
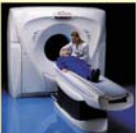


**Medical Physics Education
for
Adults, the General Public**



Perry Sprawls, Ph.D
Emory University
&
Sprawls Educational Foundation



Educational Interest and Needs
Organization and Venues
Topics and Content
Resources

Organization and Venues











Resources



The Sprawls Resources
<http://www.sprawls.org/resources>

**Understanding
the Science and Technology
in
Our Lives Today**



**Understanding
the Science and Technology
in
Our Lives Today**

Not

Clinical Medicine

Political Issues

Religion

Science

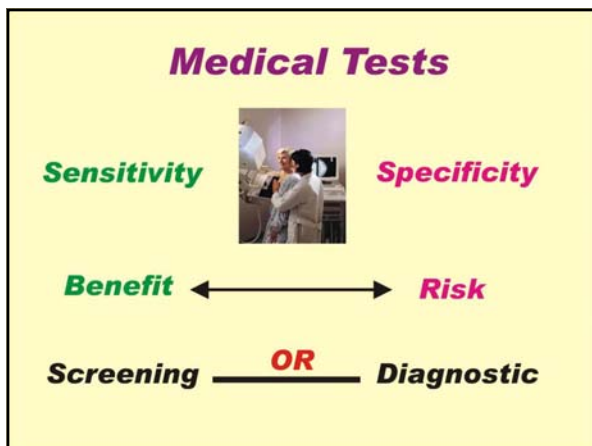
*The knowledge of ourselves and
the world in which we live.
Comes from
Observation, Experience, Discovery, and Research*

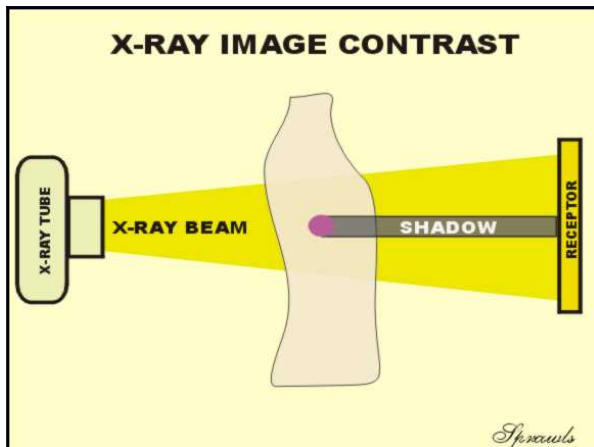
Technology

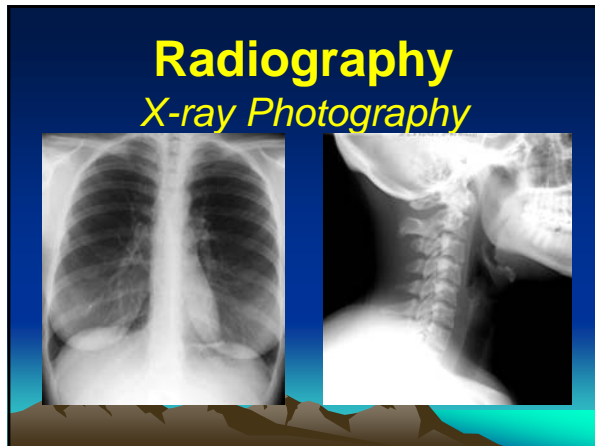
*Equipment, Instruments, and Gadgets
Comes from
Invention and Development*



