

MEDICAL IMAGING



IMAGEM MÉDICA

Medical Imaging

My collection is based on the scientific history of medical imaging devices and their applications throughout the ages and the influent people in its development as illustrated by postage stamps.

Medical imaging began in November 1895 with Wilhelm Conrad Roentgens discovery of the X-ray. For his works he was awarded the first Nobel prize in 1901. In 1896, only one year after the discovery of the X-ray, Siemens produced the first industrially manufactured X-ray tubes for medical diagnostics and have till this day been the forefront developers in medical technology.

In modern medicine, medical imaging has undergone major advancements. Today, this ability to achieve information about the human body has many clinical applications. Over the years, different sorts of medical imaging have been developed, each with their own advantages. X-ray based methods of medical imaging include conventional X-ray, computed tomography (CT) and mammography. To enhance the X-ray image, contrast agents can be used for example for angiography examinations.

Molecular imaging is used in nuclear medicine and uses a variety of methods to visualize biological processes taking place in the cells of organisms. Small amounts of radioactive markers, called radiopharmaceuticals, are used for molecular imaging.

Other types of medical imaging are magnetic resonance imaging (MRI) and ultrasound imaging. Unlike conventional X-ray, CT and Molecular Imaging, MRI and ultrasound operate without ionizing radiation. MRI uses strong magnetic fields, which produce no known irreversible biological effects in humans, and diagnostic ultrasound systems which use high-frequency sound waves to produce images of soft tissue and internal body organs.

Imagem Médica

A minha coleção é baseada na história científica dos dispositivos de imagem médica e as suas aplicações ao longo do tempo e das pessoas influentes no seu desenvolvimento ilustrada através dos selos postais.

A imagem médica começou em novembro de 1895, com a descoberta do raio-X por Wilhelm Conrad Roentgen. Por seus trabalhos, ele recebeu o primeiro prêmio Nobel em 1901. Em 1896, apenas um ano após a descoberta do raio-X, a Siemens produziu os primeiros tubos de raio-X fabricados industrialmente para o diagnóstico médico e até hoje desenvolvem tecnologia médica de vanguarda.

Na medicina moderna, a imagem médica teve grandes avanços. Hoje, essa capacidade de conseguir informação sobre o corpo humano tem muitas aplicações clínicas úteis. Ao longo dos anos, diferentes tipos de imagem médica foram desenvolvidos, cada um com suas próprias vantagens. Os métodos de imagem médica utilizando raio-X incluem raio-X convencional, tomografia computadorizada (CT) e mamografia. Para melhorar a imagem de raio-X, podem ser utilizados agentes de contraste, por exemplo, para exames de angiografia.

A imagem molecular (IM) é usada na medicina nuclear e usa uma variedade de métodos para visualizar os processos que ocorrem nas células dos organismos. Pequenas quantidades de marcadores radioativos, chamados radiofármacos, são utilizados na imagiologia molecular.

Outros tipos de imagem médica são a ressonância magnética (RM) e a ultra-sonografia. Ao contrário de raio X convencional, CT e IM, a RM e ultra-som operam sem radiação ionizante.

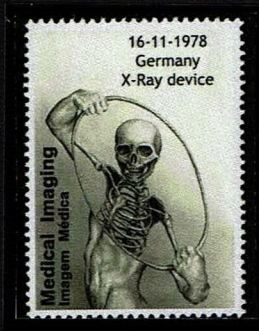
A RM utiliza fortes campos magnéticos, que não produzem efeitos biológicos irreversíveis conhecidos em humanos, e sistemas de diagnóstico por ultrassom que usam ondas sonoras de alta frequência para produzir imagens de tecidos e órgãos internos do corpo.

