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腹部

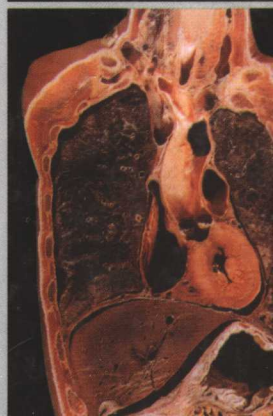
盆部

四肢部

断面解剖与 MRI CT ECT 对照图谱

主编 姜树学 马述盛

辽宁科学技术出版社



断面解剖 与MRI CT ECT 对照图谱 ②

——腹部、盆部、四肢部

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· 沈 阳 ·

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《断面解剖与MRI CT ECT对照图谱》已出版7年了,进行了4次印刷。作者也收到了一些读者的建议,认为该书部头较大、较厚、不利于携带和阅读。为了满足不同医学专业读者的需要,该书又增添了小的版本印刷,分两册装订:《断面解剖与MRI CT ECT对照图谱①——头颈部、胸部》与《断面解剖与MRI CT ECT对照图谱②——腹部、盆部、四肢部》,采图变成黑白图,精装变成简装,这样更适合于部分读者的需要。该书这样改版如何,敬请读者多提宝贵意见。

姜树学 马述盛

2005年9月 于沈阳

前言

随着医学检测手段的迅速发展, B型超声、CT已得到普及, MRI与ECT设备相继出现于市级医院。传统的投影成像(X线成像), 已变成二维或三维的断面成像, 如CT、MRI和超声成像。与此同时, 医学影像工作者的队伍逐年扩大, 各科医生都在积极学习和运用医学影像知识为患者服务。读CT、MRI片必须以断面解剖学知识为基础, 然而, 过去没有断面解剖学的教育, 临床工作的医生大都缺乏这方面的知识。为了满足临床医务工作者的诊断和医学院校影像教学的急需, 我们编写了《断面解剖与MRI CT ECT对照图谱》, 为读者提供了宝贵的图像资料。

两书精选出180幅断面解剖图、337幅MRI图、105幅CT图、40幅ECT图和3幅MRA图。每两页为一单元, 一页为彩色断面解剖图、ECT图及定位图。另一页为CT及MRI图。每一单元图都处于同一断面上, 切线相同, 结构相同, 便于读者学习和应用。本图谱不仅对从事医学影像的学者是一本不可缺少的读物, 而且对其他各科临床医生阅读CT、MRI图像也是极有价值的参考书。断面解剖标本是用健康国人尸体冰冻切片制成的。胸、腹、盆部的横断面(水平断面)及头颈部、膝关节的断面等层厚为1cm; 胸、腹、盆部的冠状断面及矢状断面层厚为2cm。CT、MRI及ECT等各种影像图都是用健康国人扫描制成的。

CT图是用第四代CT机扫描、激光照相制成的。头颈部与胸部用平扫图像; 腹部与盆部用增强扫描图像。

MRI图像(T_1 WI、 T_2 WI及PDWI)是用1.5T、2.0T磁共振仪、自旋回波(SE)序列采集的。

名词以全国自然科学名词审定委员会1991年公布的人体解剖学名词为准, 中英文对照。

本图谱是断面解剖学与医学影像学相结合的产物, 经过几年的努力终于和读者见面了, 我们感到很欣慰。本书在编著过程中, 得到王淀教授、曹郁琦教授等人的帮助, 特此表示衷心的感谢。

尽管诸位编者尽心尽力, 精益求精, 但是仍有不足之处, 敬请各位读者指正。

姜树学 马述盛
2005年9月于沈阳

PREFACE

With the rapid development of modern sophisticated imaging modalities, the conventional projection imaging as radiography is now changed to sectional imaging such as B-mode US, CT and MRI. Now, in China most of hospitals are equipped with such imaging modalities. Doctors and technicians in the department of Radiology and physicians in other departments are interested in studying the fundamental knowledge of human sectional anatomy. However, in the past few medical school offered the course of sectional anatomy so that most of the radiologists and clinical physicians are not familiar with this. To meet the urgent need for the clinical medical workers and training of students, we compiled this book "Atlas of Sectional Anatomy Correlated with the MRI, CT and ECT" with hope that it would be easier for them to learn.

