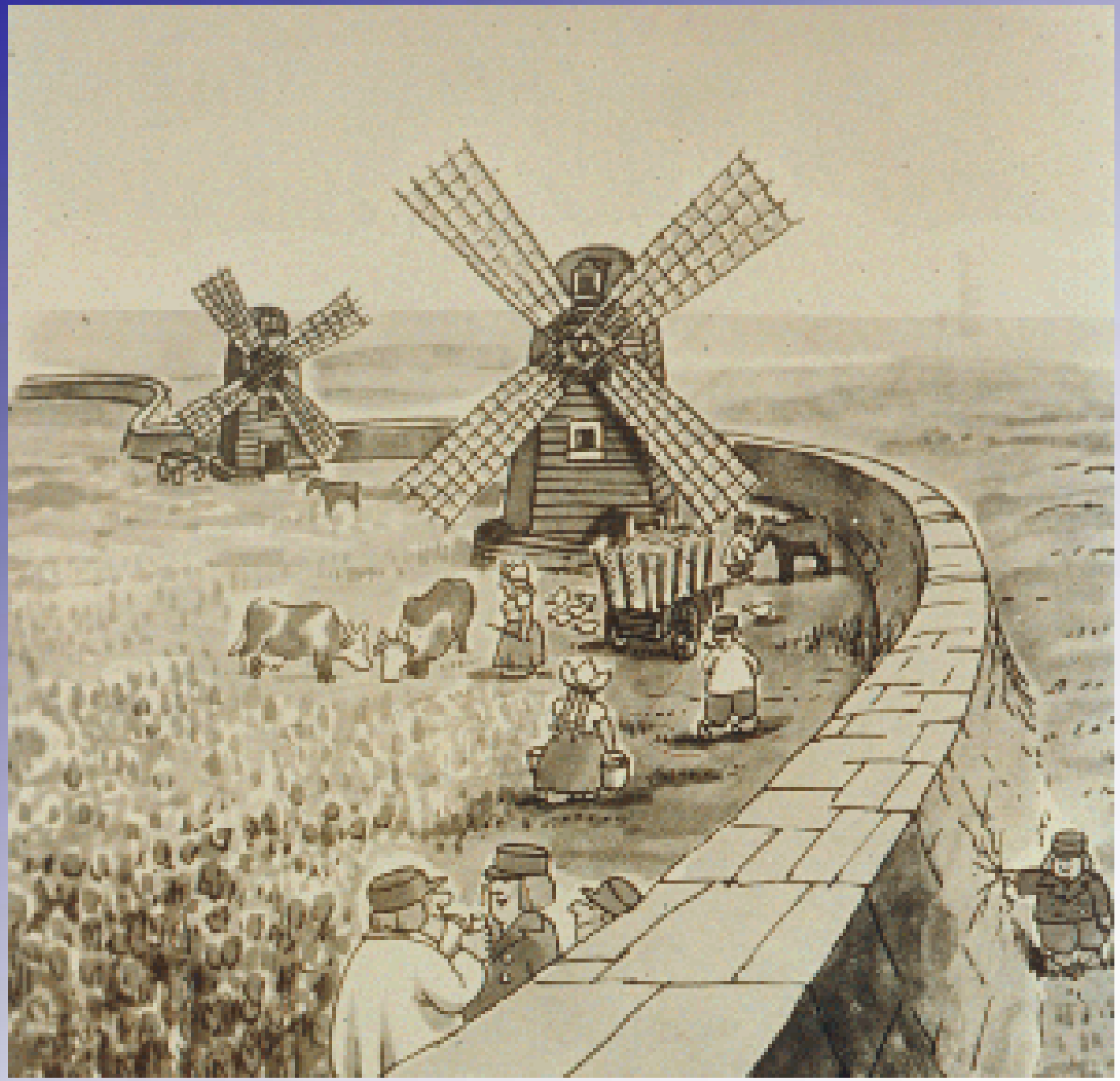
RADIOLOGISKE UNDERSØKELSER AV THORAX

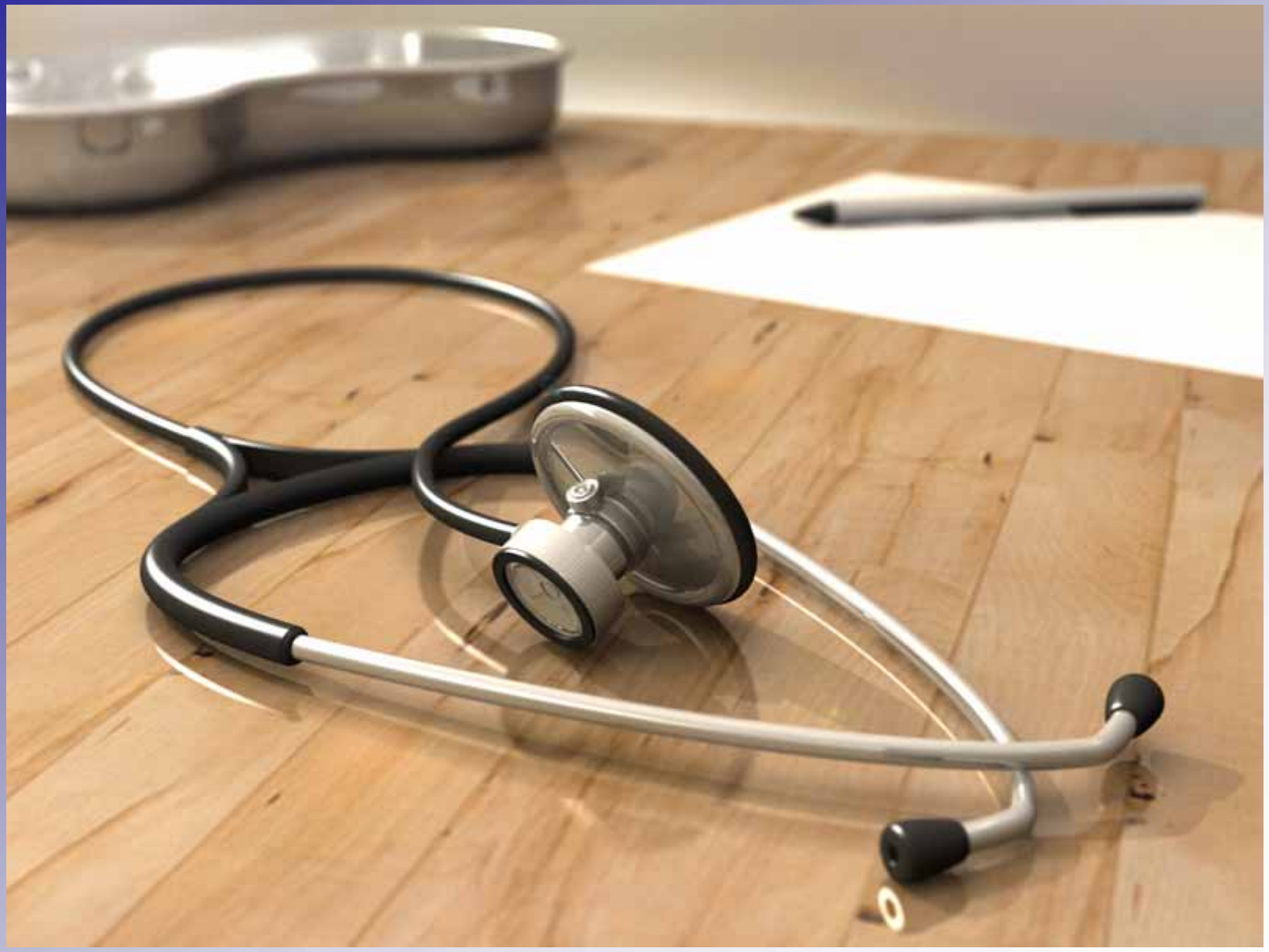
Sven Weum

Radiologisk avdeling
Universitetssykehuset Nord-Norge HF

RIKTIG VERKTØY FOR RIKTIG JOBB

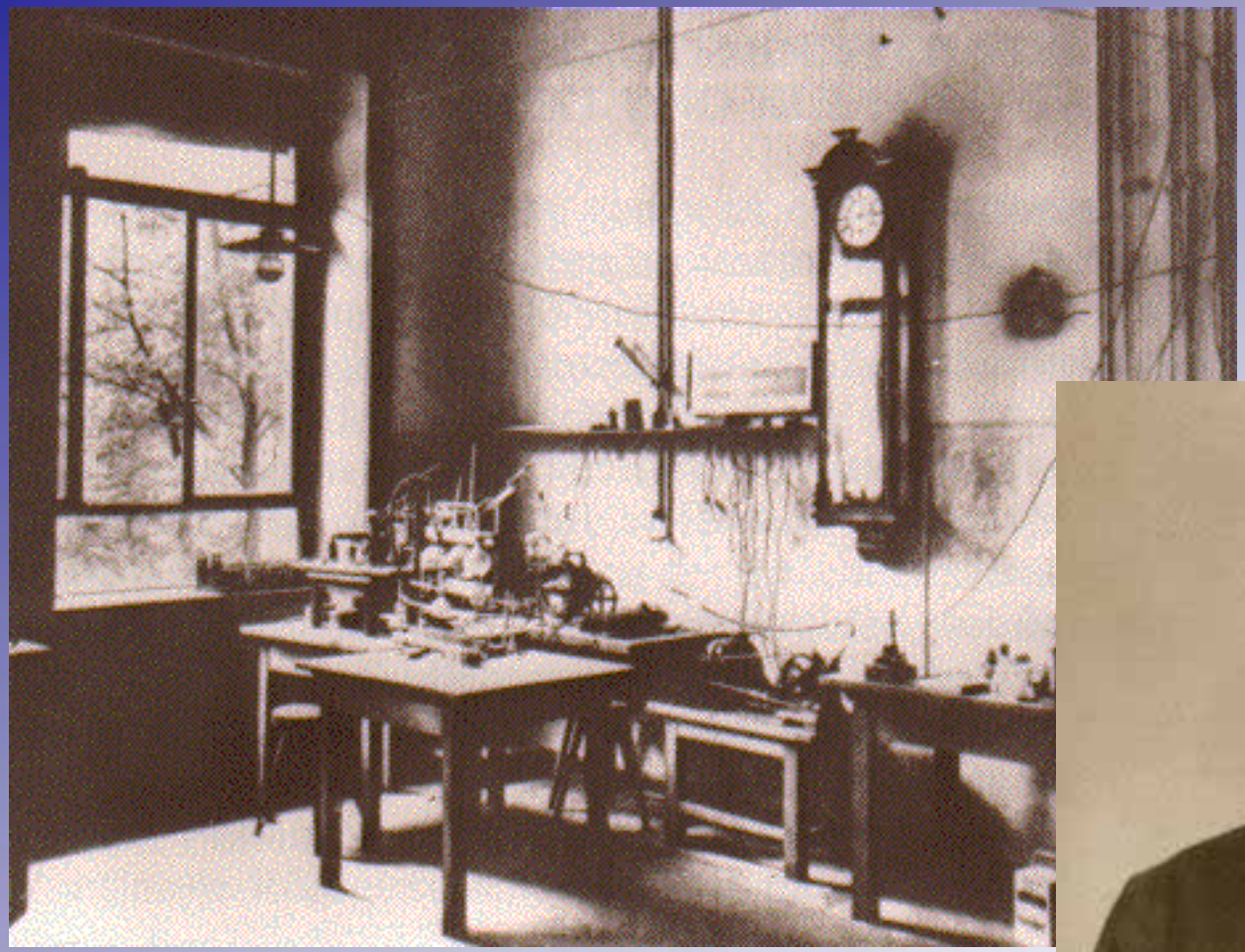
TV