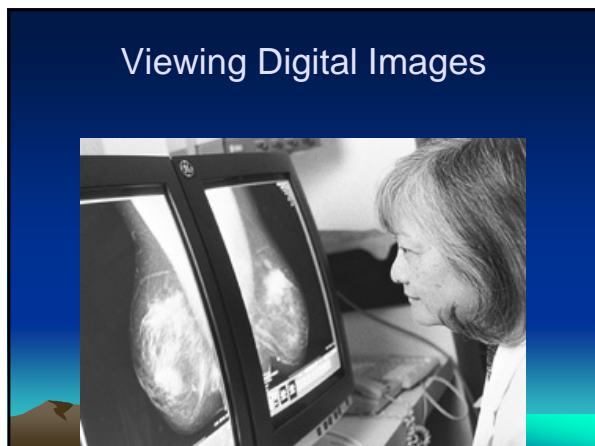


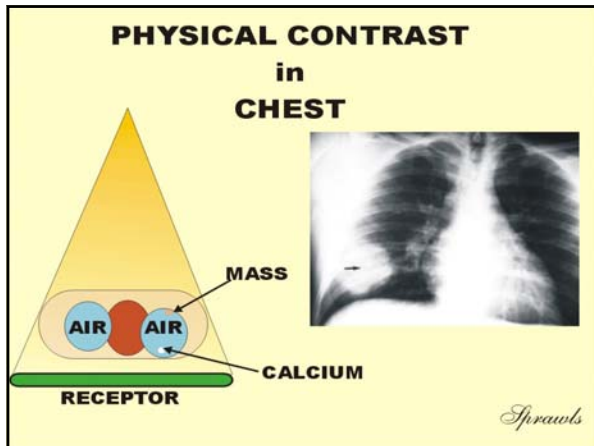










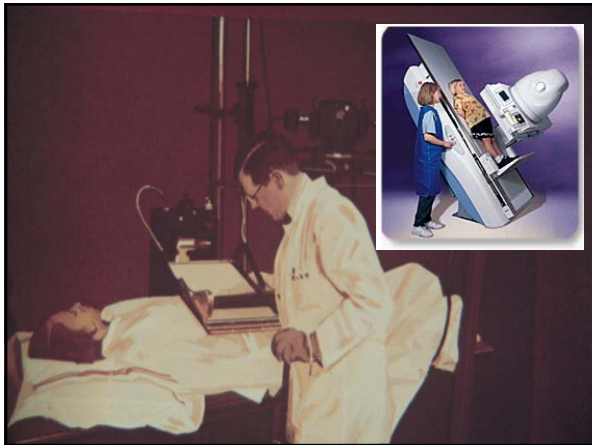






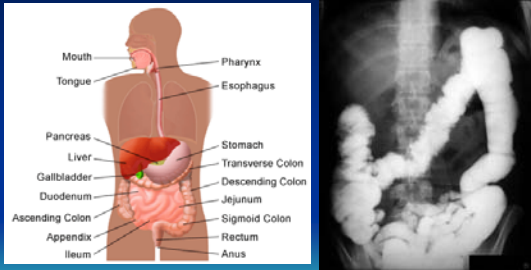
Fluoroscopy



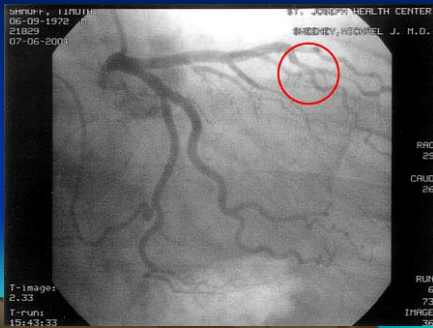


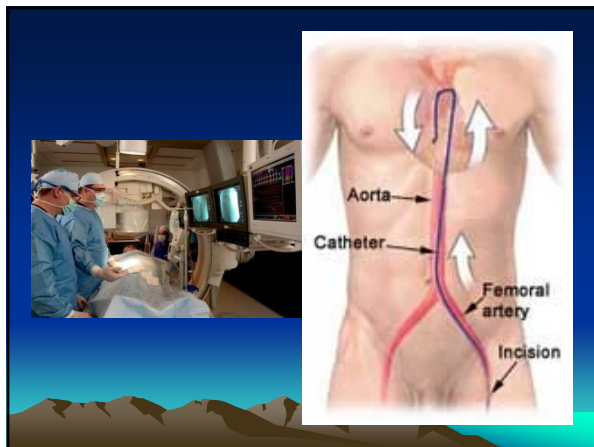


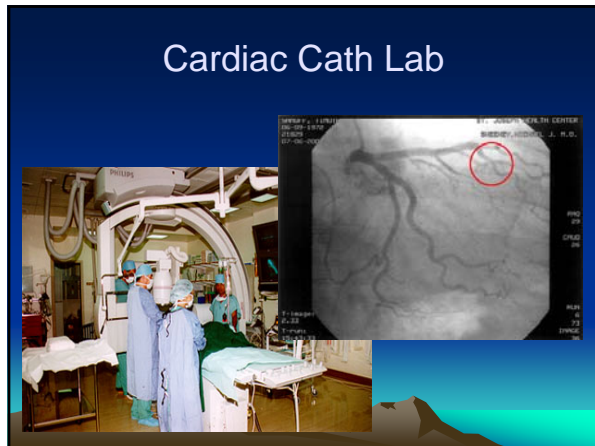
Barium Contrast Media

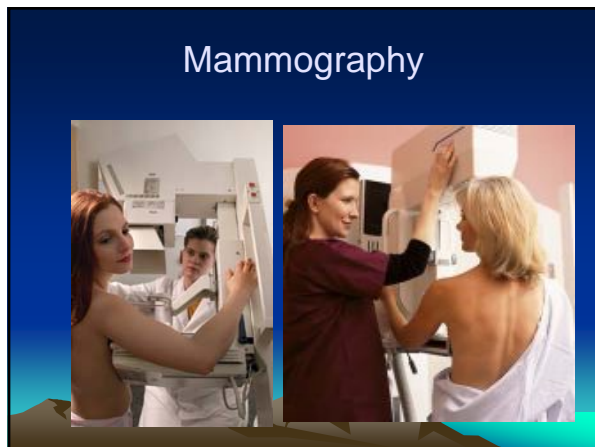


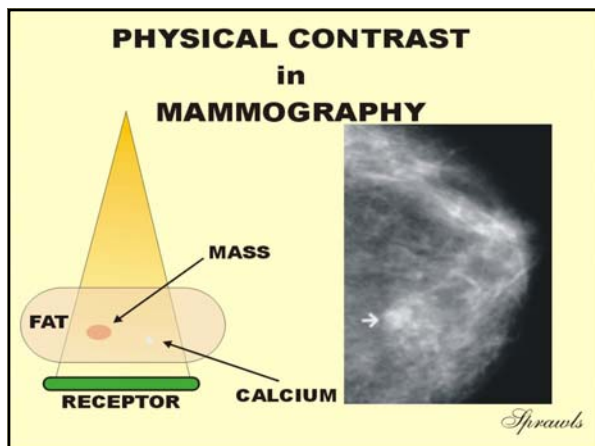
Iodine Contrast Media



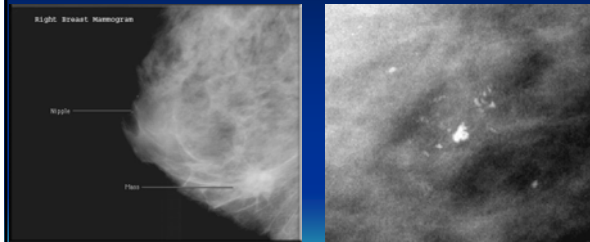








Signs of Breast Cancer



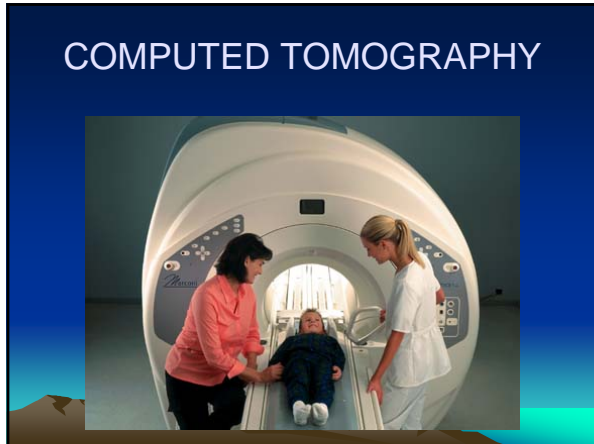
Mammography

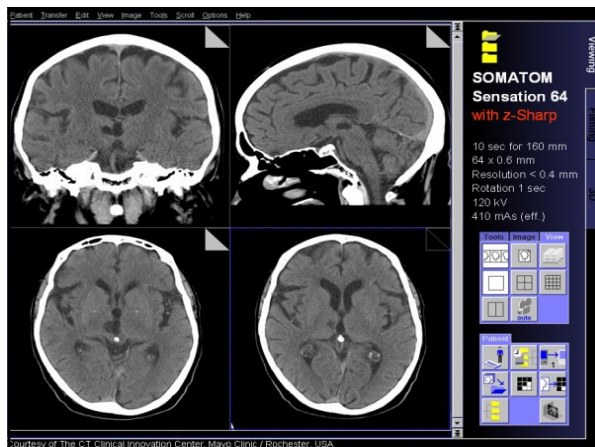


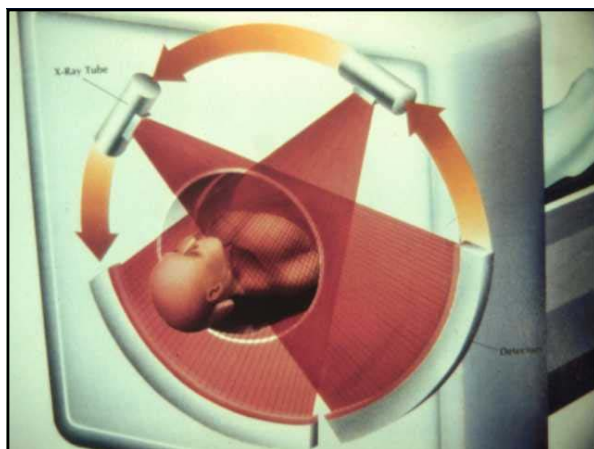
Limitations of Radiography



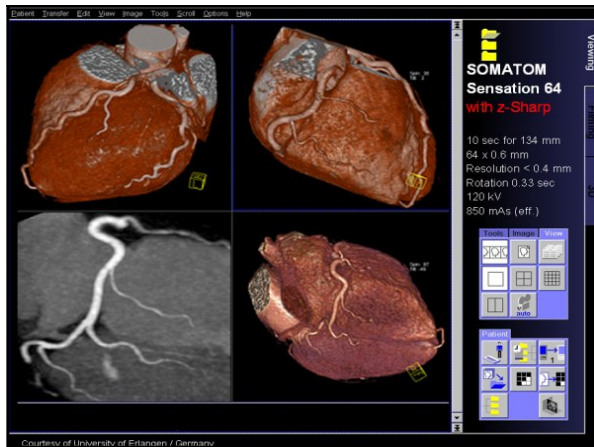
COMPUTED TOMOGRAPHY





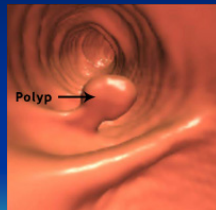








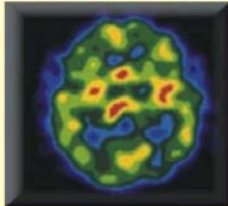
Virtual Colonoscopy



RADIONUCLIDE IMAGING

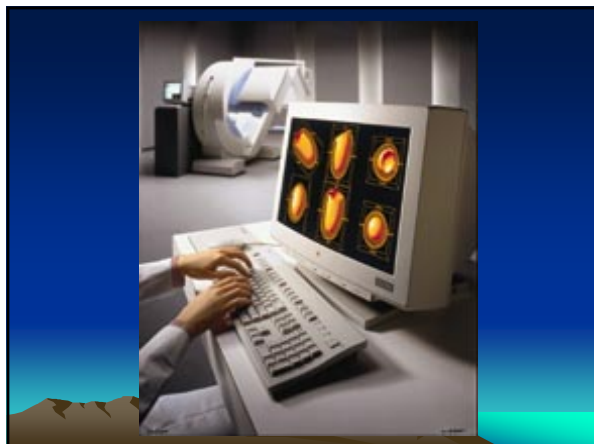
**CONTRAST
SENSITIVITY**

ADJUST TO RADIATION ENERGY

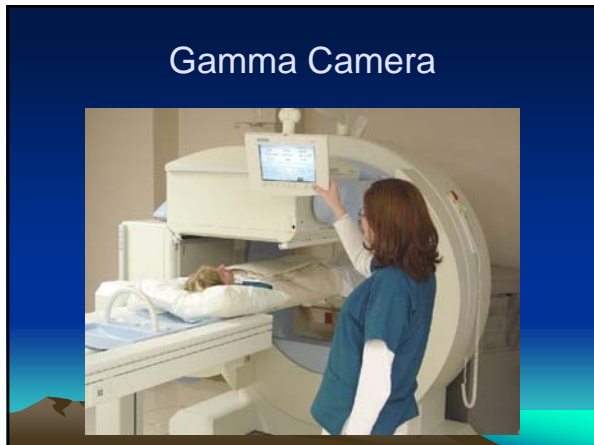


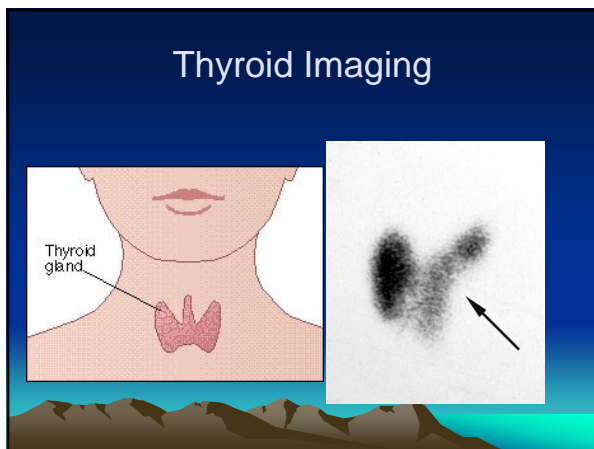