One hundred and eighty illustrations of sectional anatomy together with corresponding 337 MR images, 105 CT images and 40 ECT pictures were carefully chosen for the atlas. Each unit is composed of two pages, one shows the colored illustration of sectional anatomy and ECT image as well as a locator of section, while another page depicts the CT and MR images of the corresponding section. This atlas is not only indispensable for radiologists but also essential to all clinical physicians in interpreting CT and MR imaging.

All the anatomic sections were made from normal Chinese cadavers with frozen section method. The thickness of horizontal section for the thorax, abdomen, pelvis and the thickness of sections for head and neck, knee joint were 1.0 cm, and the thickness of frontal and sagittal sections was 2.0 cm for the thorax, abdomen and pelvis. The CT, MRI and ECT images were obtained from scanning normal Chinese volunteers.

All CT examinations were performed with PQ-2000 (Picker International, Cleveland, Ohio, U.S.A.) and laser printer. The images of head and neck, chest were non-enhanced, while the images of abdomen and pelvis were enhanced. The slice thickness was 1.0 cm.

MR images including T₁ weighted, T₂ weighted and proton density images were performed on 1.5T scanner (Signa, GE Medical Systems, Milwaukee, Wis., U.S.A.) and 2.0 T scanner (Prestige, Elscint Ltd, Israel) with spin echo (SE) sequence. The slice thickness was 1.0 cm.

Terms are used according to the Human Anatomic Terms published in 1991 by the National Examination and Approval Committee on Natural Scientific Terminology with corresponding English terms.

After several years, the authors appreciated very much that this book was eventually compiled and published. We hope that the readers will find this book interesting and helpful.

We would like to express our thanks to Prof. Wang Dian and Prof. Cao Yuqi, whose assistance and co-operation made this publication possible.

Shenyang Jiang Shuxue
Ma Shusheng
September, 2005

使用说明

一、本图谱分头颈部、胸部、腹部、盆部和四肢五个部分。每两页为一单元，一页为彩色断面解剖图、ECT图及定位图。定位图的白色线为断面的切线，蓝色线为基准线。另一页为黑白的CT图、MRI T₁加权图、MRI T₂加权图及该单元的中英文名词。每一单元的所有图像都处于同一断面上。

二、参考平面

1. 头颈部水平断面的参考平面为眶下缘至外耳门的平面。
2. 头颈部额状断面的参考平面为垂直于眼耳平面的断面。
3. 头颈部矢状断面的参考平面为正中矢状断面。
4. 胸腹盆及四肢水平断面的参考平面为经过胸骨角或脐的水平断面。
5. 胸腹盆及膝关节的矢状断面的参考平面为躯干和膝关节的正中矢状面。
6. 胸腹盆及膝关节的额状断面的参考平面为经过腋中线和膝关节的侧中线的额状面。

三、英文名词缩写

Fig.	Figure	H	Horizontal
C	Cephalo—cervical	S	Sagittal
F	Frontal	T	Thoracic Vertebrae
L	Lumbar Vertebrae	S	Sacral Vertebrae
Co	Coccyx	A	Abdomen
P	Pelvis	K	Knee
UL	Upper Limb	LL	Lower Limb
PD	Proton Density	f	female
m	male	a.	artery
v.	vein	n.	nerve

INSTRUCTIONS

1. There are five regions in this atlas including head and neck, thorax, abdomen, pelvis and limbs. Every unit is composed of two pages. One page shows a colored sectional anatomic picture, ECT image and a locator of sections in which the white line represents cutting plane, and the blue line represents basic plane. Another page shows CT and MRI (T₁WI and T₂WI) images with Chinese-English anatomical terms of this section. Pictures and images of one unit are all at the same plane.