GUIDE
CONFIDENTIAL

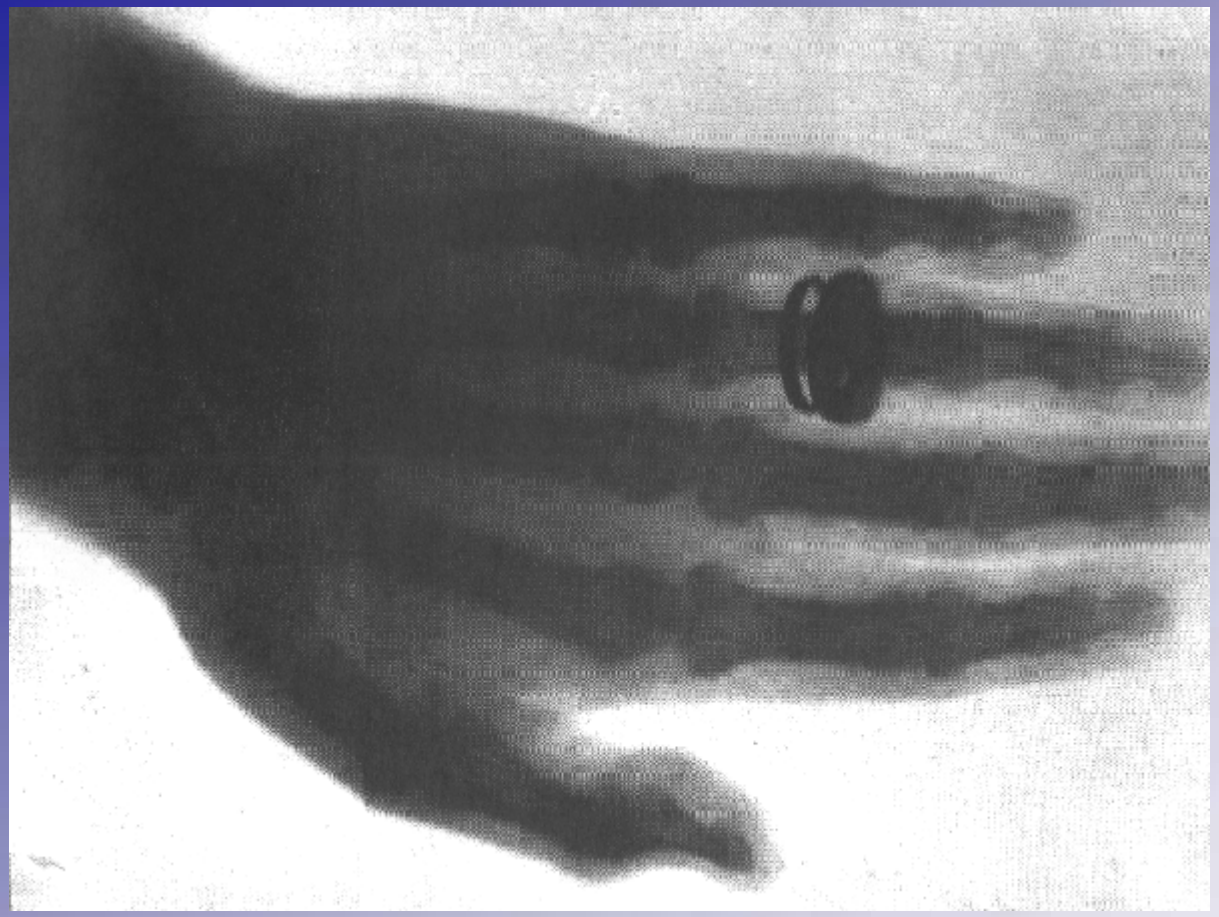


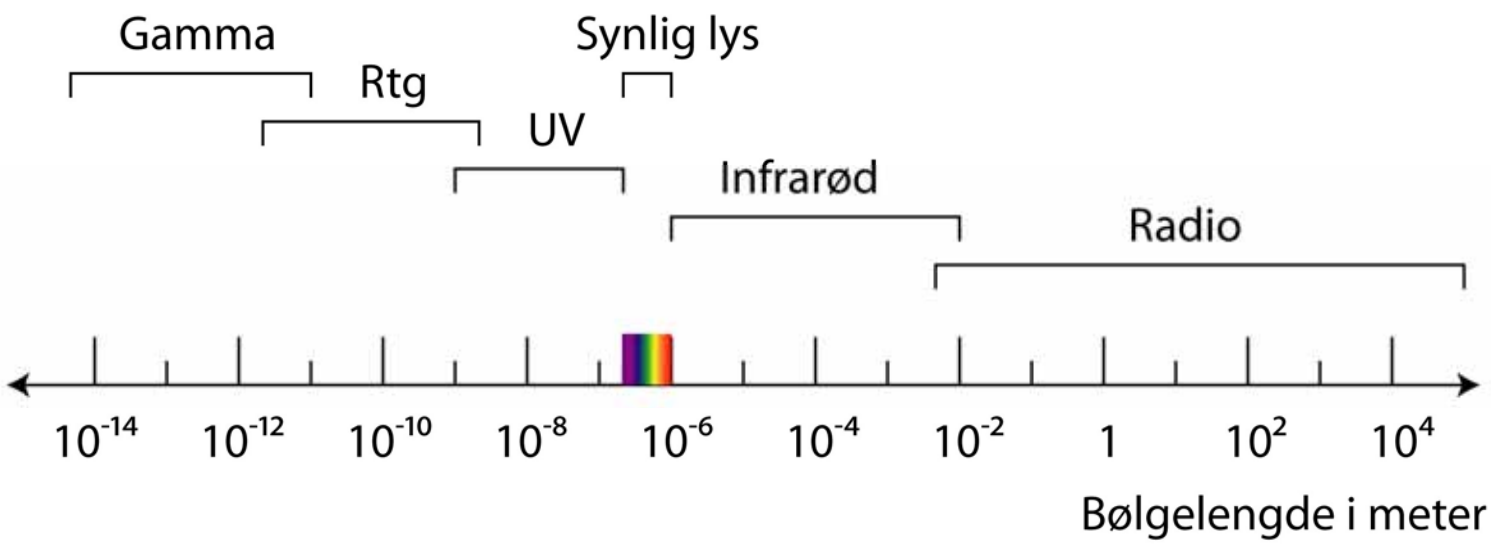


Wilhelm Röntgen (1845-1923)

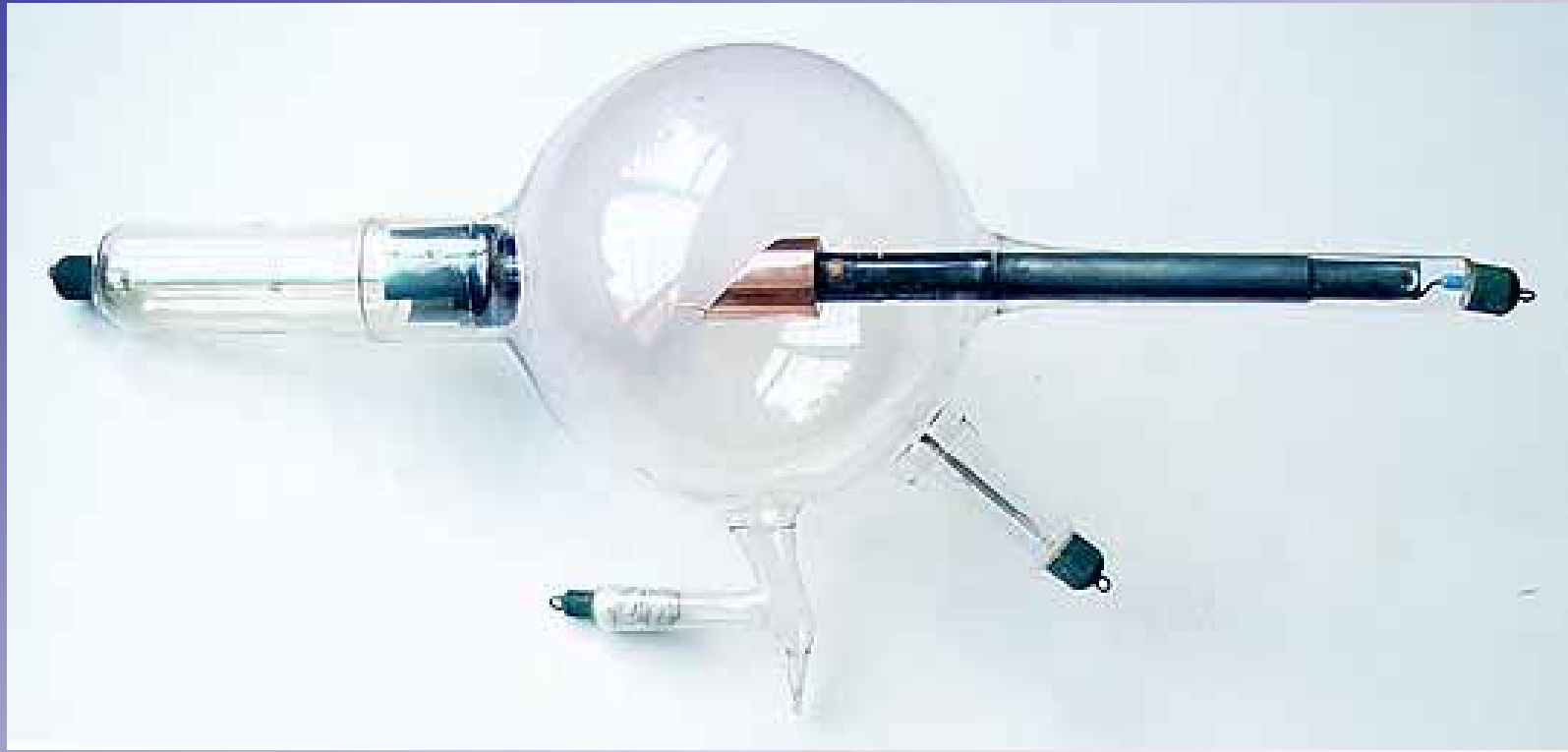
WILHELM RÖNTGEN'S FIRST ATTEMPT AT X-RAYS:
SHINING A BRIGHT LIGHT THROUGH MADAME RÖNTGEN

