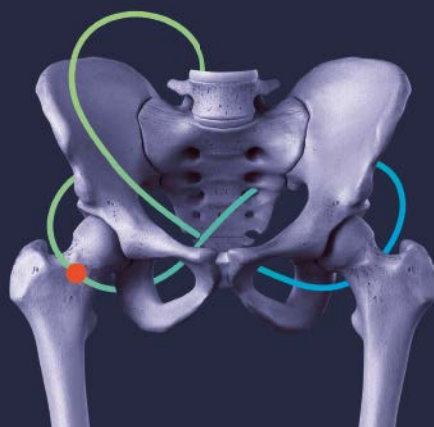
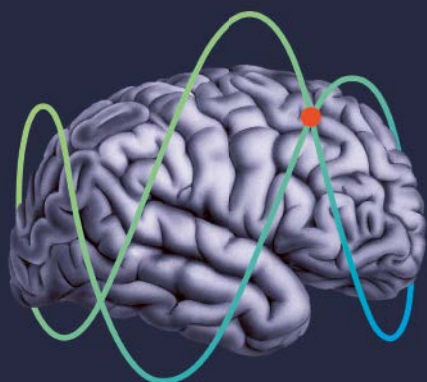


Diseases of the Brain, Head and Neck and the Musculoskeletal System

June 8-10, 2018 | Beijing

June 15-17, 2018 | Hong Kong



IDKD offers interactive, organ-based teaching workshops with annually changing topics.
达沃斯国际诊断课程(IDKD)提供以器官为基础的互动式教学课程, 并且每年会变换主题。

IDKD China Courses in Beijing and Hong Kong (two identical courses)

Topic Diseases of the Brain/Head & Neck and the Musculoskeletal System

Dates Beijing June 8-10, 2018,
Hong Kong June 15-17, 2018

IDKD looks back at 50 years of excellence in radiology teaching using the best imaging specialists.
In 2018 other IDKD courses will be held in Switzerland, Greece, and Brazil.

IDKD中国课程北京和香港 (两个相同课程)

主题 脑/头颈部及骨骼肌肉系统疾病

日期 北京2018年6月8-10日,
香港2018年6月15-17日。

IDKD50年间集中了最优秀的影像学专家专注放射教学。
在2018年, 其他IDKD课程将在瑞士、希腊和巴西举行。

Table of Contents

Additional Information	4
CME Accreditation	5
Faculty Addresses	6
Program - Workshops and Lectures	8
Schedule	10
Course Overview	11
General Information	12
Registration Fees	12
Payment - Confirmation	13
Cancellations	13
Organization	14
Venue - Accommodation	16
Acknowledgement	17
Future IDKD Courses	18

Additional Information

附加信息

- IDKD—Diagnostic Imaging Courses – provides education for medical imaging specialists and others interested
- IDKD courses focus on organ systems and are interactive
- IDKD courses consist of 14 workshops lasting 75 minutes and are held by top radiology experts in groups of 50-60.
- IDKD workshops consist of an introduction to the topic and the interactive presentation of cases
- IDKD case material is analyzed by participants and then discussed with the teachers.
- IDKD participants bring their laptop or tablet (PC or Mac) for individual case viewing
- IDKD offers access to a case data base and to the current IDKD books
- IDKD courses feature 4 – 6 highlight lectures on topics of new developments in the field

Course participants are encouraged to download and get familiar with the viewing software on their computers prior to the course from www.idkd.org / General Information / IDKD Software

- IDKD—影像诊断学课程—为医学影像学专家及其他感兴趣者提供教育
- IDKD课程专注器官系统且是互动性的
- IDKD课程由14个长达75分钟的讨论会组成，这些讨论会将由顶尖的放射学专家带领50-60人一组的小组方式进行
- IDKD讨论会包括主题介绍及互动式的病例呈现
- 听课者先研读IDKD病例资料，再与老师进行讨论
- IDKD听课者自备笔记本电脑或平板电脑(PC或MAC) 以浏览病例
- IDKD提供病例数据库及当前IDKD课程的书籍
- IDKD课程以4-6个相关领域新进展的精彩讲座为特色

建议课程参加者在课程前用自己的电脑从以下网站下载并熟悉浏览软件

IDKD books

- Current digital version included in the registration fee
- Overview of current imaging of
 - Diseases of the Brain/Head and Neck
 - Diseases of the Musculoskeletal System.

IDKD Online Cases

Participants will receive a login and password to access teaching cases stored in the IDKD online database.

CME Credits

The **8th IDKD in Asia, Hong Kong: Neuro and Musculoskeletal, Hong Kong, China, 15/06/2018-17/06/2018** has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with **18** European CME credits (ECMEC®s).

Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 Credits TM. Information on the process to convert EACCME® credit to AMA credit can be found at www.ama-assn.org/education/earn-credit-participation-international-activities.

CME/CPD Accreditation for Fellows from the Hong Kong College of Radiologists is considered upon individual application. The Royal Australian and New Zealand College of Radiologists is allocating a comparable number of points of attendance of the entire course.