2. The plane of reference

a. The plane of reference for horizontal sections of head and neck is at the eye-ear plane (Frankfurt horizontal, orbito-meatal line).

b. The plane of reference for frontal sections of head and neck is the plane perpendicular to the eye-ear plane (Frankfurt horizontal, orbitomeatal line).

c. The plane of reference for sagittal sections of head and neck is median sagittal plane.

d. The plane of reference for horizontal sections of thorax, abdomen, pelvis and limbs is the horizontal plane passing through sternal angle or umbilicus.

e. The plane of reference for sagittal sections of thorax, abdomen, pelvis or knee joint is the median sagittal plane of trunk or knee joint.

f. The plane of reference for frontal sections of thorax, abdomen, pelvis or knee joint is the plane passing through midaxillary line or lateral median line of knee joint.

3. Abbreviations:

Fig.	Figure	H	Horizontal
C	Cephalo-cervical	S	Sagittal
F	Frontal	T	Thoracic Vertebrae
L	Lumbar Vertebrae	S	Sacral Vertebrae
Co	Coccyx	A	Abdomen
P	Pelvis	K	Knee
UL	Upper Limb	LL	Lower Limb
PD	Proton Density	f	female
m	male	a.	artery
v.	vein	n.	nerve

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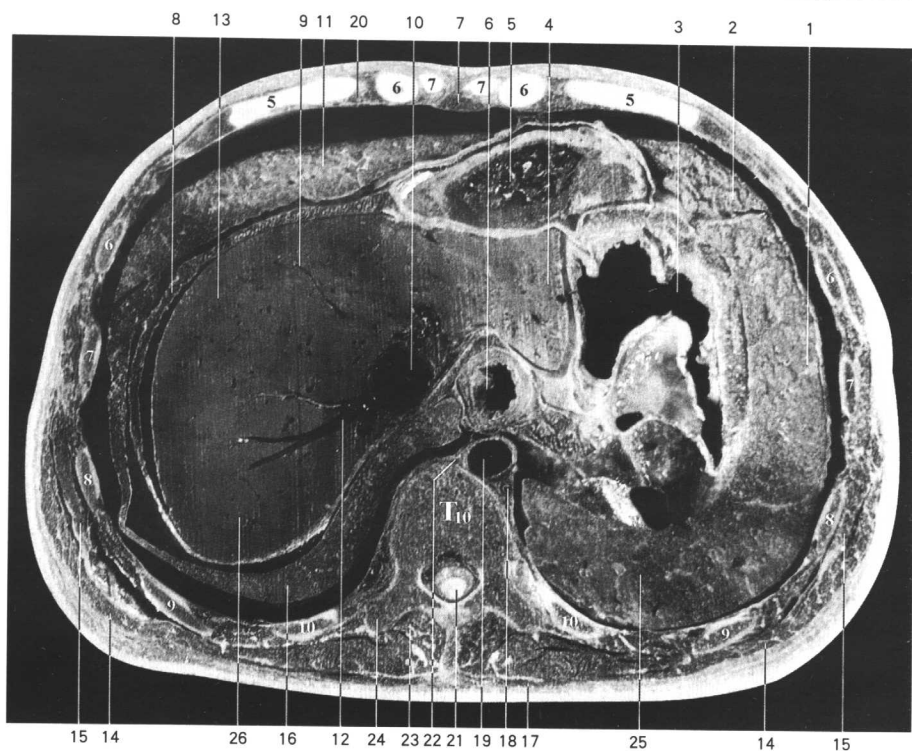
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ABDOMEN