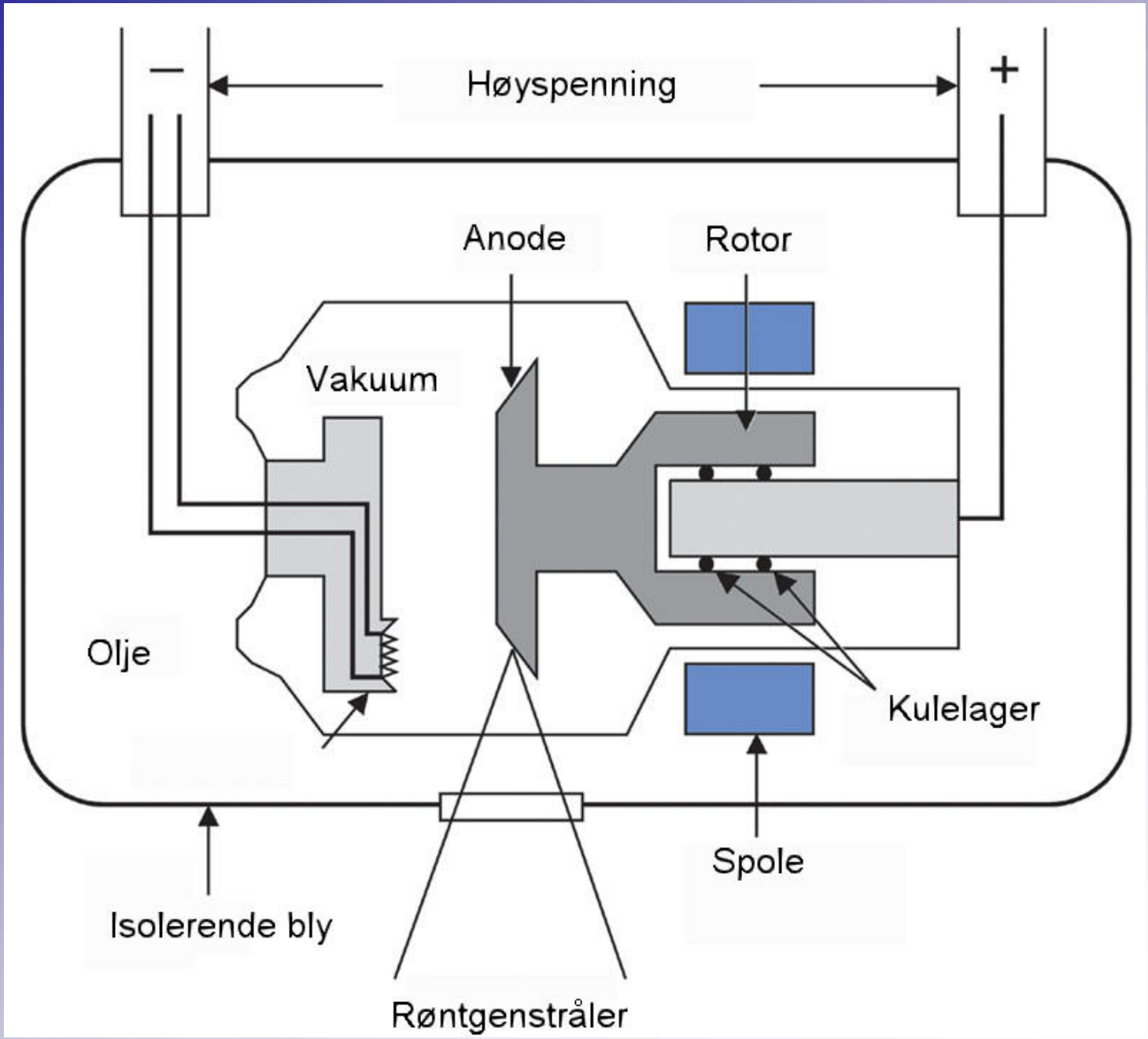




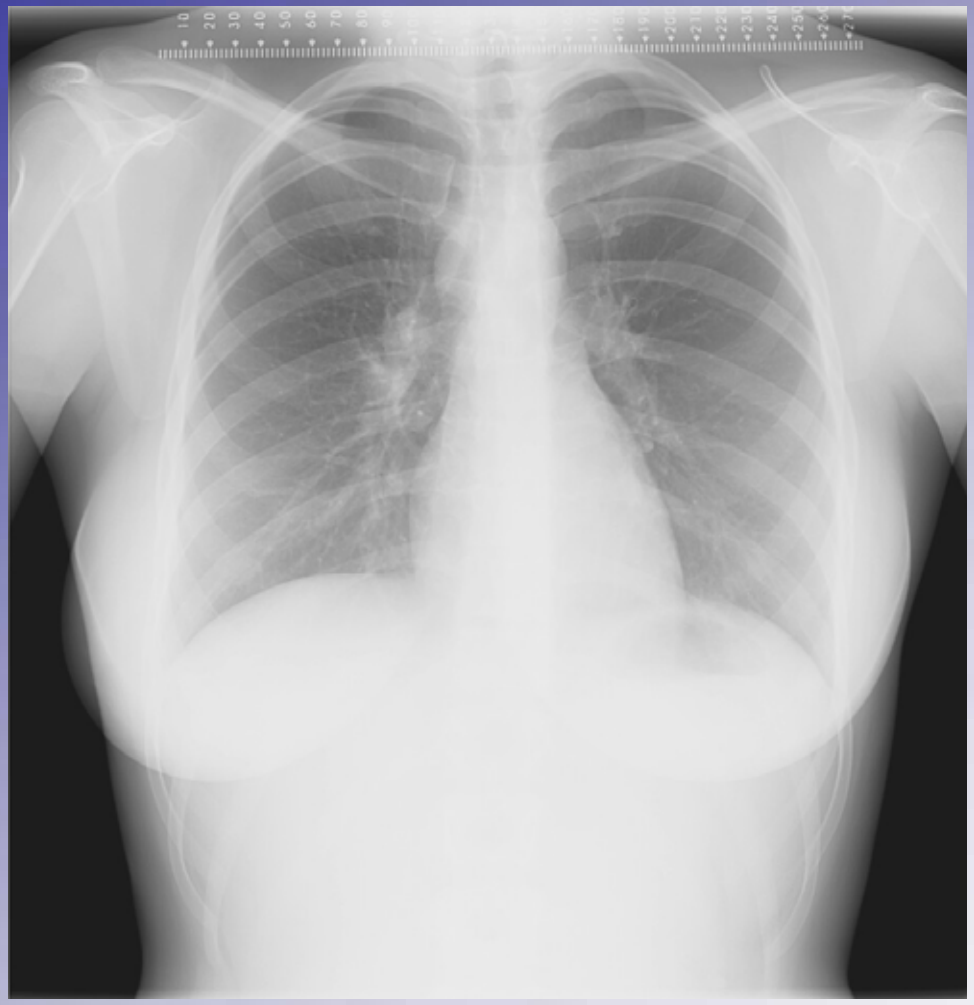


Spektrum av elektromagnetisk stråling




−
Høyspenning
+
Anode
Rotor
Vakuum
Olje
Kulelager
Spole
Isolerende bly
Røntgenstråler