ERSTTAGSBLATT

21/1978

Postwertzeichen-Dauerserie

»Industrie und Technik«



Nähere Angaben zu dieser Postwertzeichen-Ausgabe auf der Rückseite

ERSTTAGSBLATT

13/1978

Postwertzeichen-Dauerserie

»Industrie und Technik«



Nähere Angaben zu dieser Postwertzeichen-Ausgabe auf der Rückseite



24-10-1964
Zambia
X-Ray Technician



25-05-1995
Malasia
Discovery X-Rays



01-03-1993
North Macedonia
Fight against Cancer



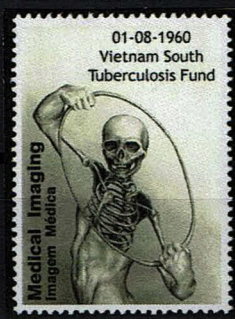
17-06-1988
Canada
Cobalt Therapy



01-07-1983
Indonesia
Cancer Control



18-05-2004
Australia
Ultrasound Imaging

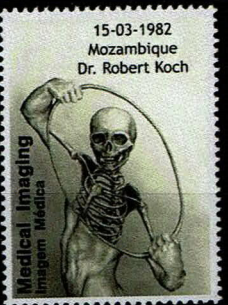
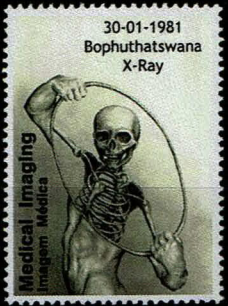
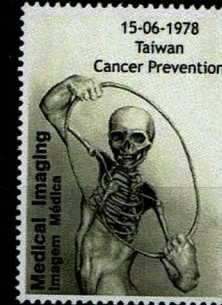
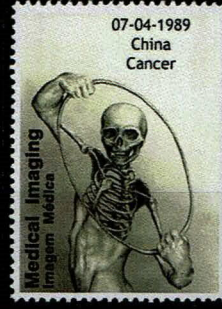
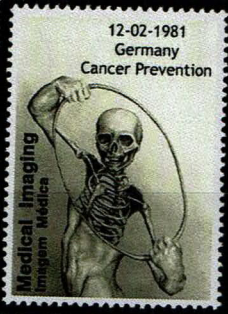


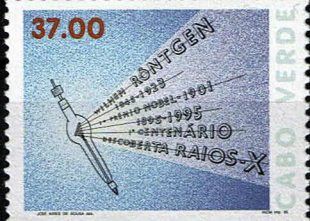
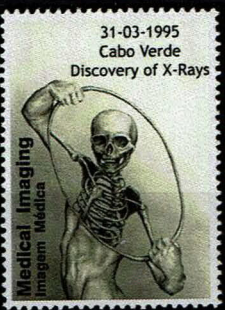
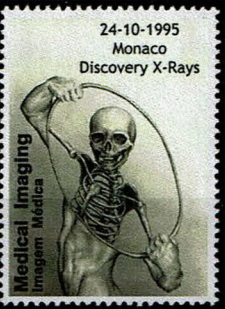
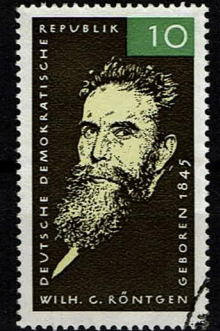
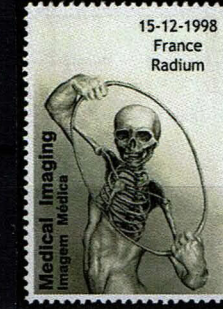
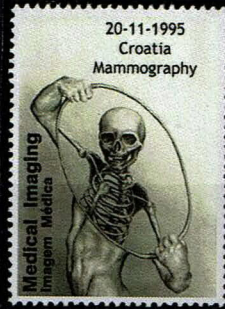
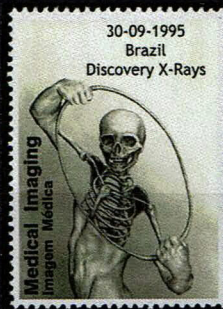
01-08-1960
Vietnam South
Tuberculosis Fund