**RADIOACTIVITY
PHYSICAL CONTRAST**

Sprawls

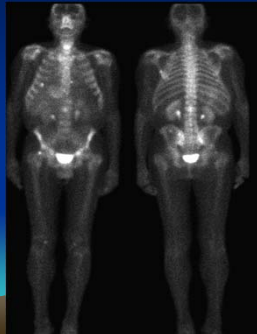








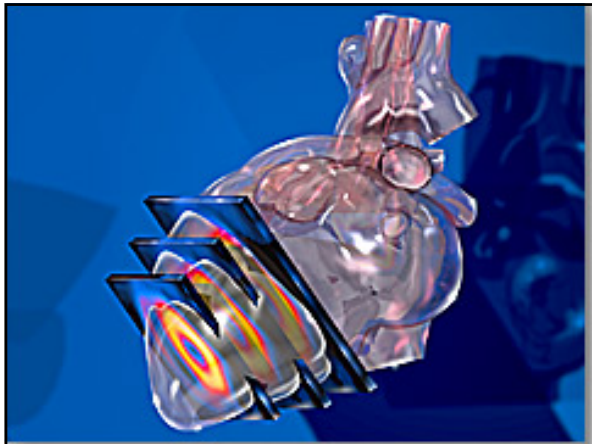
Radionuclide Bone Scan

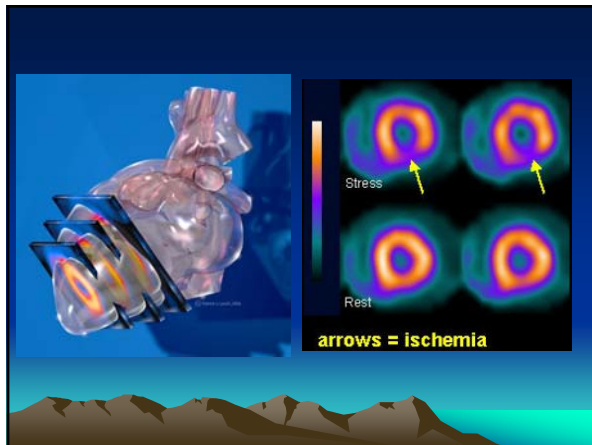


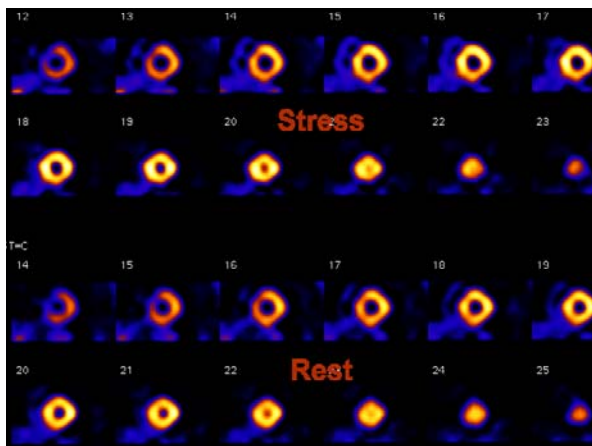


Single Photon Emission Tomography



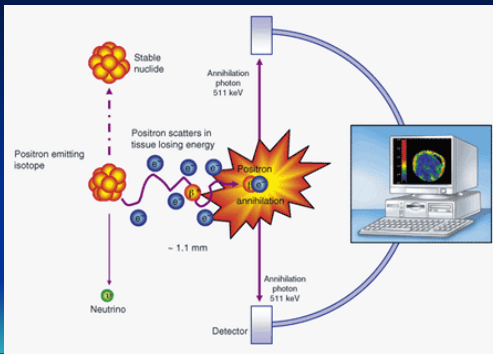


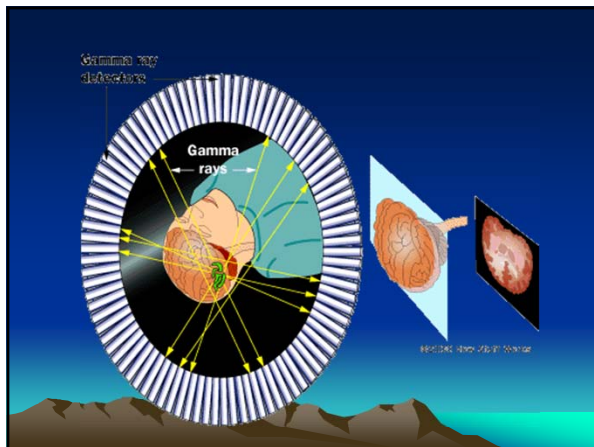


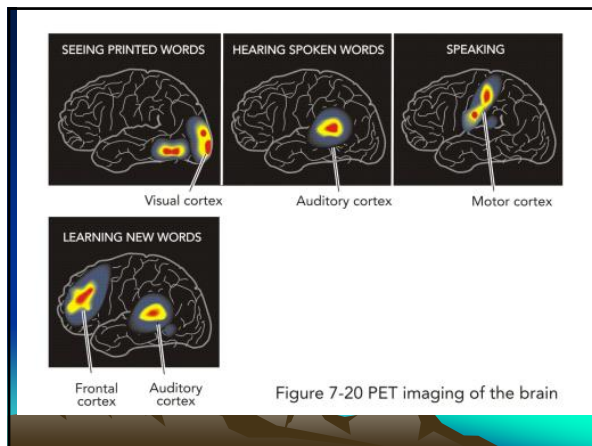


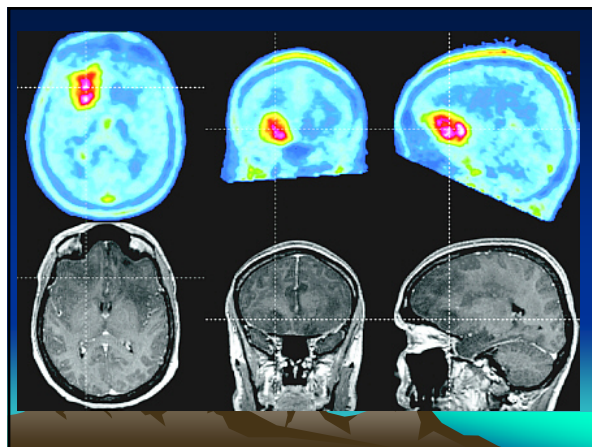
PET Scanner

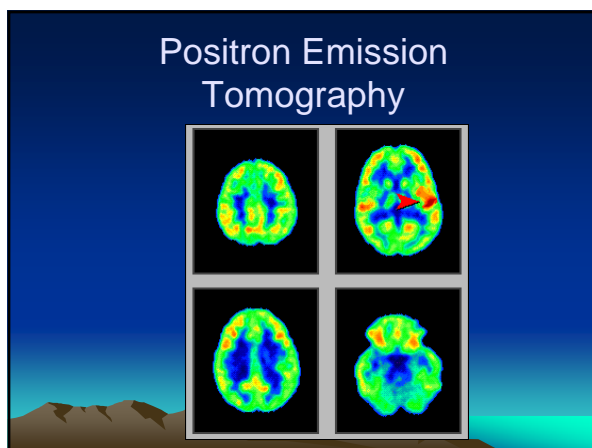












MEDICAL IMAGING NON-IONIZING RADIATION METHODS


- Radiography and Mammography
- Fluoroscopy
- Computed Tomography (CT)
- Radionuclide Scan
- Single-Photon Emission CT
- Positron-Emission Tomo. (PET)
- Ultrasound
- Magnetic Resonance Imaging (MRI)

Medical Tests

Sensitivity

Benefit

Screening




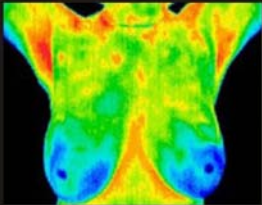
Specificity

Risk

Diagnostic

Benefit ← **OR** → **Risk**

Thermography



The Ultrasound Image
What do you see?

Echo Sites

Sprawl

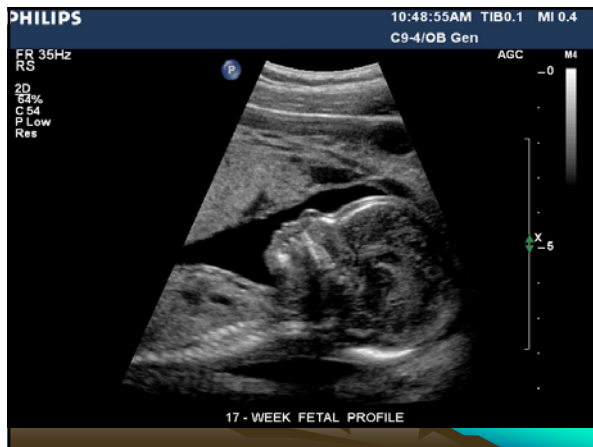
The Ultrasound Image
What do you see?