Røntgen thorax

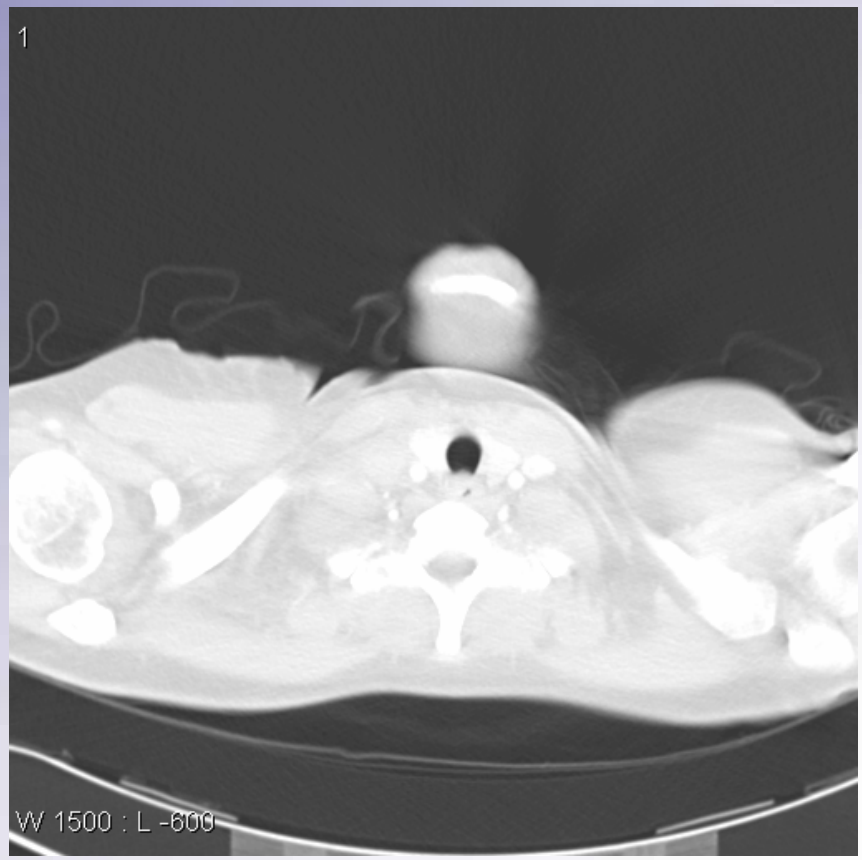


CT

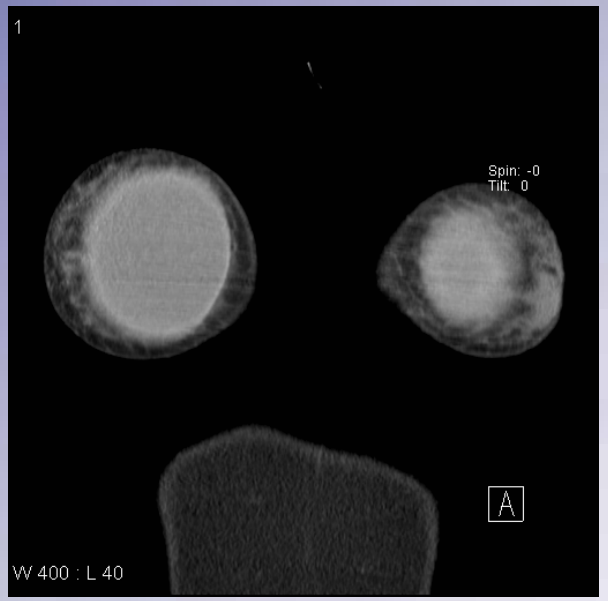
Computer Tomography

1
W 400 : L 40

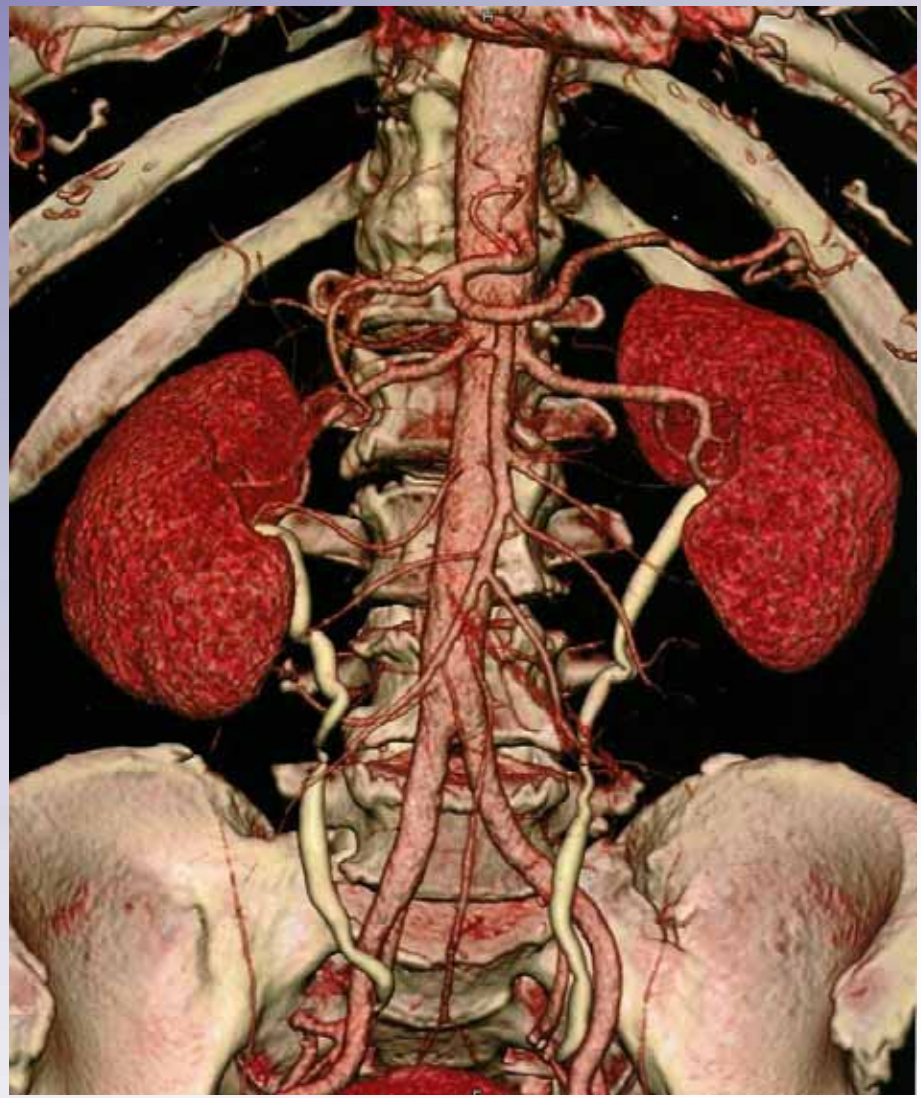
Bløtdels- og lungevindu

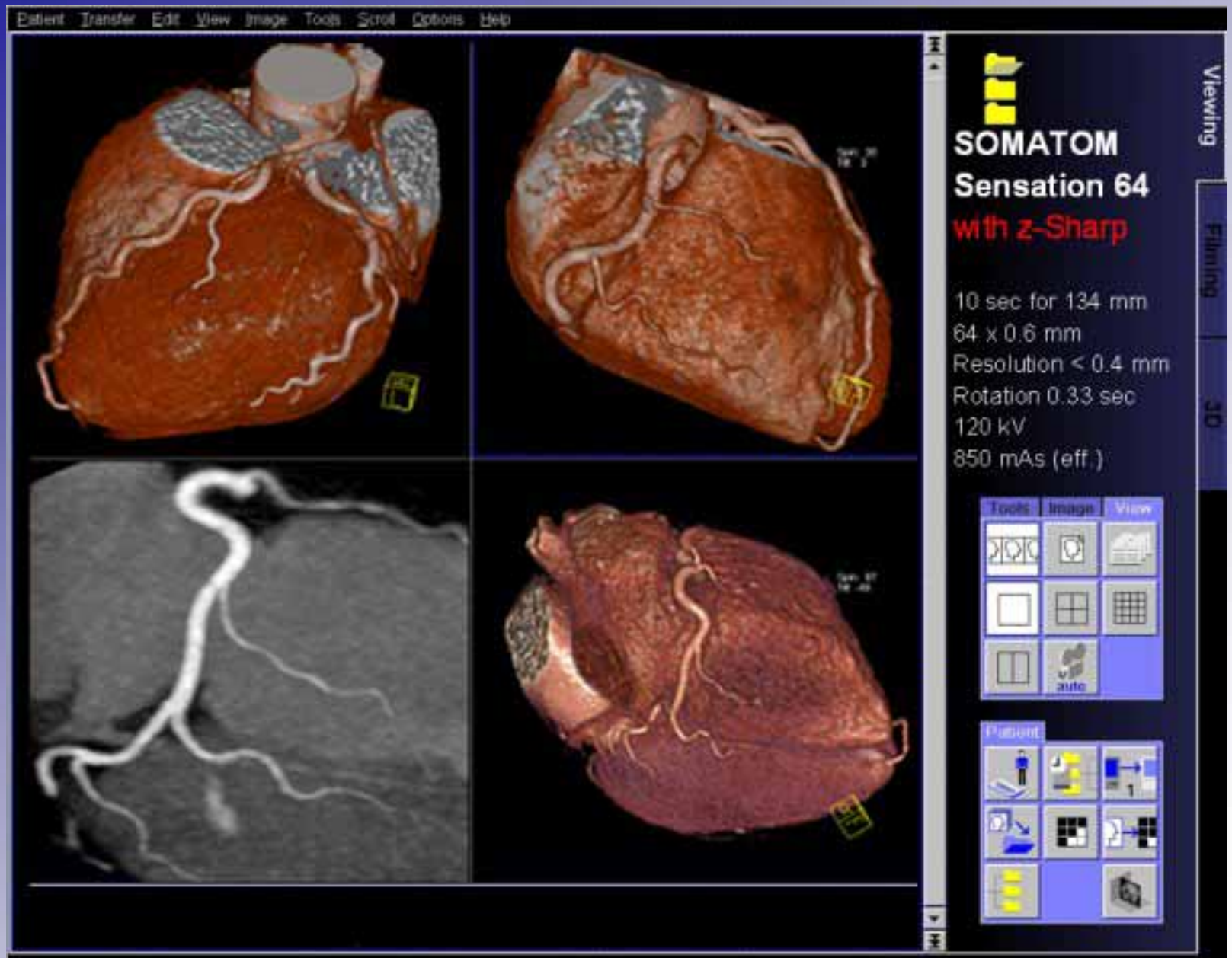


Multiplanar rekonstruksjon