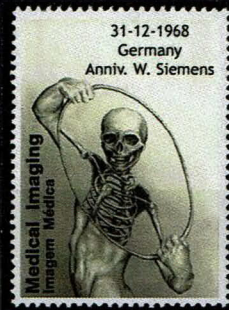
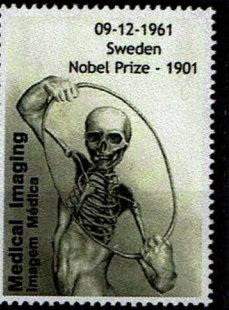
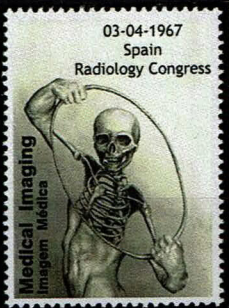
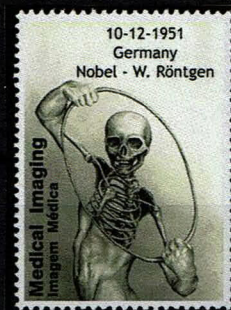
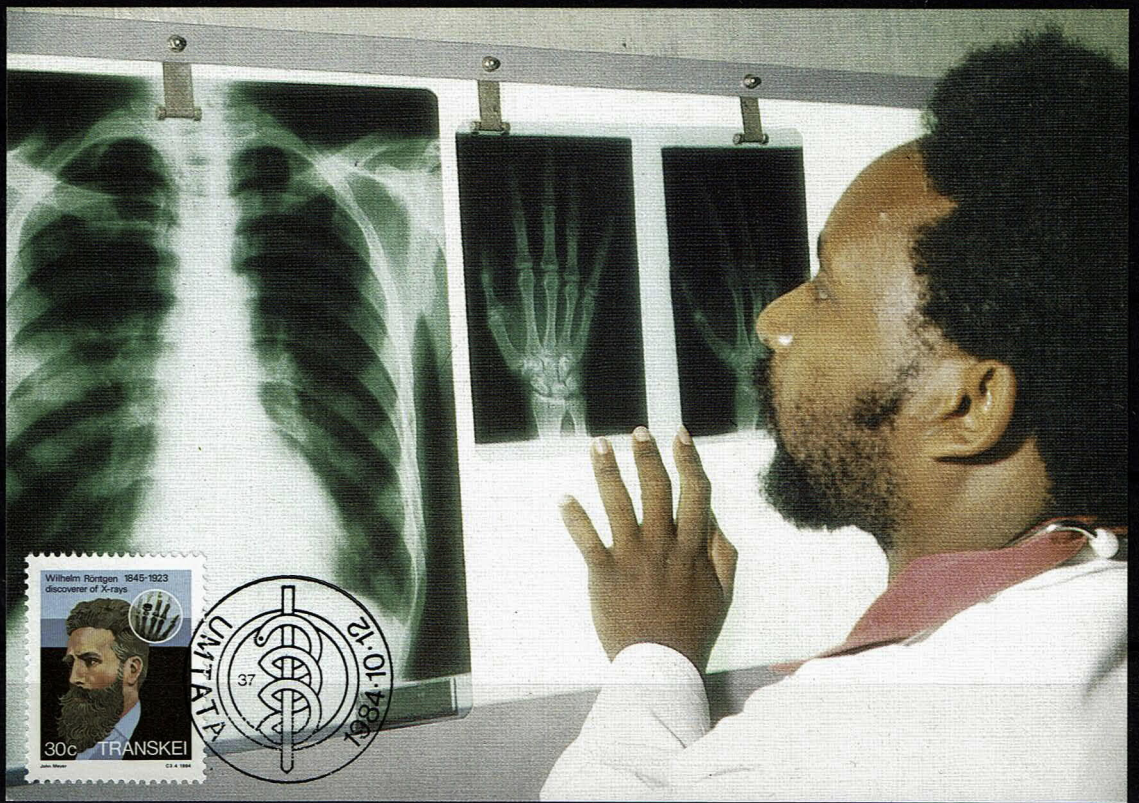


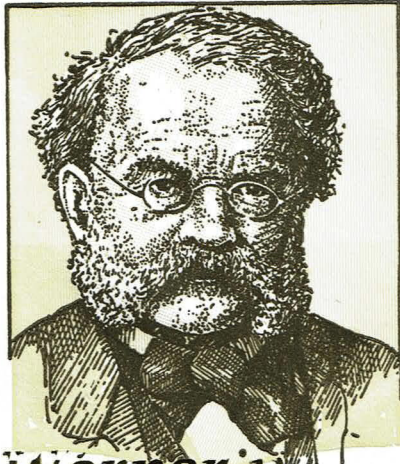
27-09-1994
United Kingdom
Medical Discoveries