Flowing Blood

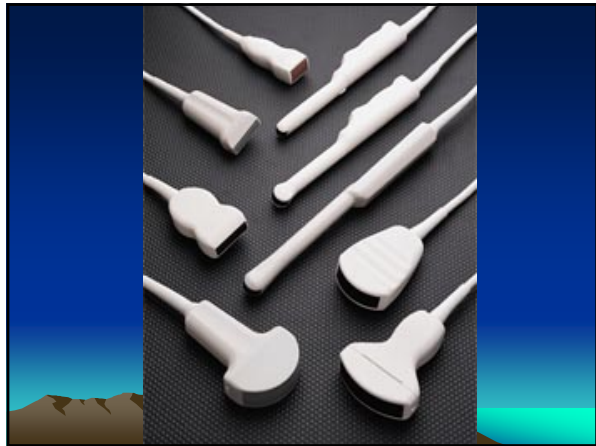
Sprawl

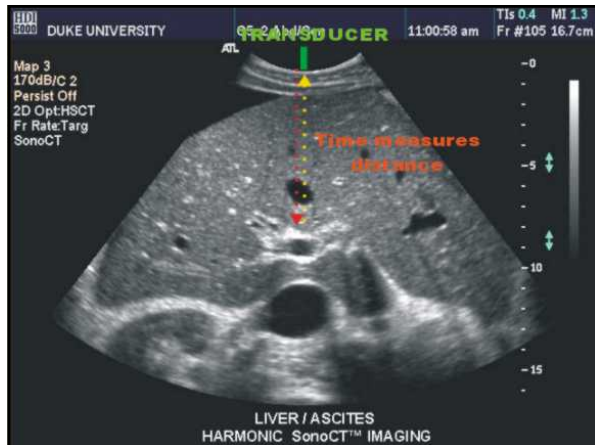
Baby's First Picture

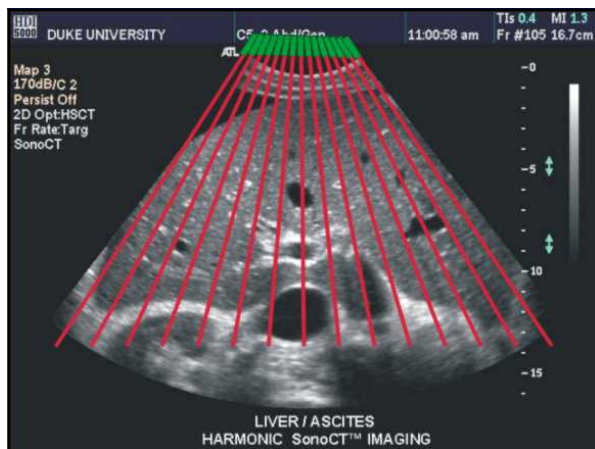






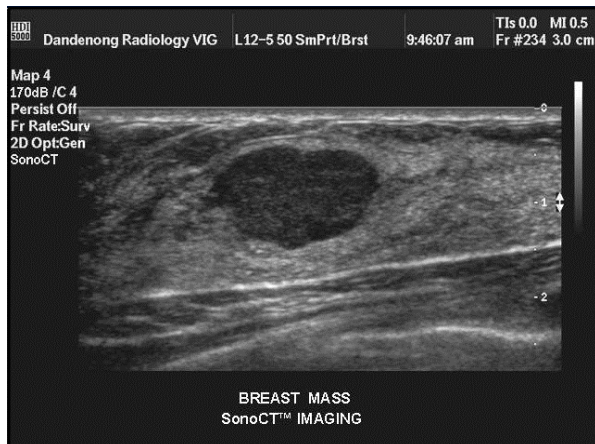




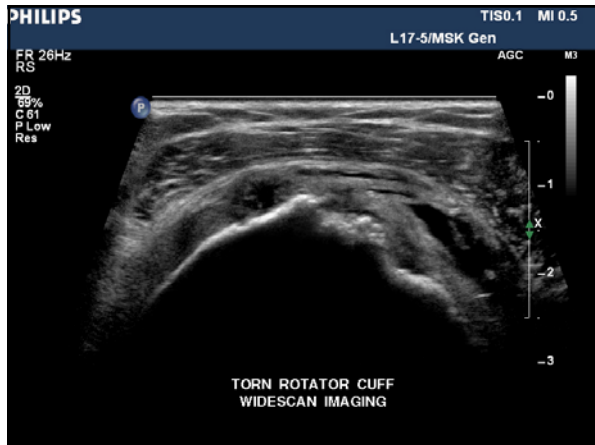


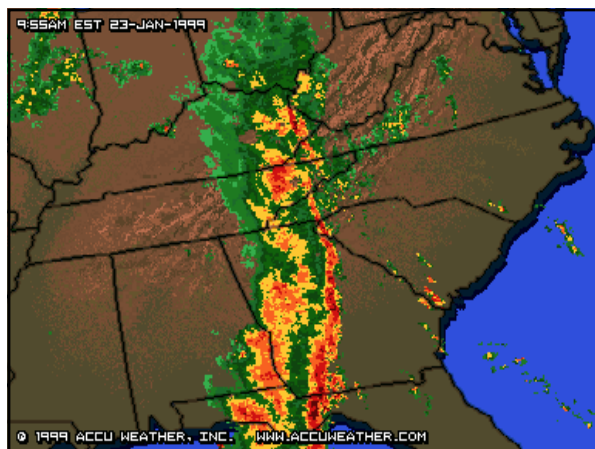


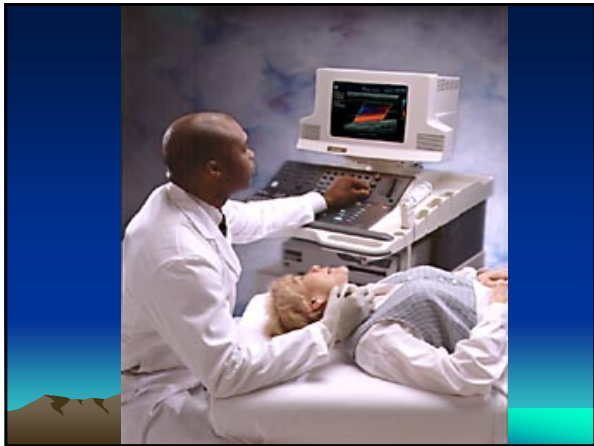


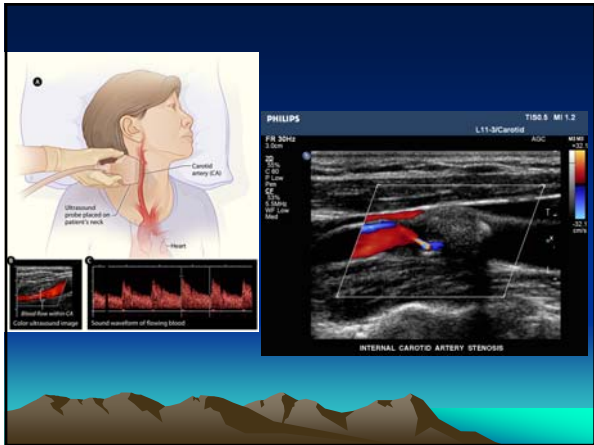




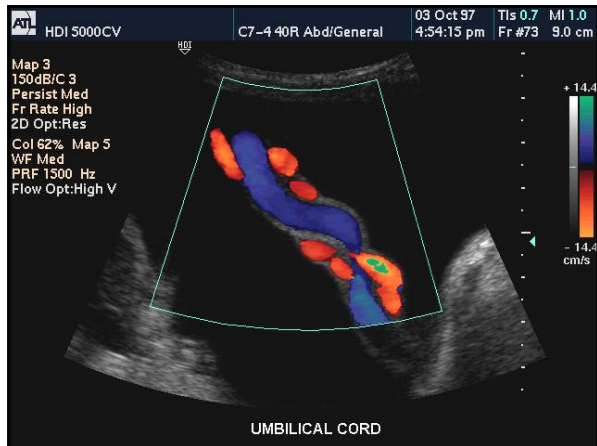


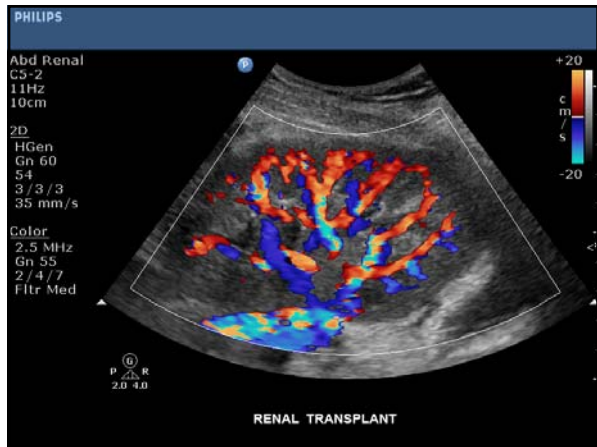


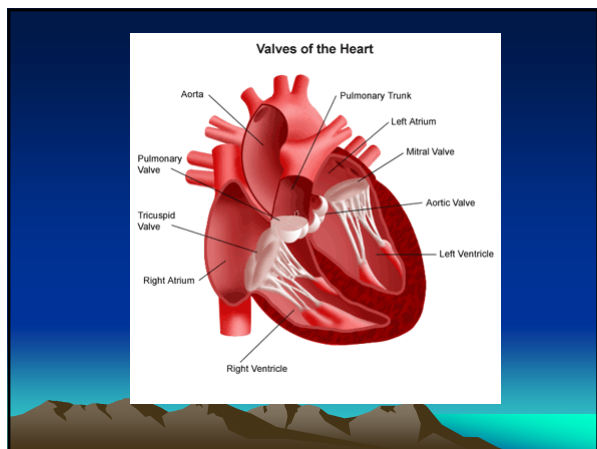


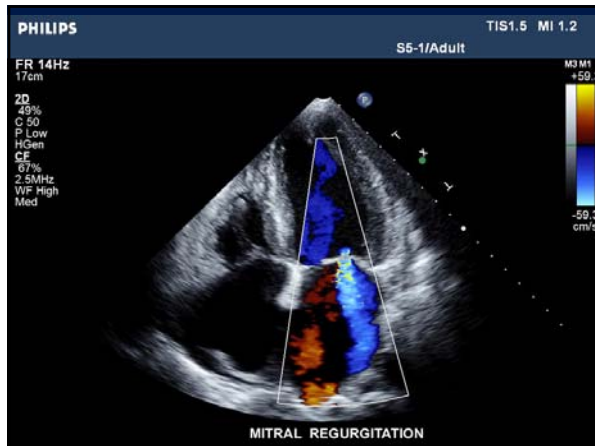




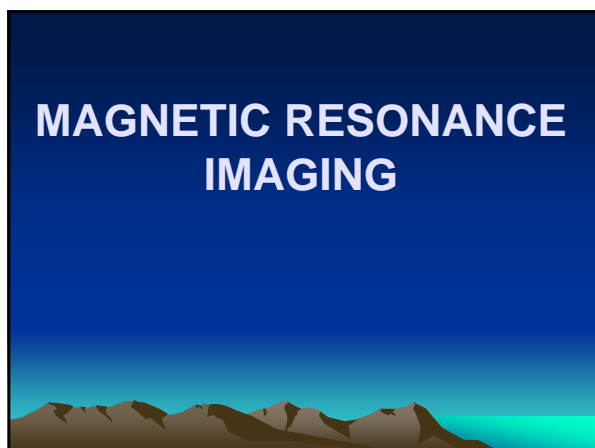




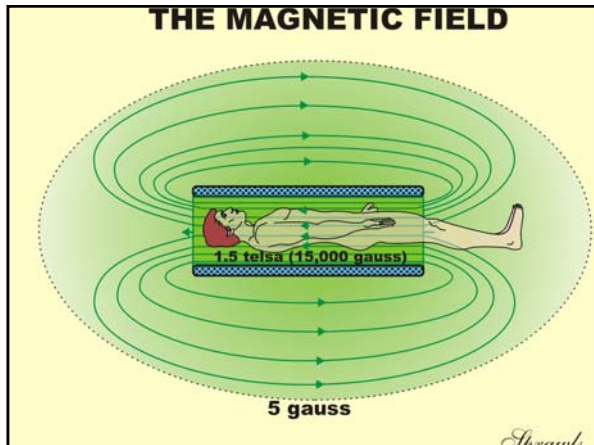


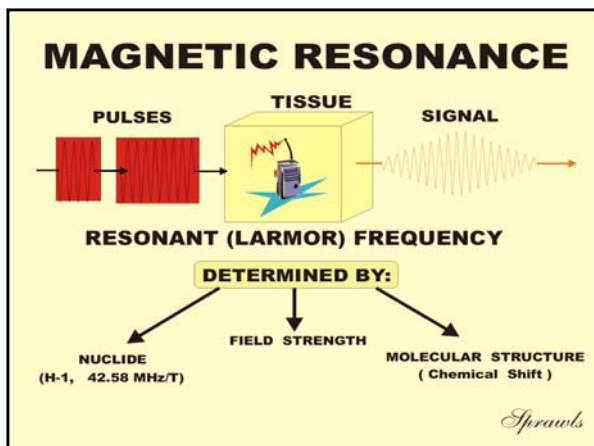


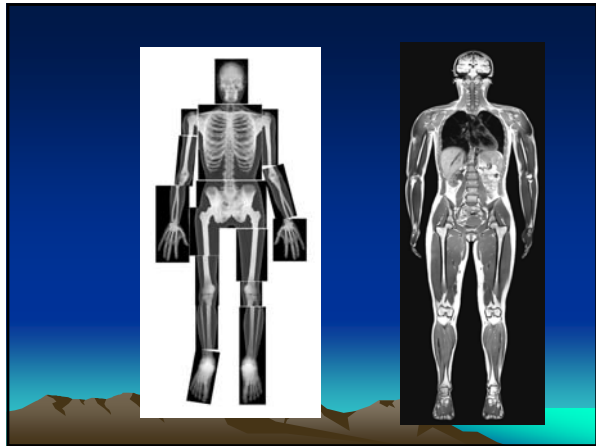


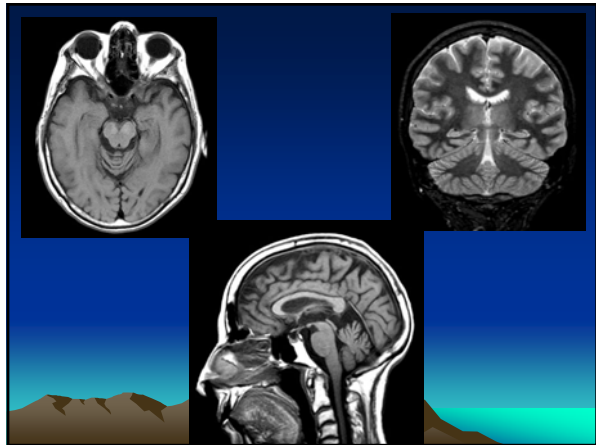


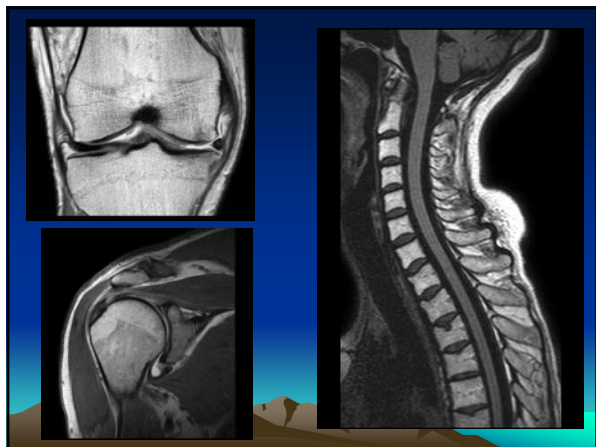


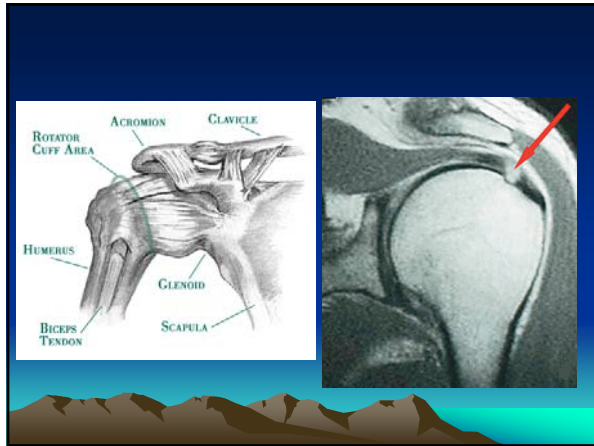


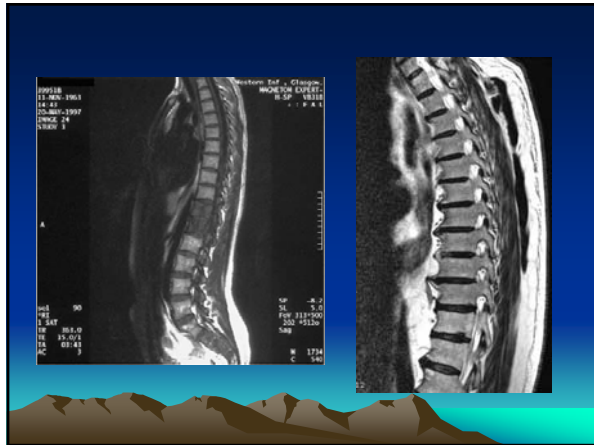