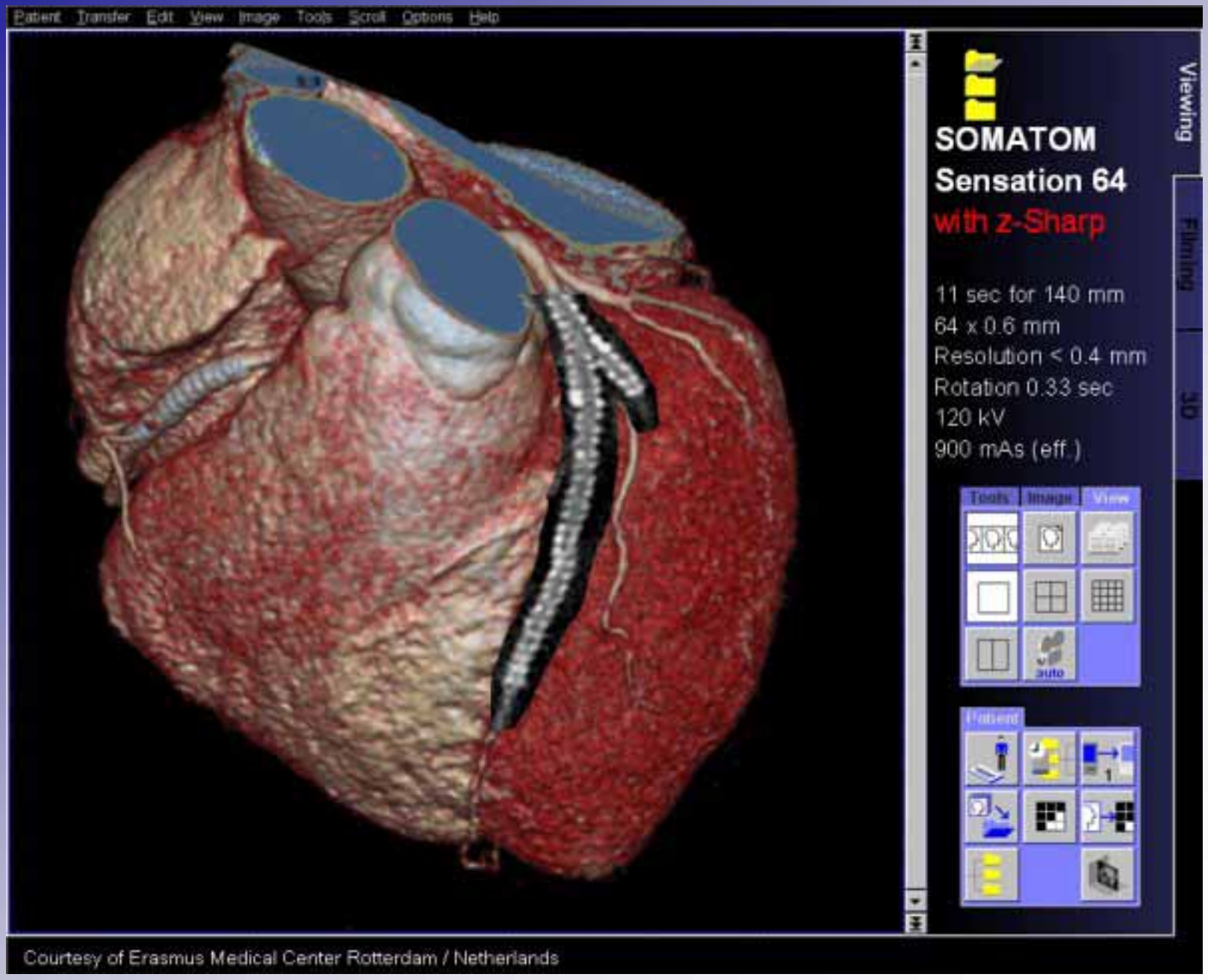


3D rekonstruksjon

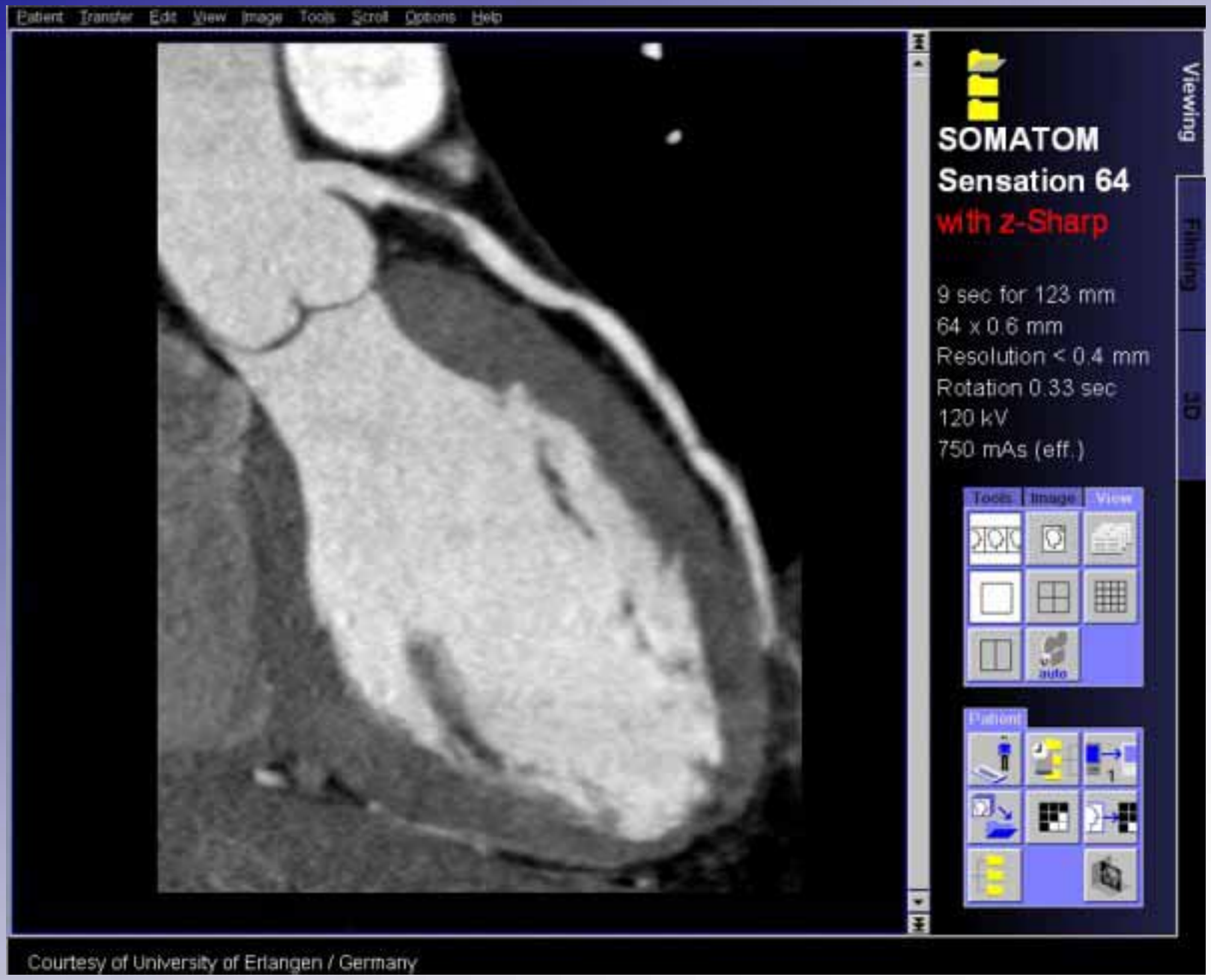




Courtesy of University of Erlangen / Germany



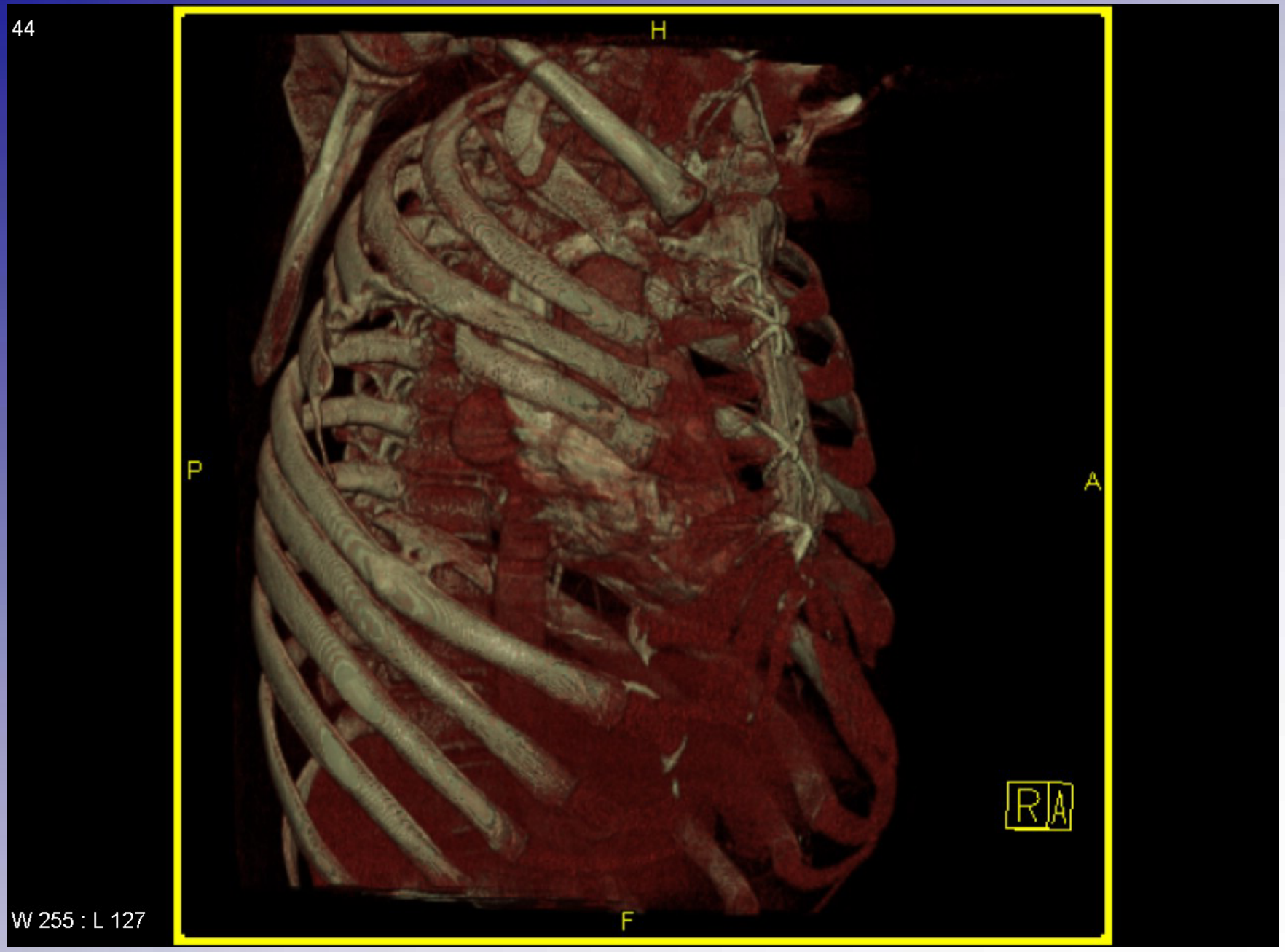
Courtesy of Erasmus Medical Center Rotterdam / Netherlands