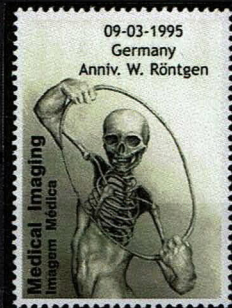
Werner v.
SIEMENS

№ 0032 **FIRST DAY COVER**

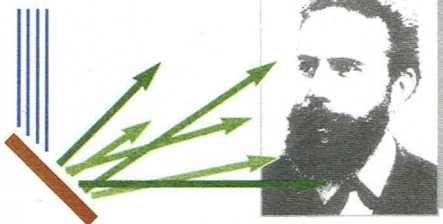


Herrn
Heinz Stahl
Ickstattstr. 1

W 8070 Ingolstadt

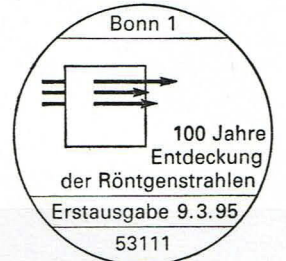
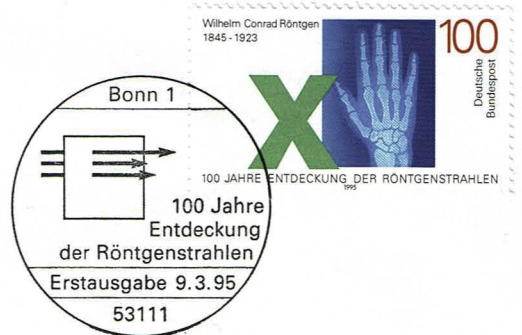


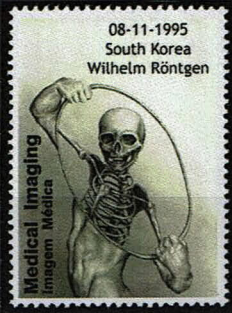
100 Jahre Entdeckung der
Röntgenstrahlen
150. Geburtstag
Wilhelm Conrad Röntgen



ERSTTAGSBRIEF - FIRST DAY COVER

Comnet

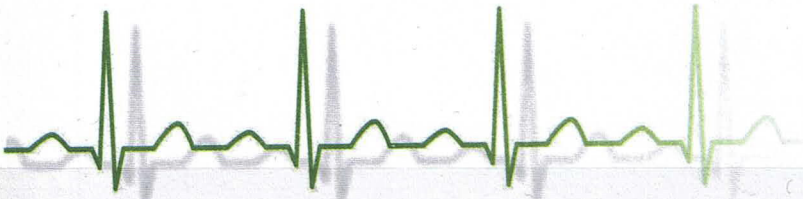




יום ההופעה
DAY OF ISSUE

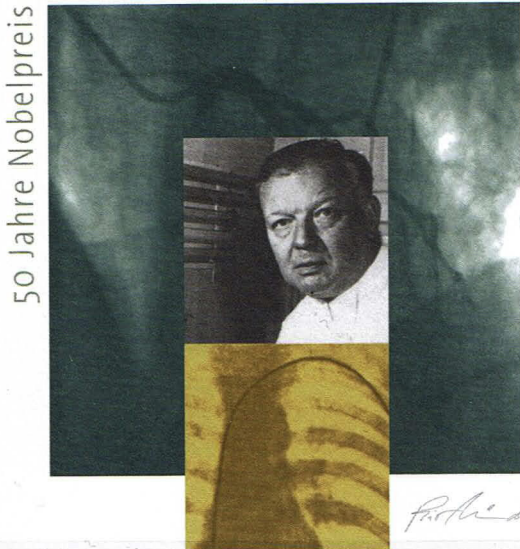
2.2.2013 דויליום קדיוולוגיה
הישגים ישראליים
קדיוולוגיה
ISRAELI ACHIEVEMENTS - CARDIOLOGY
أولمبيات
ISRAELI ACHIEVEMENTS - CARDIOLOGY

2.2.2013 דויליום קדיוולוגיה
הישגים ישראליים
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أولمبيات
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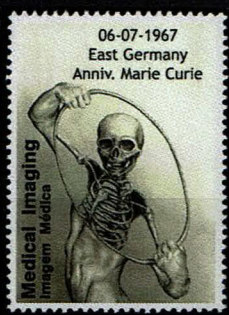


