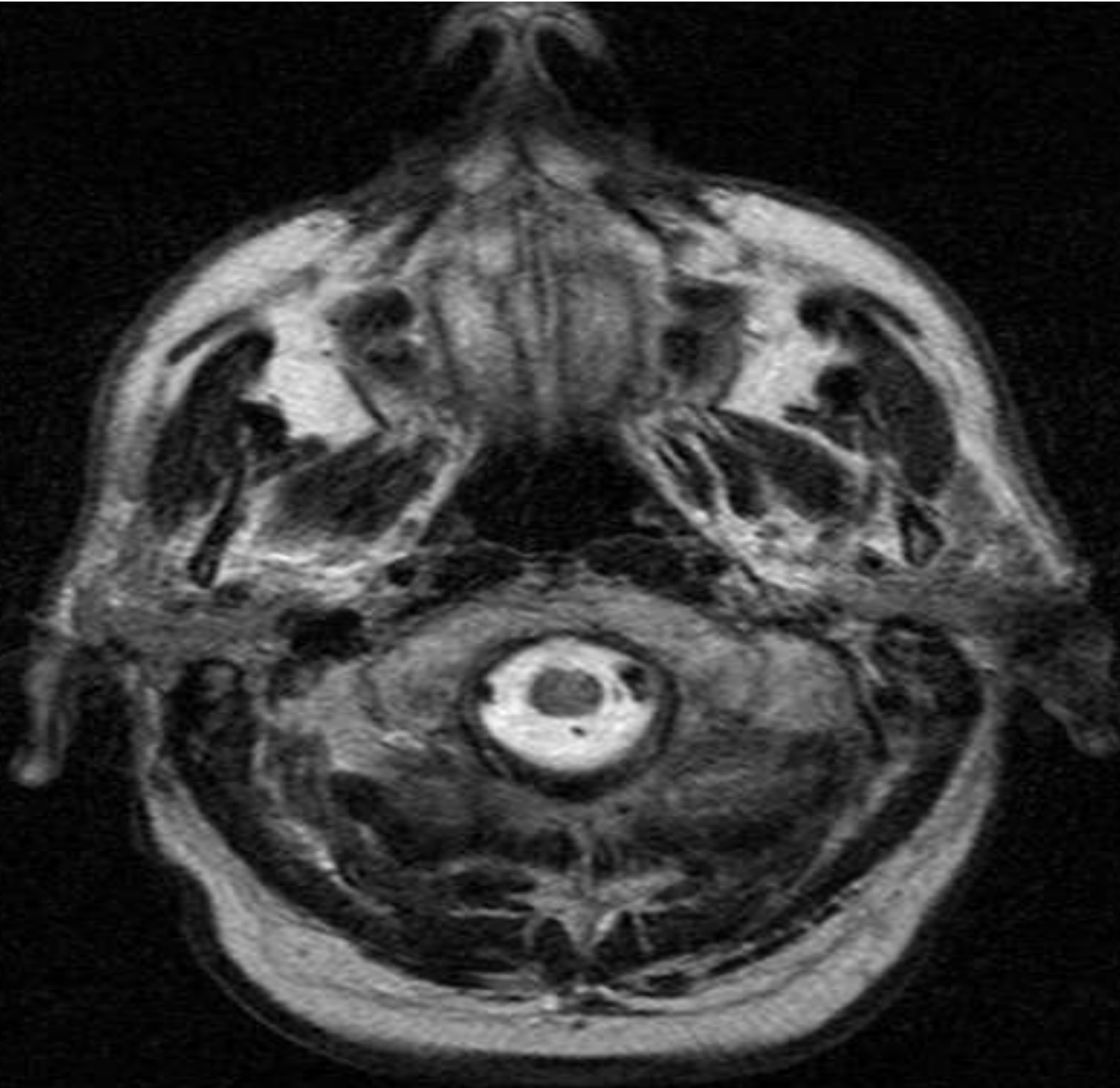
- 1) You have any metallic, electronic or magnetic implants or devices in your body**
- 2) You have been exposed to metal shavings from operations like grinding or sawing as part of your occupation**
- 3) You have metal embedded in your body due to injury**
- 4) You have any object which may contain metal or metallic parts (cell phones, scissors, watches, hearing aids, tools or keys)**