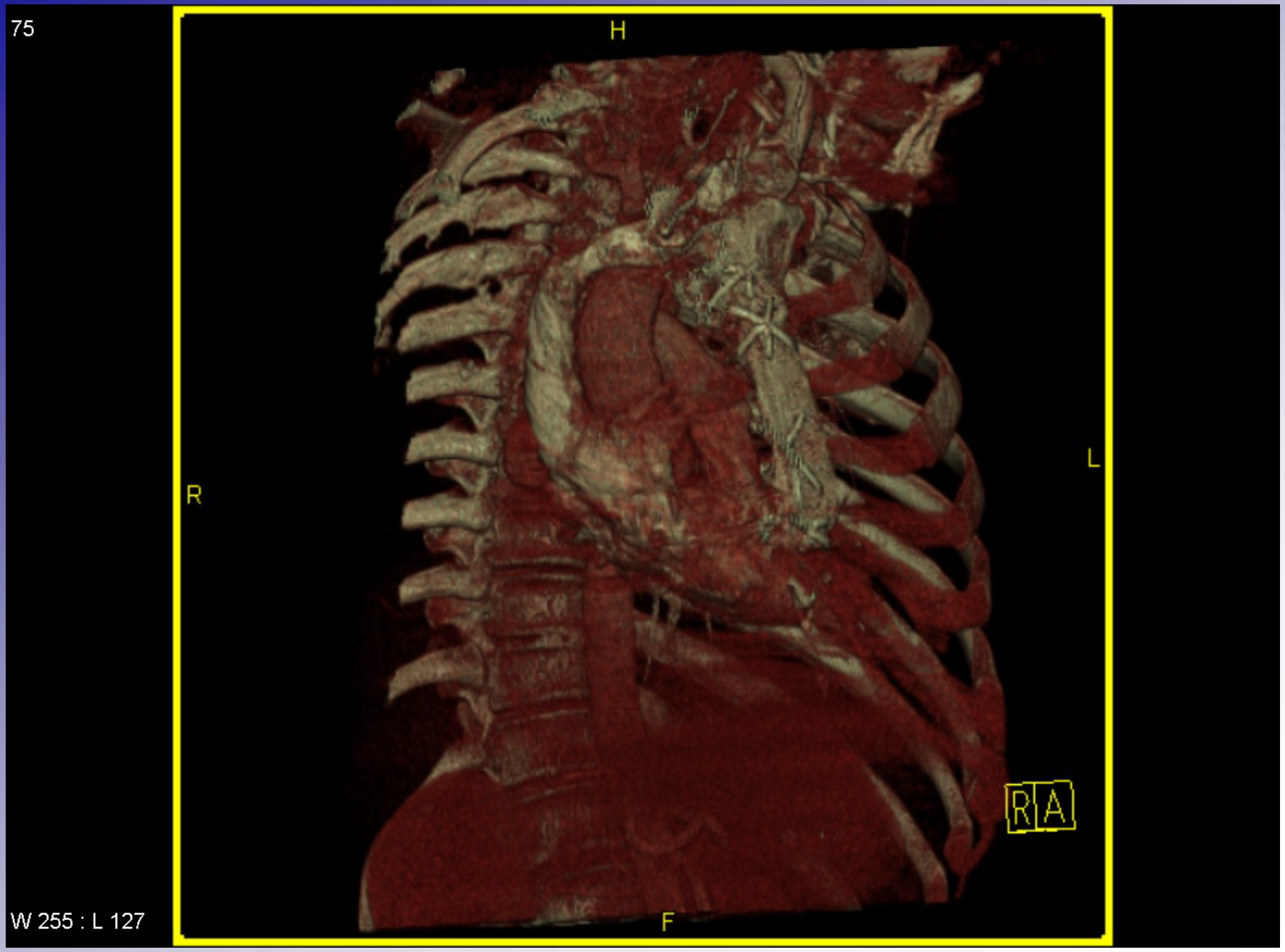


Courtesy of University of Erlangen / Germany

1
H
R
L
A
W 255 : L 127
F

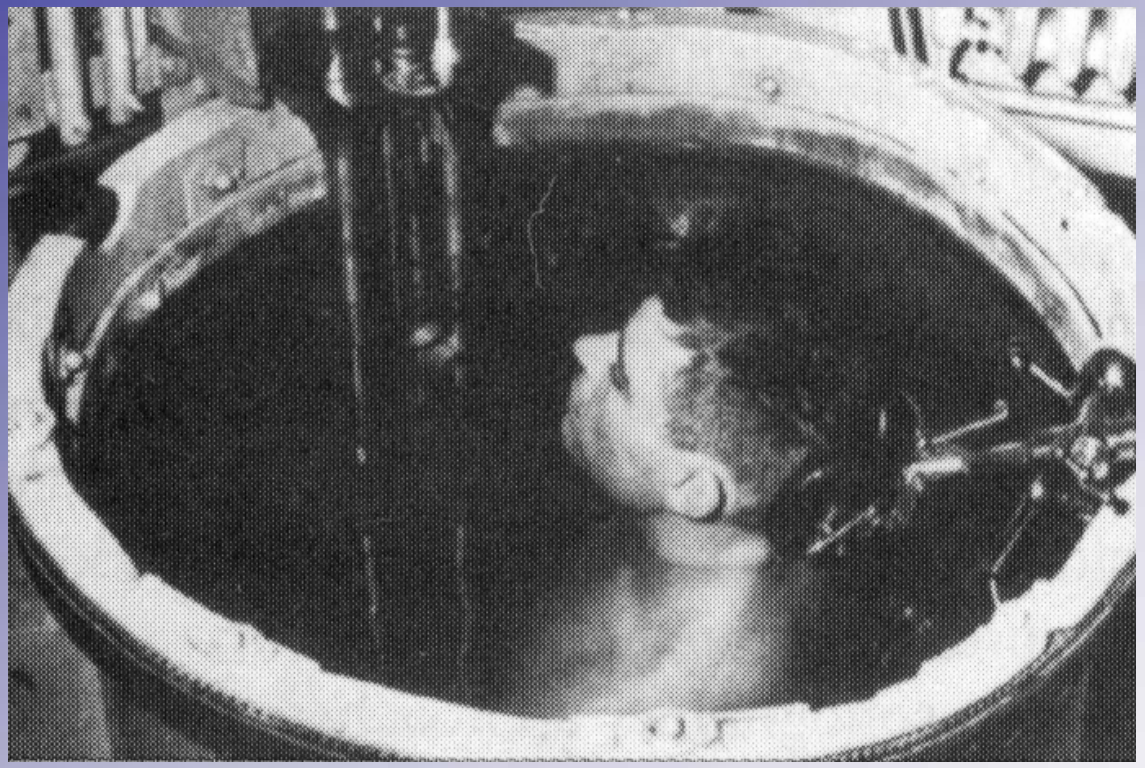
33
A
R
L
F
P
W 255 : L 127


44
H
P
A
R A
W 255 : L 127
F


75
H
R
L
RA
W 255 : L 127
F

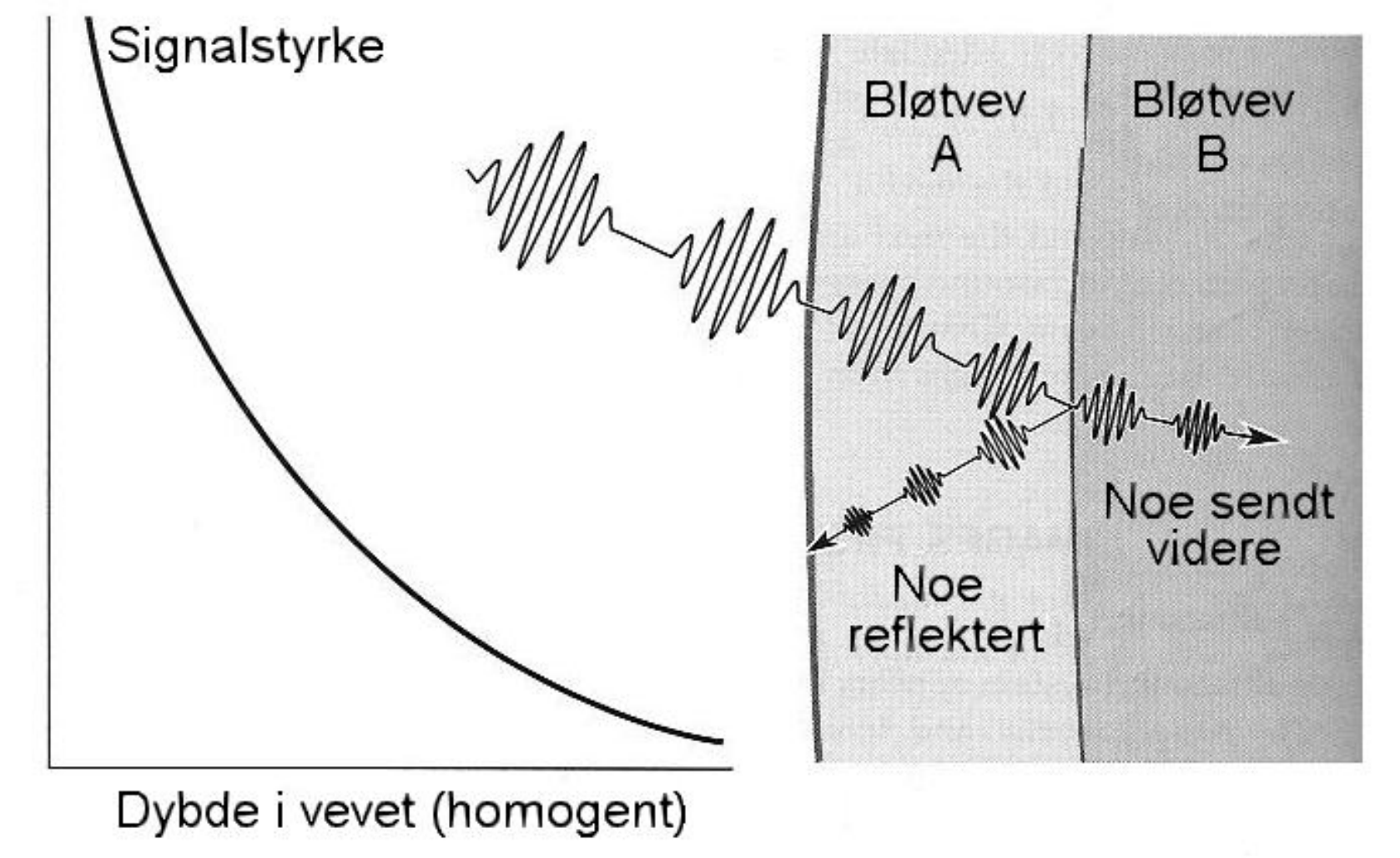