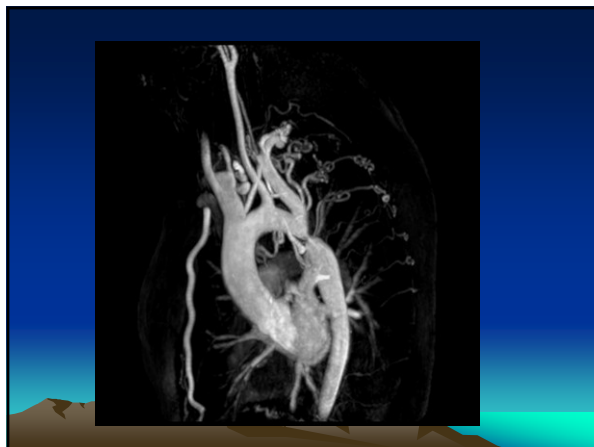


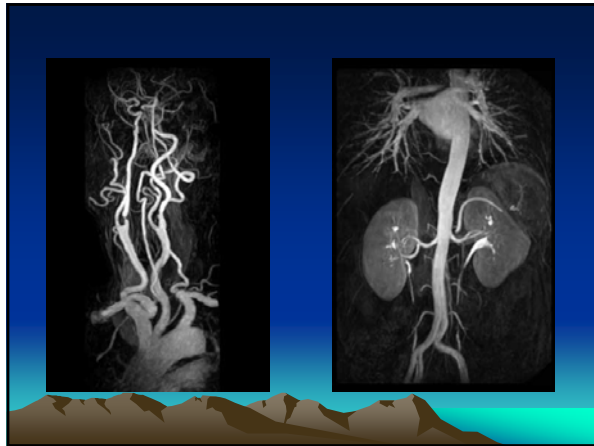










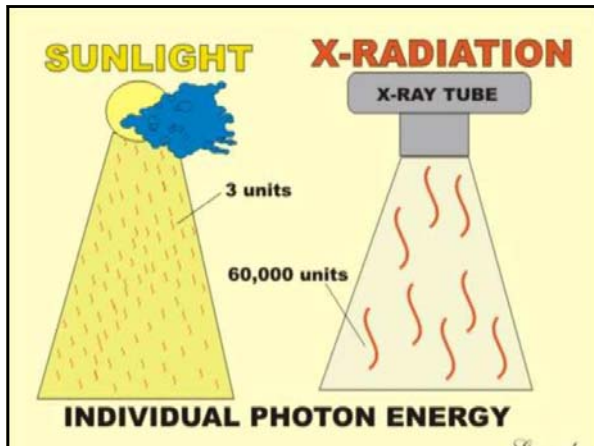


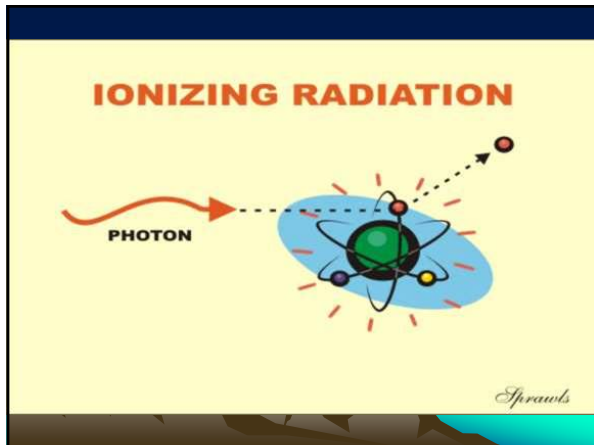


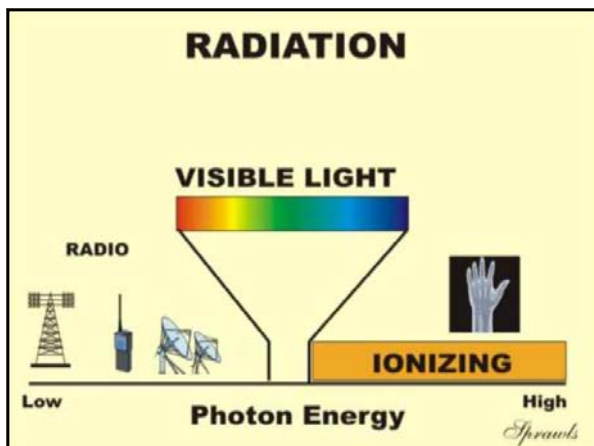


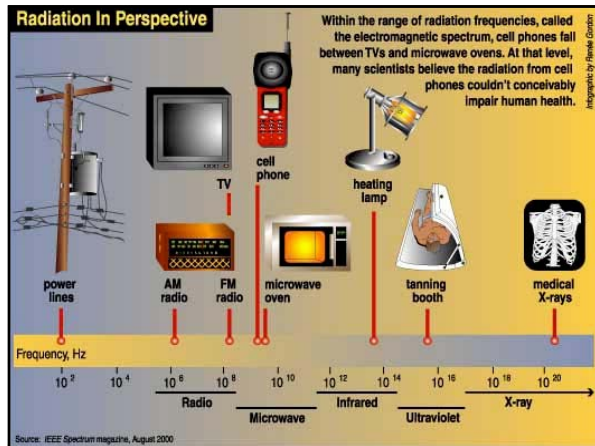
Radiation

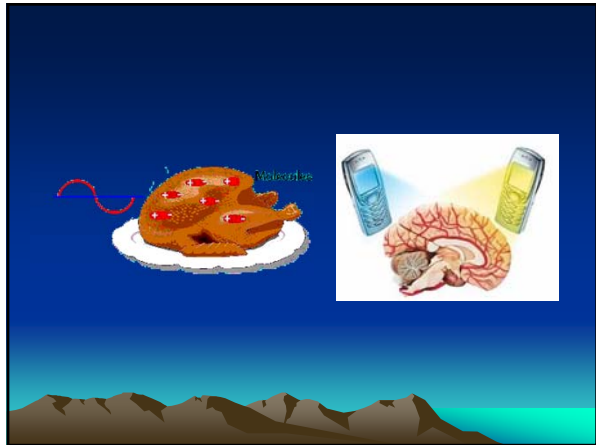
In Our Lives Today





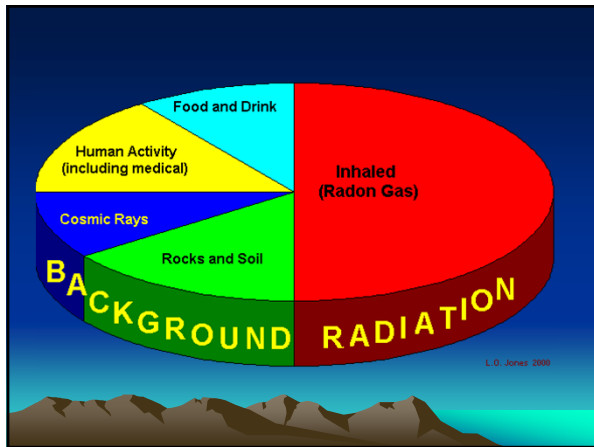


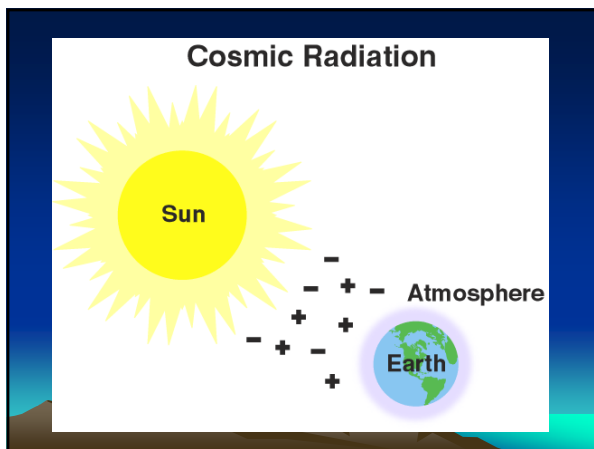


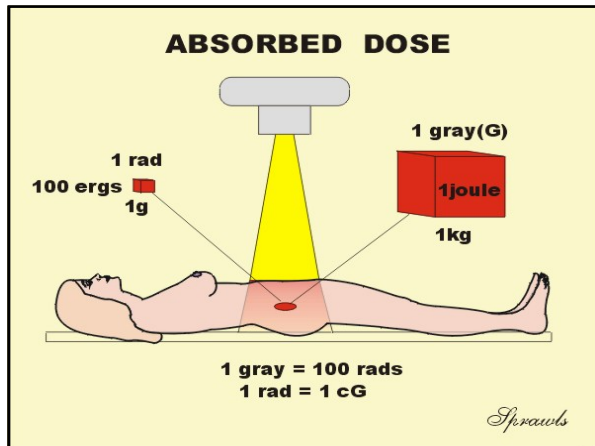




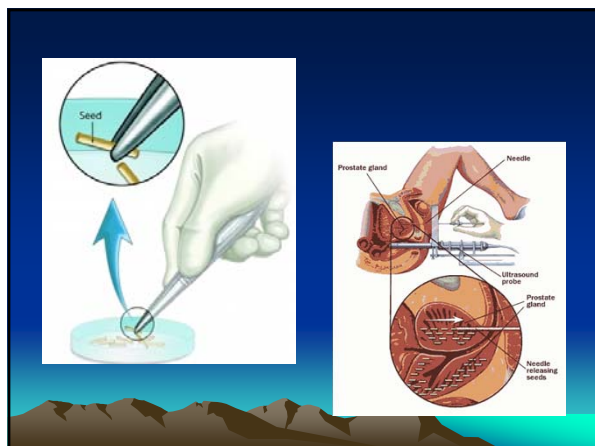


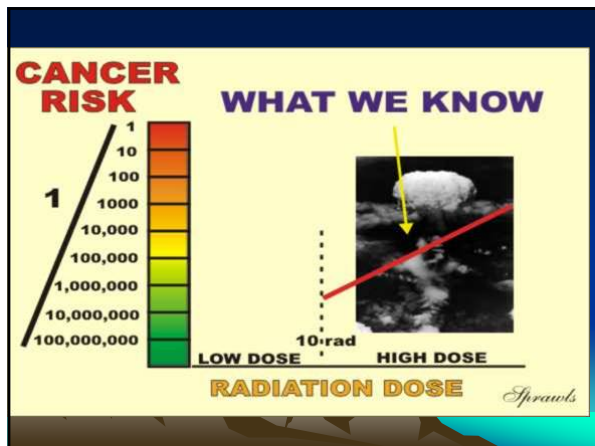


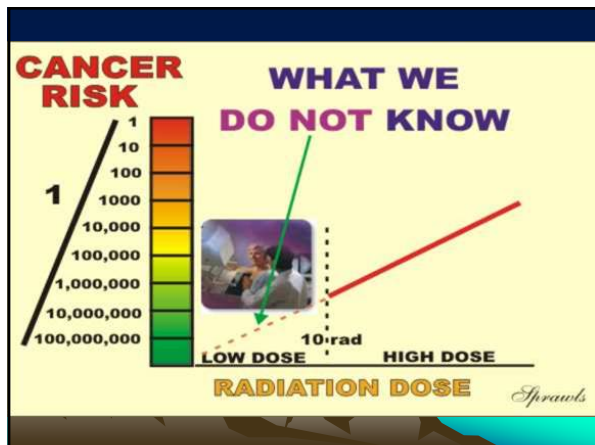


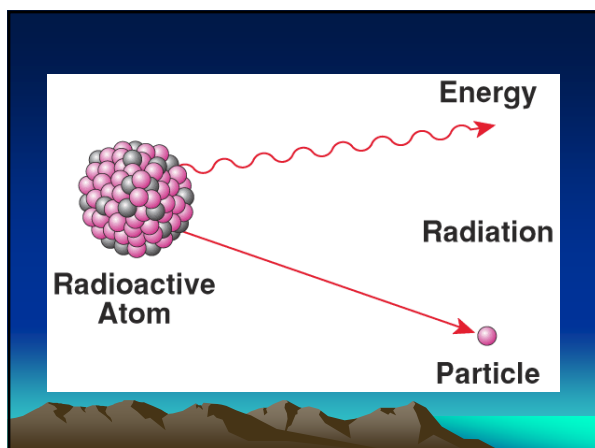


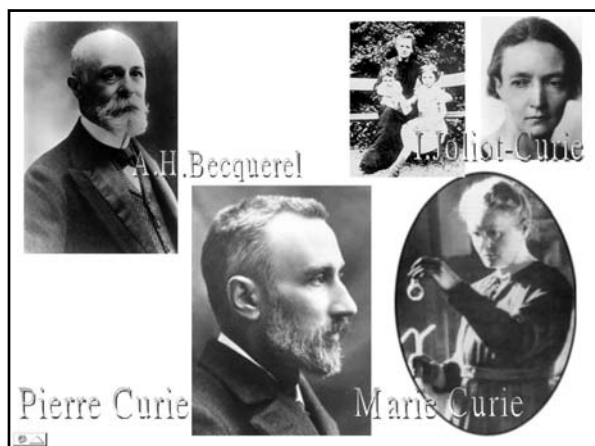




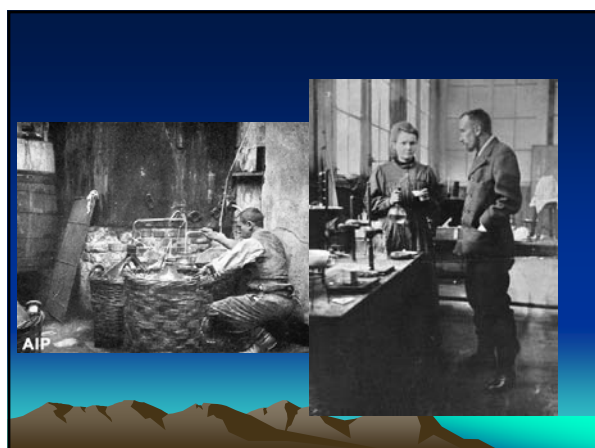




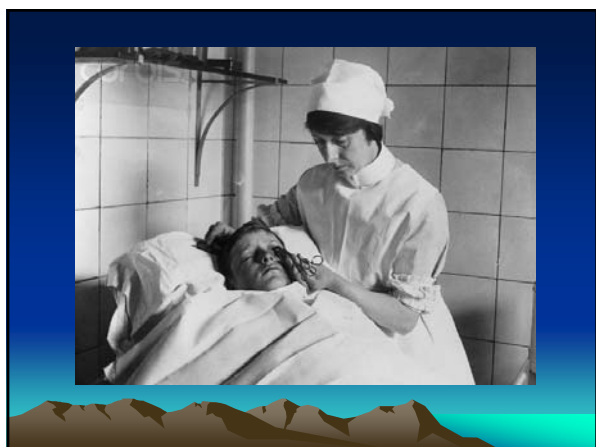


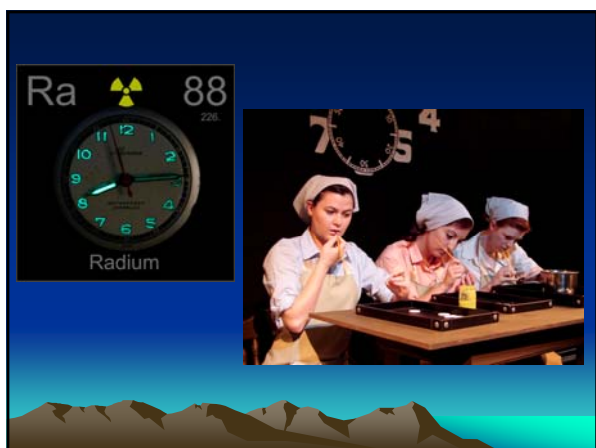










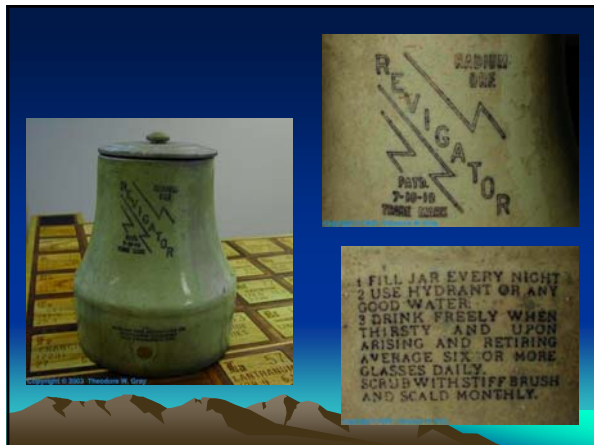




















RADIUM v. GREY HAIR
Who'd dream she was 50?



10-and not a grey hair to be seen. Wonderful! Yet as absolute fact, let "CARADIUM" do for you what it has done for thousands of our clients in all parts of the world. "CARADIUM" will quickly restore, right from the hair roots, the natural colour, health and beauty to your hair, making you look 10 to 20 years younger.

"Caradium" is NOT A DYE

CONTAINING RADIATION WATER

Regular application of "Caradium" will surely give colour glands of the hair and cause the natural pigment to flow abundantly. "Caradium" restores to just as brilliant as when it was first applied. "Caradium" is just as effective in cases of premature or falling grey hair or greyness caused by illness, worry or overwork. It is absolutely safe. No harmful to the cause of restoration that the use of "Caradium" is absolutely safe.

Grey Hair will never appear if CARADIUM IS USED ONCE WEEKLY AS A TONIC.