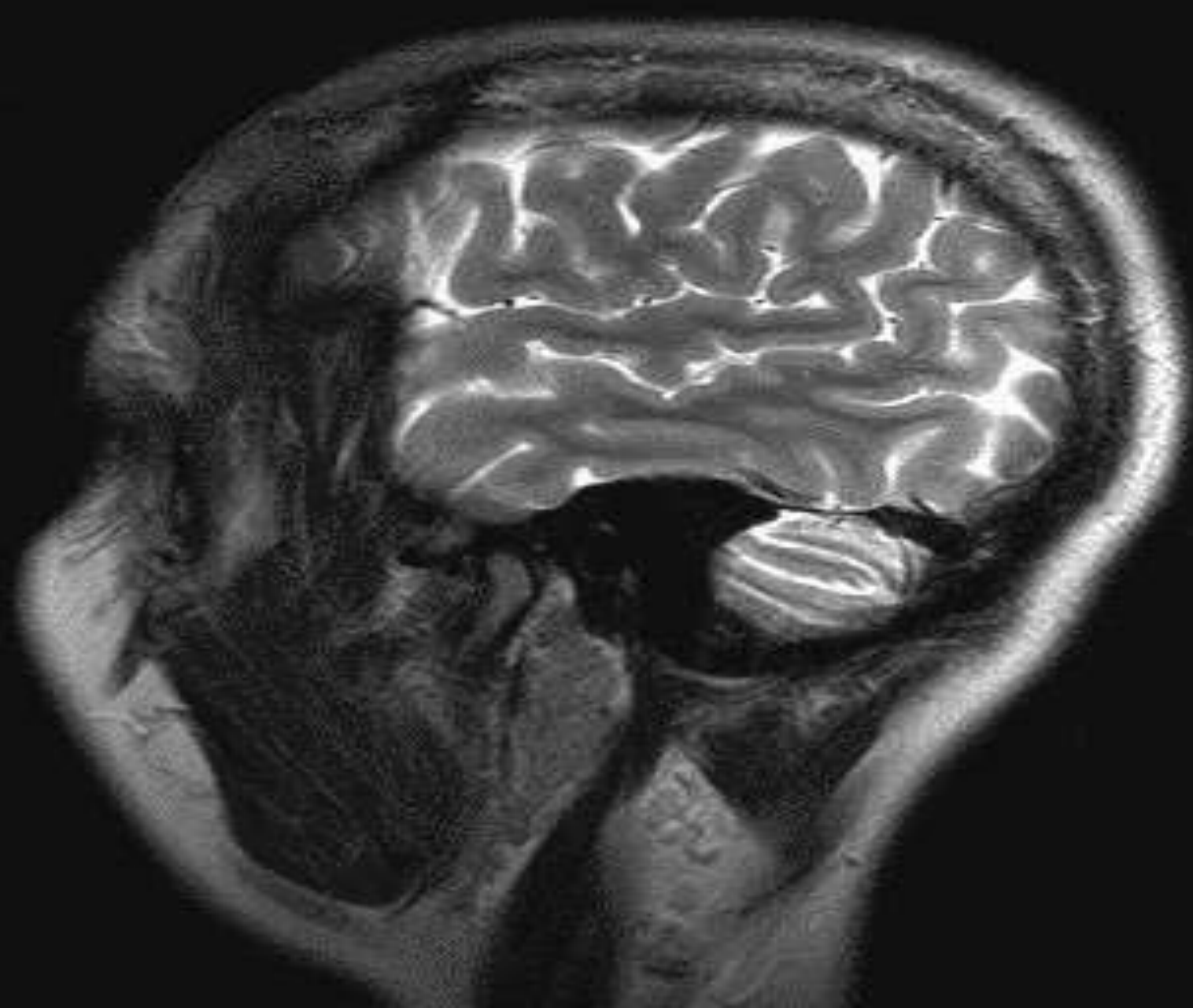
Failure to follow these instructions could result in serious injury or death.



Contra-indications to MRI







NOW ... ARE YOU READY?





Dr A.M.Abodahab - MD
Oct 2021