ADVARSEL
RØNTGEN

Ultralyd

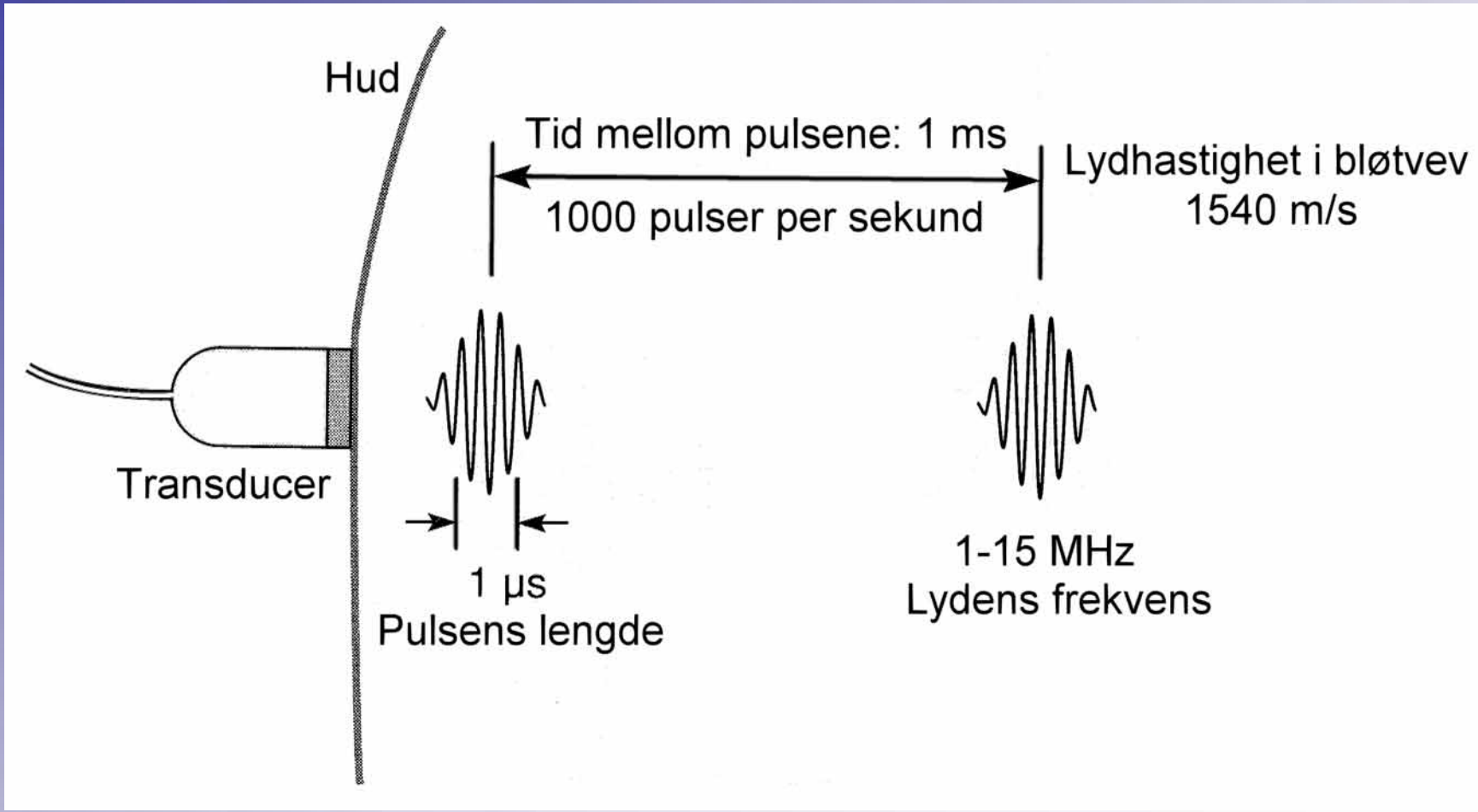


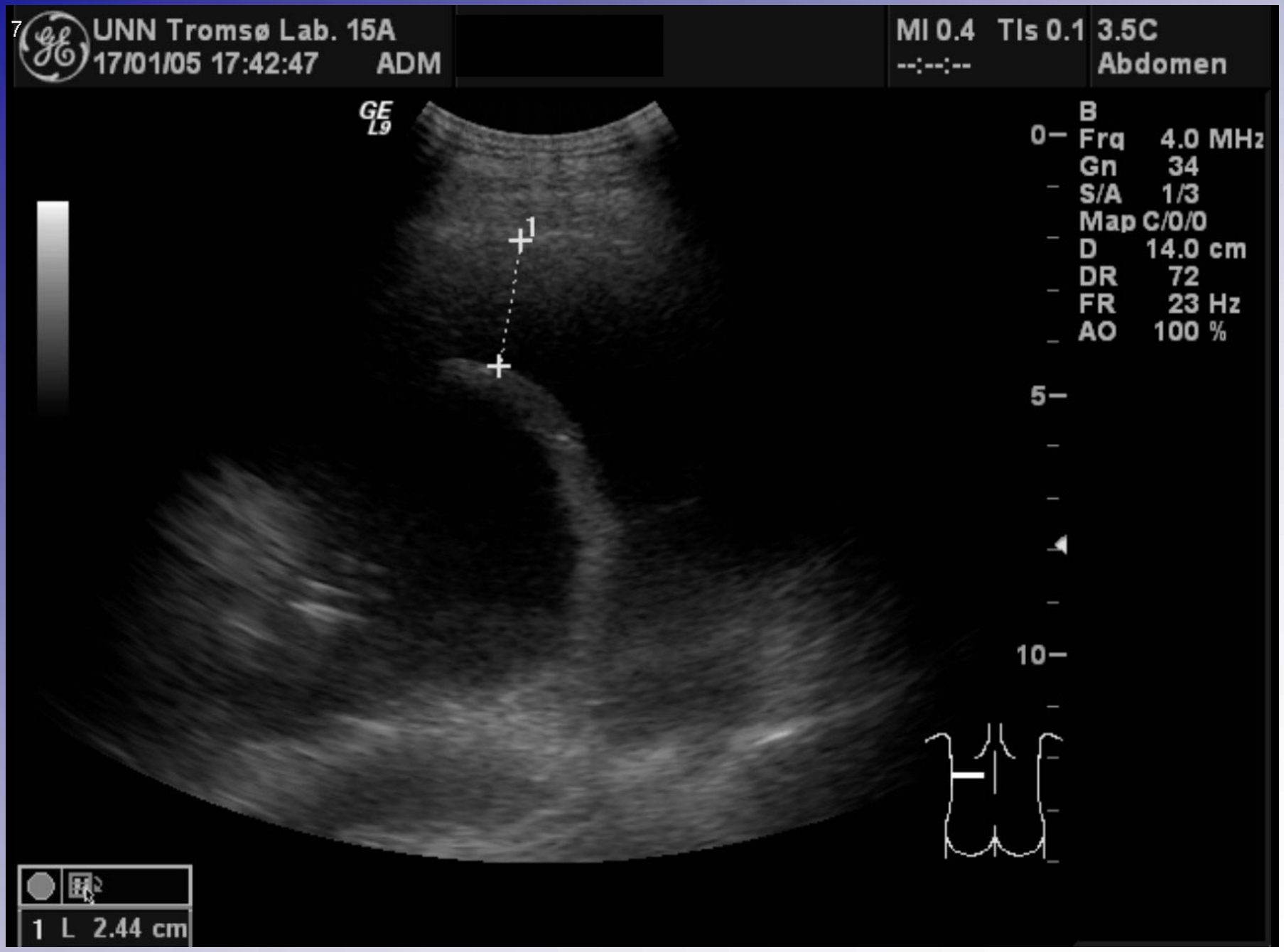
Ultralydundersøkelse av halsen 1954

Ultralyd


Signalstyrke
Dybde i vevet (homogent)
Bløtvev A
Bløtvev B
Noe reflektert
Noe sendt videre