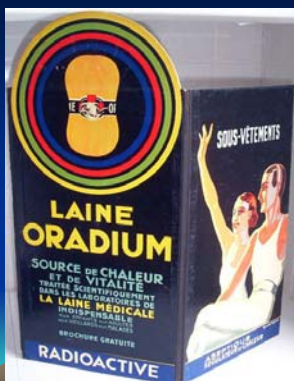
Oliver O. Hargrave, President. The House is the world for producing Soft and Glossy hair. Ad. each. Packets of ten, 6/6.

WARNING—Ask for Caradium. Don't ask for the one you get it! Imitations are useless.

Caradium REGD. Trade Mark

4/- Large Size 7/6

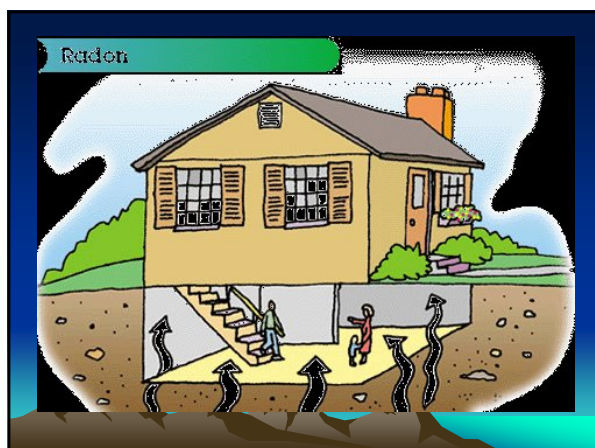
"CARADIUM" (REGD.) 26, Great Smith Street, Westminster, LONDON

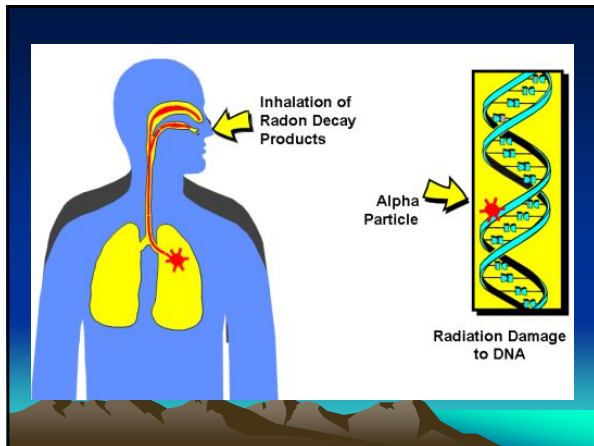


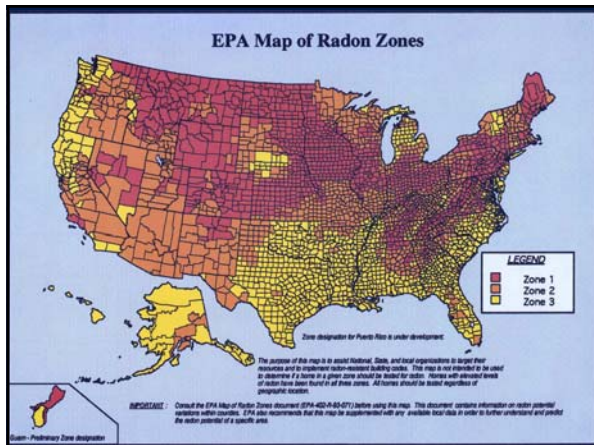
Rn Radon
 Atomic Number: 86
 Atomic Mass: (222)

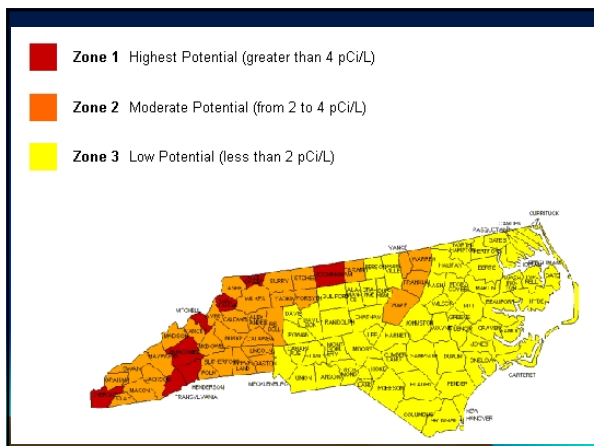
Major Radon Decay Products

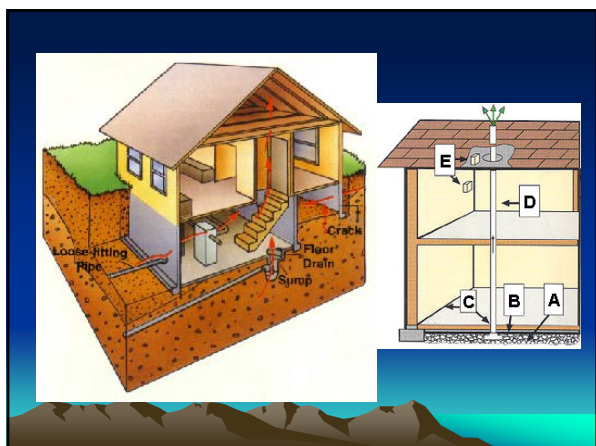
Lead 22 22 Minutes	Polonium 137 137 Minutes	Polonium 137 137 Minutes
Polonium 137 137 Minutes	Radon 3.8 Days	Lead 22 22 Minutes
Radon 3.8 Days	Radium 1,620 Years	Radon 3.8 Days
Radium 1,620 Years	Uranium 4.4 Billion Years	Radium 1,620 Years
Uranium 4.4 Billion Years		Uranium 4.4 Billion Years