腹部

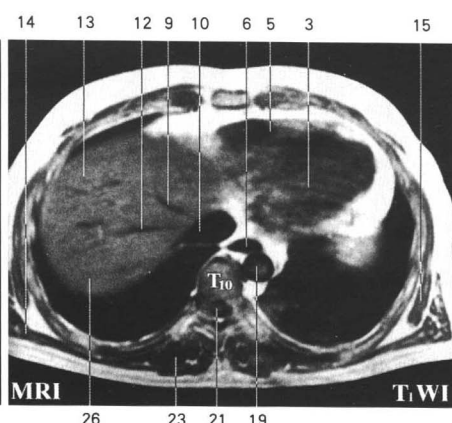
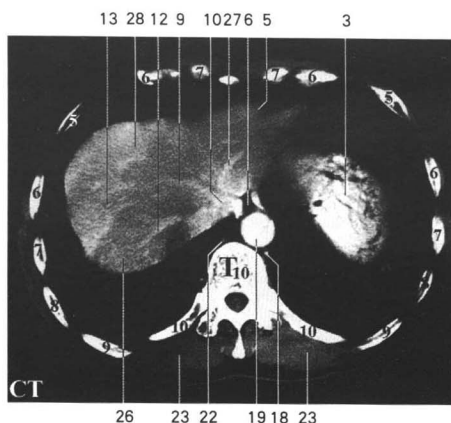


水平断面 HA

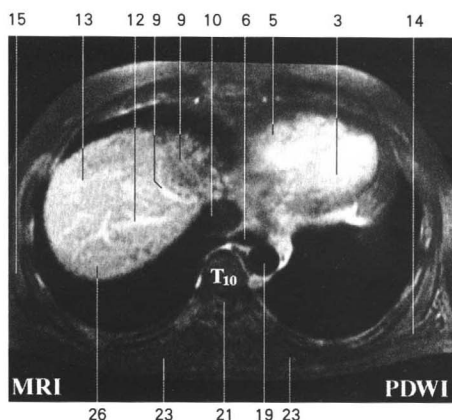
Fig.HA1

1. 外侧底段 (S_u) lateral basal segment (S_u)
2. 下舌段 (S_v) inferior lingual segment (S_v)
3. 胃底 fundus of stomach
4. 左外叶 left lateral lobe
5. 右心室 right ventricle
6. 食管 esophagus
7. 剑突 xiphoid process
8. 膈 diaphragm
9. 肝中间静脉 intermediate hepatic v.
10. 下腔静脉 inferior vena cava





11. 内侧段 (S_v) medial segment (S_v)
12. 肝右静脉 right hepatic v.
13. 右前叶 right anterior lobe
14. 背阔肌 latissimus dorsi
15. 前锯肌 serratus anterior
16. 后底段 (S_x) posterior basal segment (S_x)
17. 斜方肌 trapezius
18. 半奇静脉 semiazygos v.
19. 胸主动脉 thoracic aorta
20. 胸廓内动脉 internal thoracic a.
21. 脊髓 spinal cord
22. 奇静脉 azygos v.
23. 竖脊肌 erector spinae
24. 第10胸椎横突 transverse process (T₁₀)
25. 后底段 (S_x) posterior basal segment (S_x)
26. 右后叶 right posterior lobe
27. 肝左静脉 left hepatic v.
28. 左内叶 left medial lobe