Ultralyd

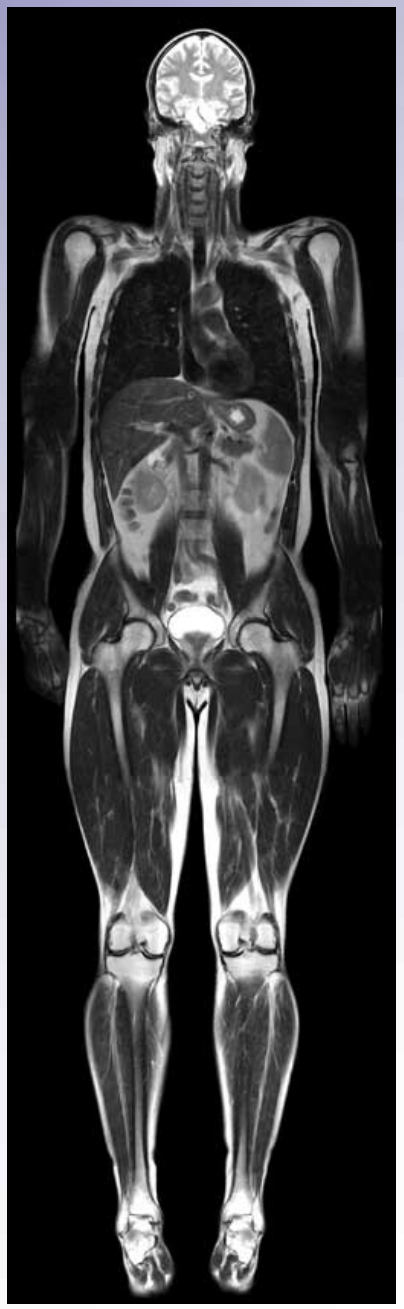

Hud
Tid mellom pulsene: 1 ms
1000 pulser per sekund
Lydhastighet i bløtvev
1540 m/s
Transducer
1 µs
Pulsens lengde
1-15 MHz
Lydens frekvens

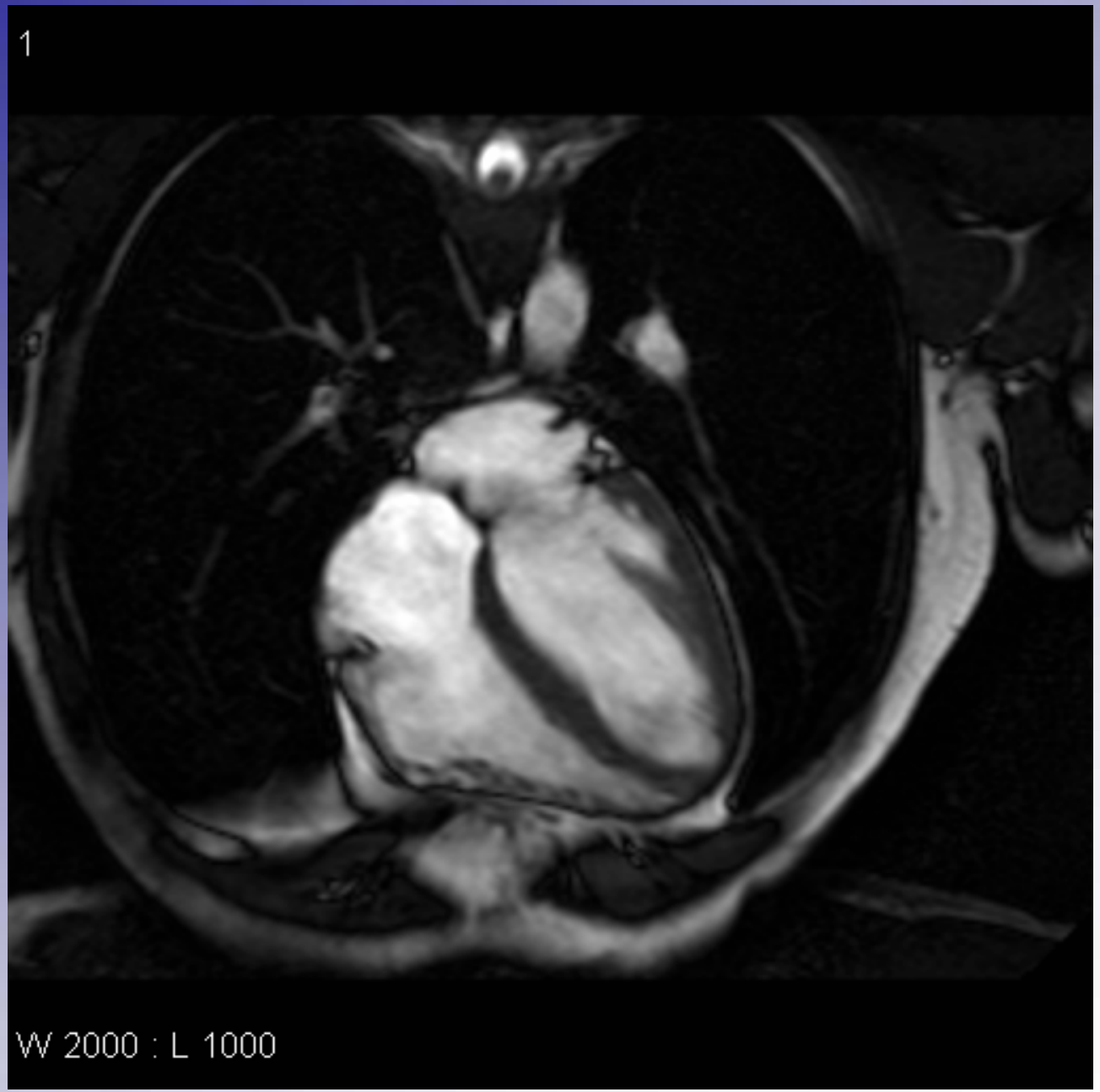

7
UNN Tromsø Lab. 15A
17/01/05 17:42:47 ADM
MI 0.4 TIs 0.1
--:--:--
3.5C
Abdomen
GE
L9
B
Frq 4.0 MHz
Gn 34
S/A 1/3
Map C/0/0
D 14.0 cm
DR 72
FR 23 Hz
AO 100 %
0
5
10
1
1 L 2.44 cm

UNN Tromsø Lab. 15A
17/01/05 18:12:28 ADM
MI 0.4 TIs 0.1
--:--:--
3.5C
Abdomen
GE
L9
B
Frq 4.0 MHz
Gn 34
S/A 1/3
Map C/0/0
D 14.0 cm
DR 72
FR 23 Hz
AO 100 %
0
5
10
ETTER 1300 ML TAPPING

MR

Magnetic Resonance Imaging

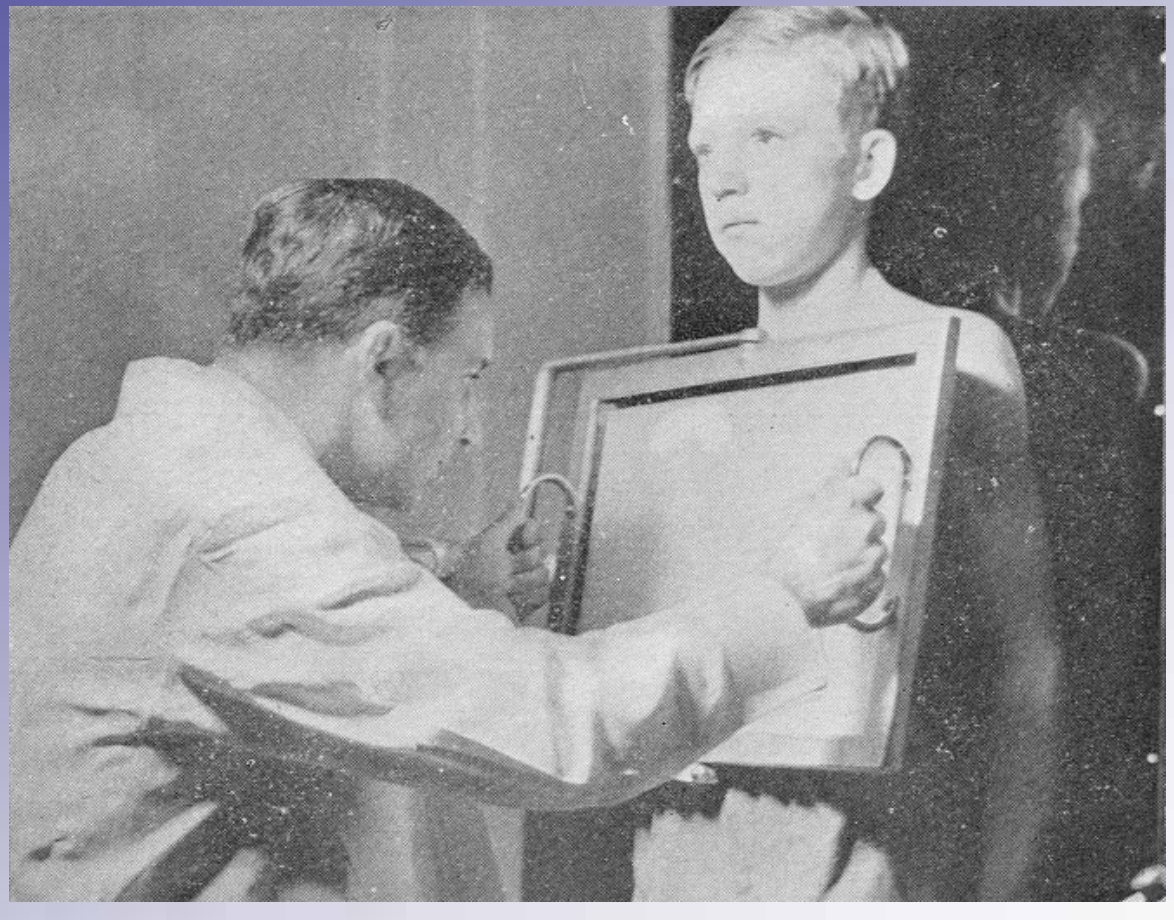



1
W 2000 : L 1000

1
W 1668 : L 840

Røntgen gjennomlysning

Røntgen gjennomlysning



9
W 255 : L 128

28 407