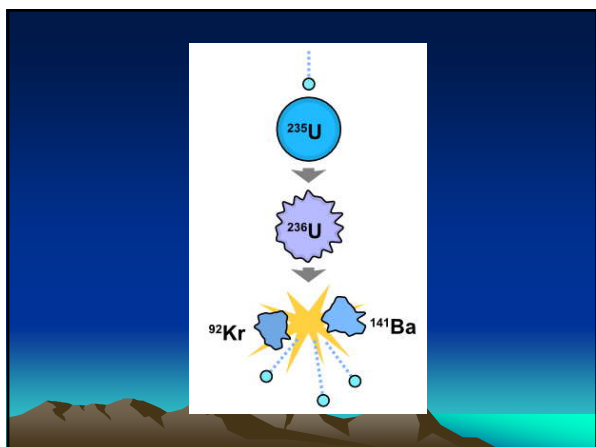


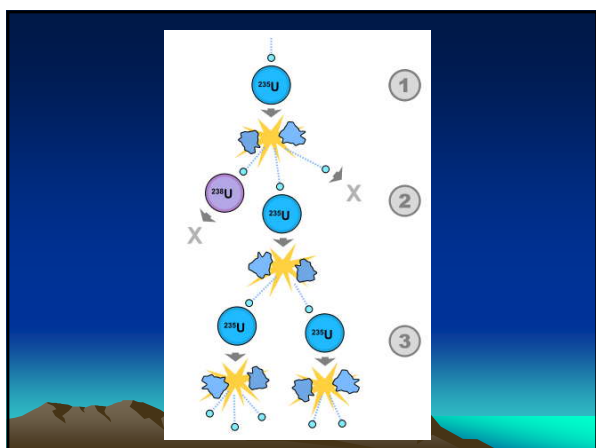






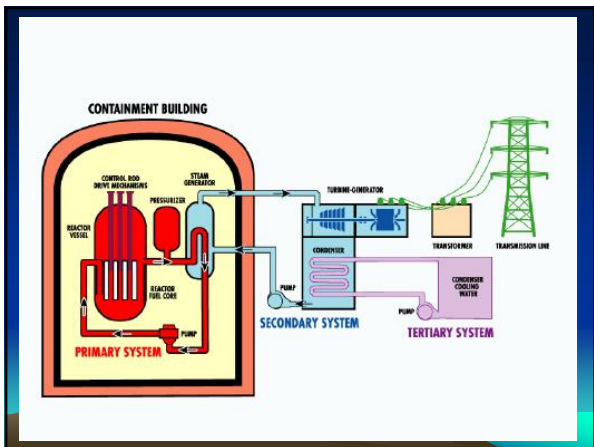


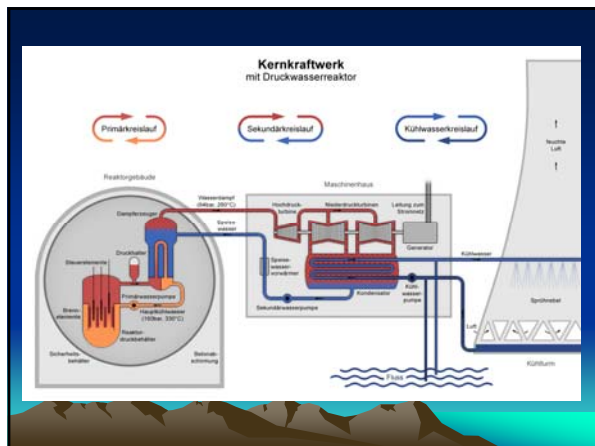


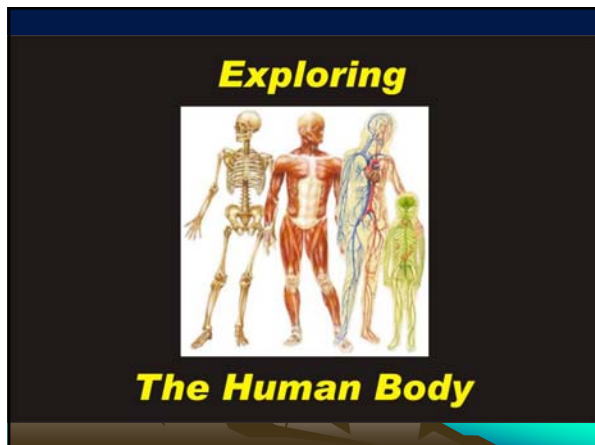


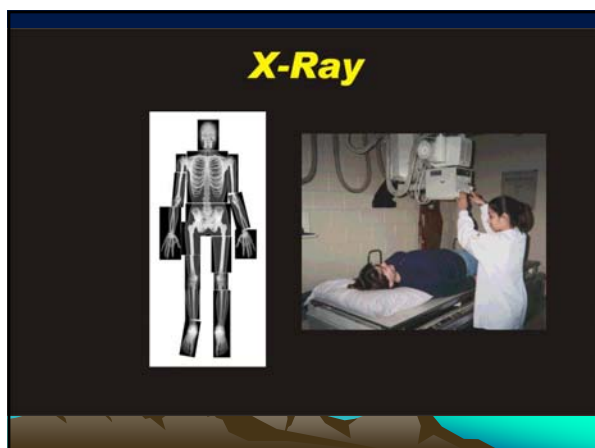












X-Ray



Barium

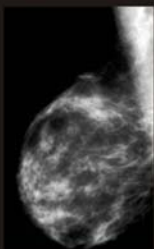
X-Ray



Iodine

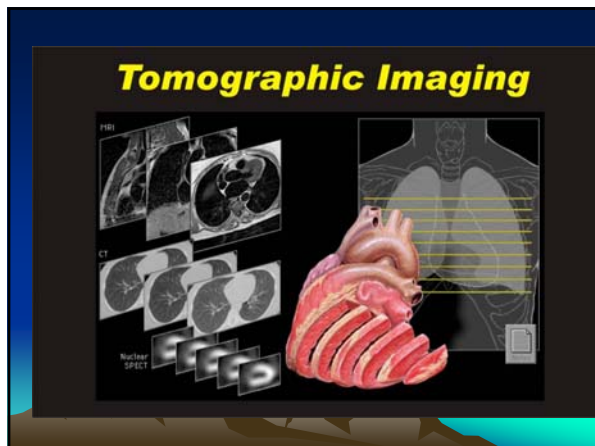


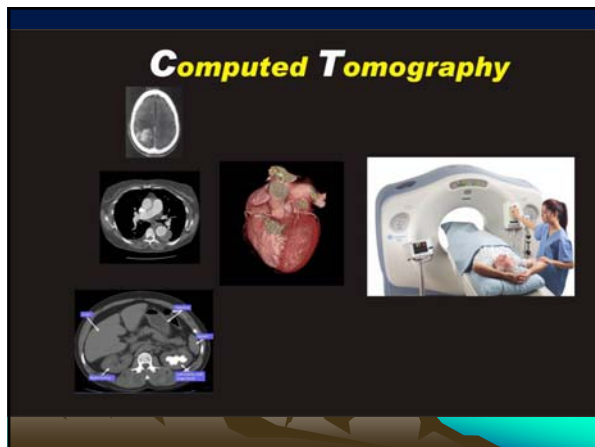
X-Ray

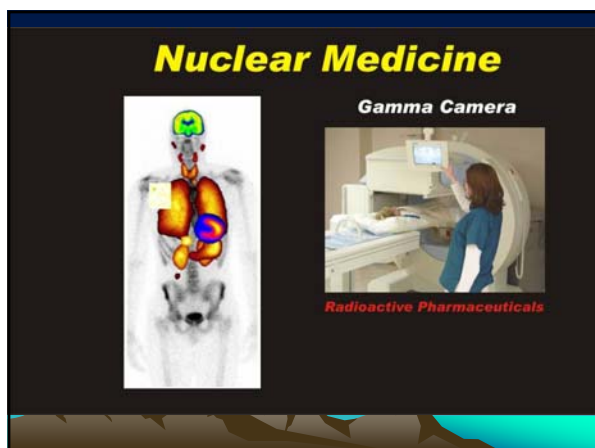


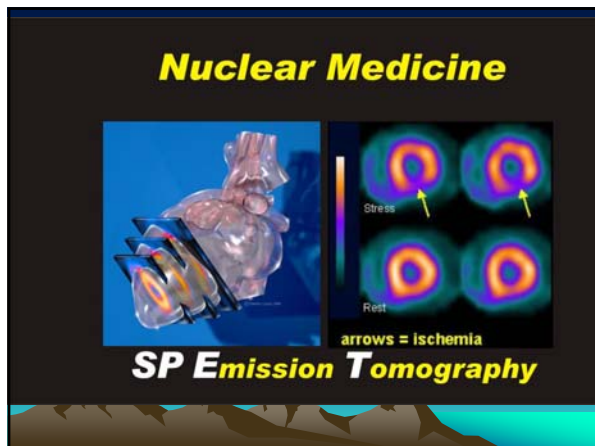
Mammography

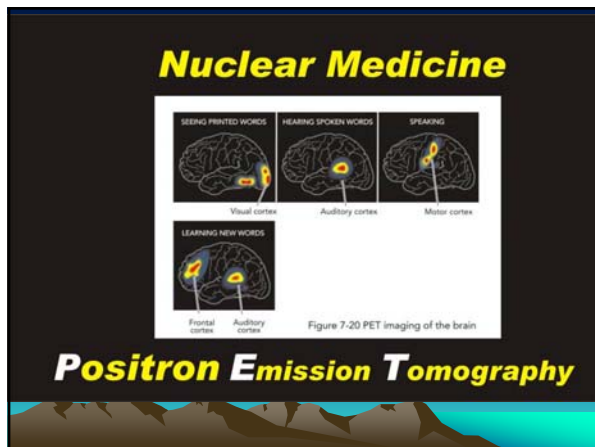


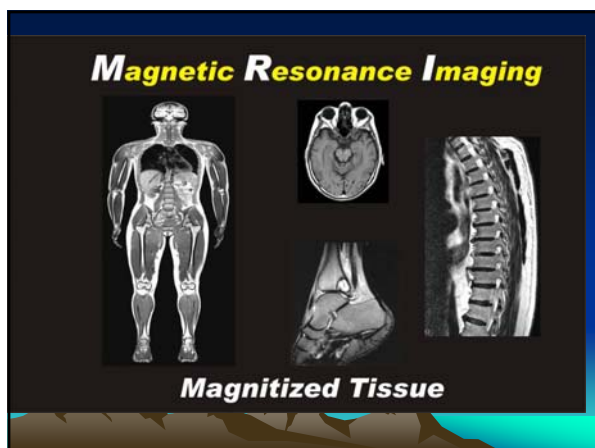


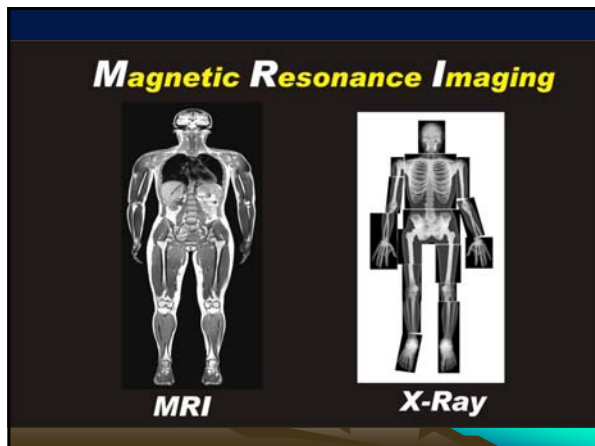


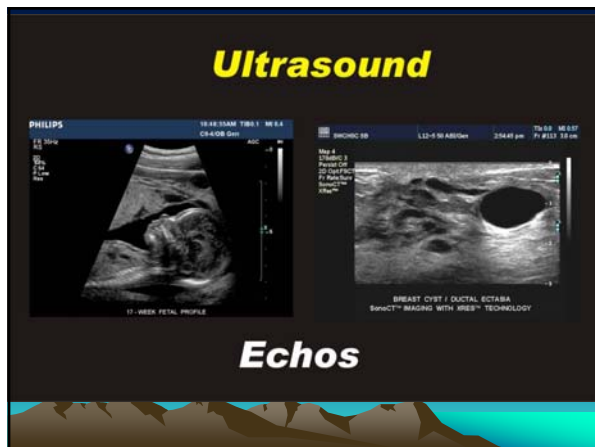


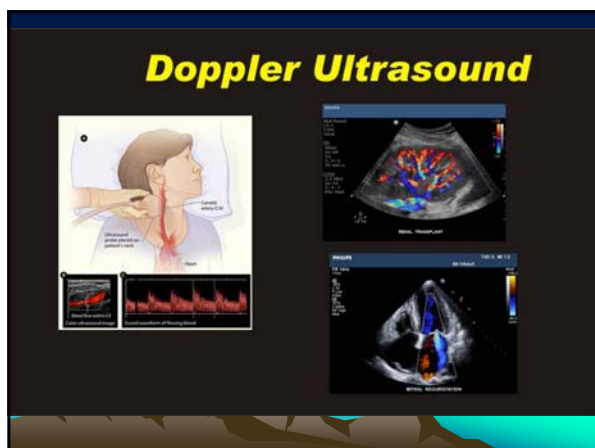


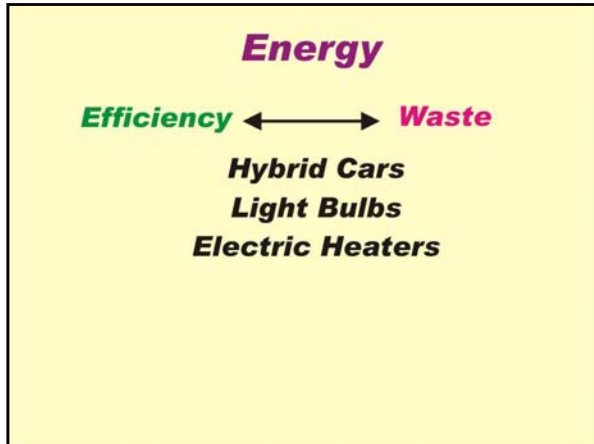


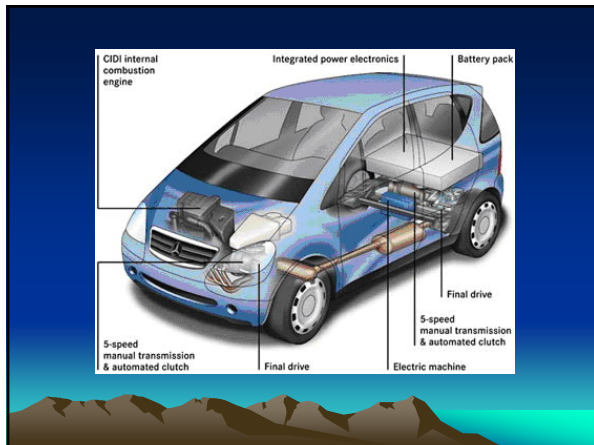












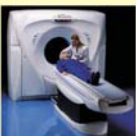









**Medical Physics Education
for
Adults, the General Public**



**Perry Sprawls, Ph.D
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