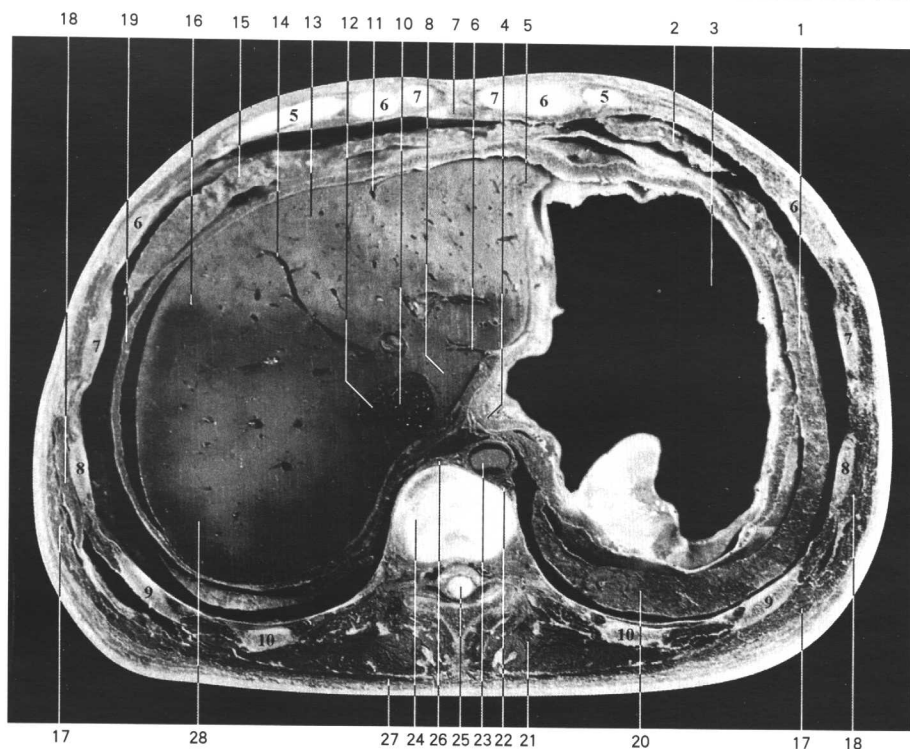
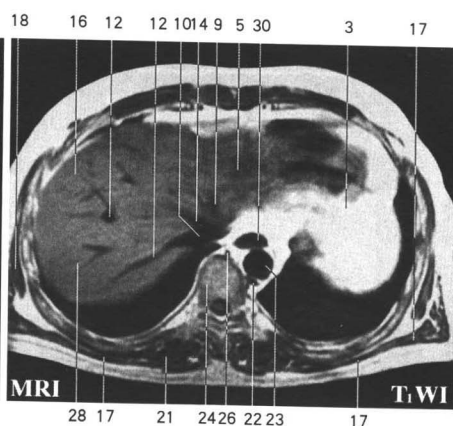
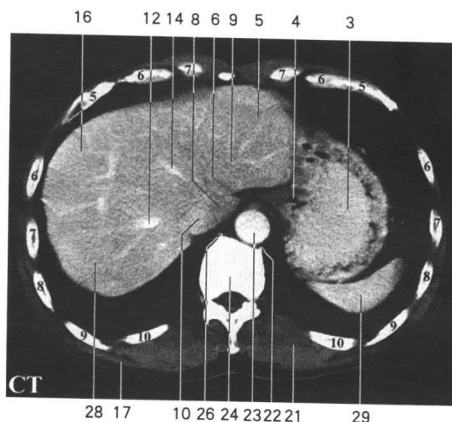
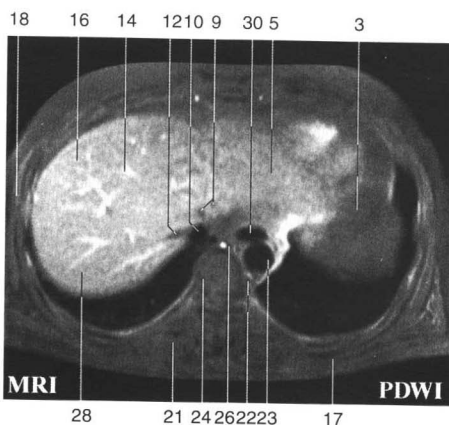