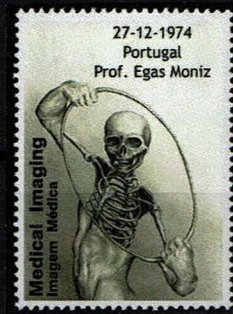
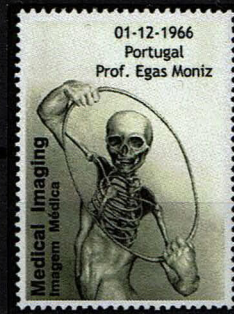
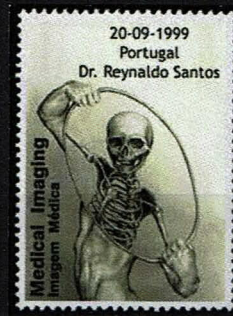
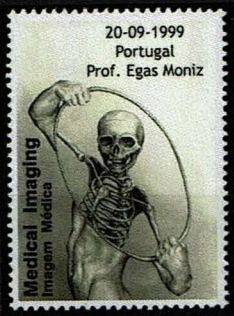
Werner Forßmann



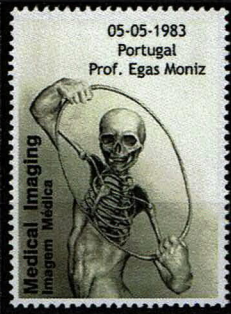
50 Jahre Nobelpreis

ERSTTAGSBRIEF · FIRST DAY COVER





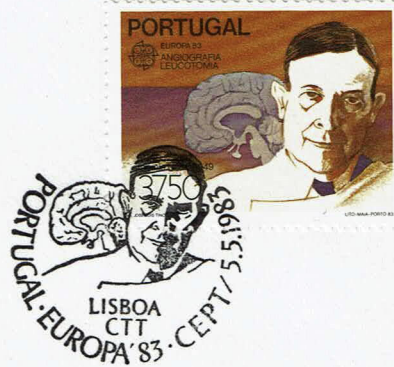
CTT - PRIMEIRO DIA DE CIRCULAÇÃO



 **EUROPA 83**

 **CORREIOS E TELECOMUNICAÇÕES DE PORTUGAL**

Preço 150\$00





Remetente _____



120 anos do Nascimento do Egas Moniz
Prémio Nobel da Medicina

BILHETE
POSTAL



PREÇO (incluindo franquia): 42\$00



Fair Dinkum
AUSSIE Alphabet

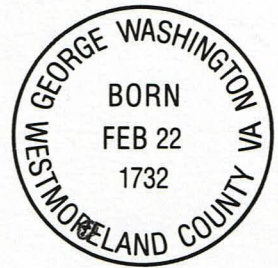
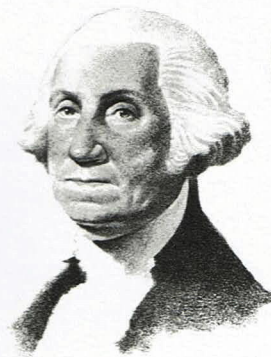
GREAT AMERICANS



U.S. STAMP ISSUED
DECEMBER 10, 1926

22KT GOLD REPLICA

GEORGE WASHINGTON



X-Ray reproduction of a stamp.

As an experiment with a 22kt Gold replica stamp made of very thin metal foil, I used a Siemens Mammomat Fusion system. Due to the very thin metal characteristics, in order to obtain an optimized X-ray image, a low energy X-ray device is needed. Mammography systems provide excellent images using low energy doses of ionizing radiation (around 28 Kv).

Reprodução de um selo com Raio-X.

Como experiencia utilizando uma réplica de um selo de ouro de 22kt feito de uma folha metálica muito fina, utilizei um sistema Siemens Mammomat Fusion. Devido às características muito finas do metal, para obter uma Imagem de raio-X otimizada, é necessário um dispositivo de raio-X de baixa energia. Os sistemas de mamografia fornecem excelentes imagens utilizando doses de baixa energia de radiação ionizante (cerca de 28 Kv).