Fig.HA2

1. 外侧底段 (S_{α}) lateral basal segment (S_{α})
2. 下舌段 (S_v) inferior lingual segment (S_v)
3. 胃 stomach
4. 贲门 cardia
5. 左外叶 left lateral lobe
6. 静脉韧带裂 fissure for ligamentum venosum
7. 剑突 xiphoid process
8. 尾状叶 caudate lobe
9. 肝左静脉 left hepatic v.
10. 下腔静脉 inferior vena cava



11. 肝圆韧带裂 fissure for ligamentum teres hepatis
12. 肝右静脉 right hepatic v.
13. 左内叶 left medial lobe
14. 肝中间静脉 intermediate hepatic v.
15. 内侧段 (S_v) medial segment (S_v)
16. 右前叶 right anterior lobe
17. 背阔肌 latissimus dorsi
18. 前锯肌 serratus anterior
19. 膈 diaphragm
20. 后底段 (S_x) posterior basal segment (S_x)
21. 竖脊肌 erector spinae
22. 半奇静脉 semiazygos v.
23. 胸主动脉 thoracic aorta
24. 10、11 胸椎间盘 intervertebral disc (T₁₀₋₁₁)
25. 脊髓 spinal cord
26. 奇静脉 azygos v.
27. 斜方肌 trapezius
28. 右后叶 right posterior lobe
29. 脾 spleen
30. 食管 esophagus



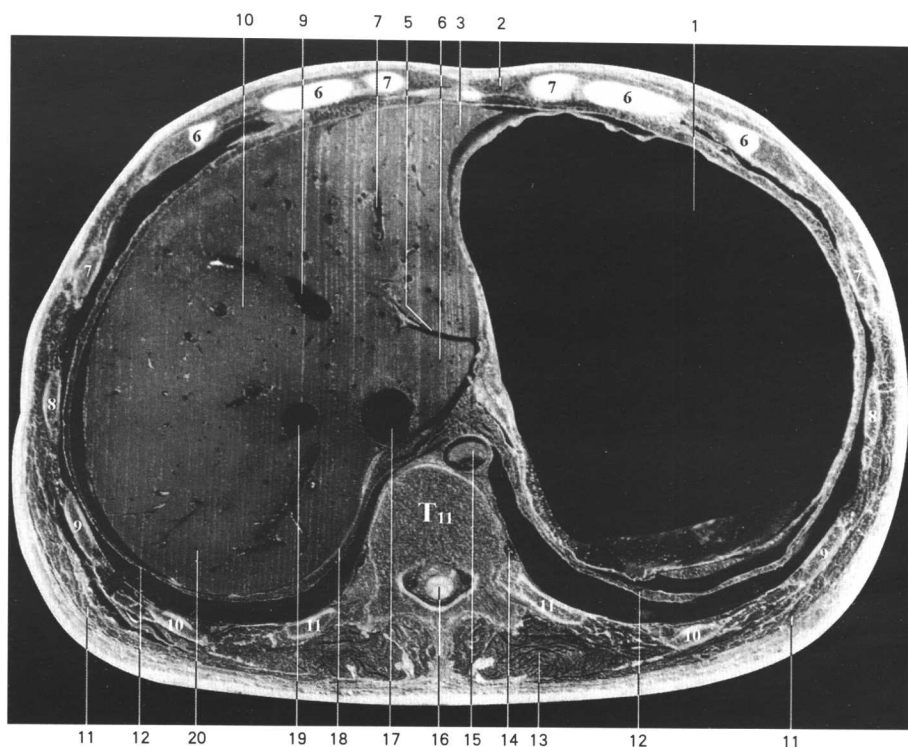


Fig.HA3

1. 胃 stomach
2. 腹直肌 rectus abdominis
3. 左外叶 left lateral lobe
4. 前锯肌 serratus anterior
5. 静脉韧带裂 fissure for ligamentum venosum
6. 尾状叶 caudate lobe
7. 肝左静脉 left hepatic v.
8. 左内叶 left medial lobe
9. 肝中间静脉 intermediate hepatic v.
10. 右前叶 right anterior lobe