IDKD教学大纲

IDKD课程的教学大纲包含在注册费之中，以网页文件的形式提供，包含了脑/头颈及骨骼肌肉系统疾病影像当前的概况。

IDKD在线病例

听课者会收到登录名和密码，可以登录IDKD网上数据库，学到既往的教学病例。

继续教育学分

此8th IDKD中国香港课程已获The European Accreditation Council for Continuing Medical Education (EACCME®)授予18欧洲继续教育学分(ECMEC®s)。

根据The Union Européenne des Médecins Spécialistes和美国医学会(American Medical Association) 签订的协议，听课者获得的EACCME®学分可转换为同等的AMA PRA Category 1 Credits™学分。有关学分转换方法及资讯可参阅www.ama-assn.org/education/earn-credit-participation-international-activities.

此IDKD中国香港课程已获香港放射科医学院授予19.5 (Cat. A) 继续教育学分。皇家澳大利亚和新西兰放射协会为此课程提供了对应的出席学分。

Faculty Adresses

Lin Ai, MD

Beijing Tiantan Hospital
Department of Nuclear Medicine
CN-Beijing 100050
ttnmal@126.com

Mark Anderson, MD

Department of Radiology
University of Virginia Health Sciences Center
US-Charlottesville, Virginia 22908
mwa3a@virginia.edu

James Griffith, MD

The Chinese University of Hong Kong
Faculty of Medicine
Department of Imaging & Interventional
Radiology
HK-Hongkong
griffith@cuhk.edu.hk

Jenny Hoang, MD

Duke University School of Medicine
Department of Neuroradiology
US-27705 Durham, NC
jennykh@gmail.com

Walter Kucharzyk, MD

University of Toronto
Department of Medical Imaging
CA-M5S 1A8 Toronto, ON
w.kucharzyk@utoronto.ca

Seung-Koo Lee, MD

Yonsei University Health System
KR-Seoul 03722
sleemd@yonsei.ac.kr

Tchoyoson Lim, MD

Neuroradiology, National Neuroscience
Institute
SingHealth Radiological Sciences and
Neuroscience Academic Clinical Program
SG-Singapore
tchoyoson.lim@singhealth.com.sg

Lin Ma, MD, PhD.

Radiology
PLA General Hospital
CN-Beijing 100853
cjr.malin@vip.163.com

Henry Mak, MD

Dept of Diagnostic Radiology
LKS Faculty of Medicine
The University of Hong Kong
HK-Hongkong
makkf@hku.hk

Kumta Shekhar Madhukar, MD

Faculty of Medicine
Department of Orthopedics and Traumatology
The Chinese University of Hong Kong
HK-Hongkong
kumta@cuhk.edu.hk

William Palmer, MD

Massachusetts General Hospital
Radiology
US-Boston, MA 02114
WPALMER@mgh.harvard.edu

Paul Parizel, MD

Antwerp University Hospital (UZA)
University of Antwerp (UA)
B-2650 Edegem
paul.parizel@uantwerpen.be

Fengdan Wang, MD

Department of Radiology
Peking Union Medical College Hospital
CN-Beijing 100730
WangFengDan@pumch.cn

Thomas Chung Cheung Yau, MD

Department of Medicine,
The University of Hong Kong
HK-Hongkong
tyaucc@hku.hk

Huishu Yuan, MD

Peking University Third Hospital
Department of Radiology
CN-Beijing
huishuy@sina.com

Program

学术日程

Workshops Beijing & Hongkong

1. **Brain Tumors**
2. **Demyelinating Diseases and its Mimics**
Henry Mak, HK
3. **Seizures and Epilepsy**
4. **Sellar and Parasellar Region**
Walter Kucharczyk, CA
5. **Traumatic Neuroemergency and Vascular Diseases**
6. **Disorders of the Spinal Cord, Nerve Roots and Cauda Equina**
Paul Parizel, BE
7. **Extramucosal Spaces of the Neck**
8. **Imaging Evaluation of Head & Neck Emergencies**
Jenny Hoang, US
9. **Spine Trauma**
10. **Knee**
Mark Anderson, US
11. **Metabolic/Endocrine**
12. **Wrist Joint**
James Griffith, HK
13. **Shoulder**
14. **Pelvis, Hip and Groin**
Bill Palmer, US

课程 北京和香港

1. 脑肿瘤
2. 脱髓鞘疾病及其鉴别诊断
Henry Mak, HK
3. 癫痫及癫痫发作
4. 鞍区和鞍旁
Walter Kucharczyk, CA
5. 脑外伤与脑血管性疾病
6. 脊髓、神经根及马尾病变
Paul Parizel, BE
7. 颈部粘膜外的空间
8. 头颈急症影像诊断
Jenny Hoang, US
9. 脊髓创伤
10. 膝关节
Mark Anderson, US
11. 代谢/内分泌
12. 腕关节
James Griffith, HK
13. 肩关节
14. 骨盆、髋关节及腹股沟区
Bill Palmer, US

Lectures Beijing

1. **MRI Diagnosis of Intracranial Germinoma**
Prof. Lin Ma, CN
2. **PET Imaging of Dementia**
Prof. Lin Ai, CN
3. **MR Diagnosis of Sports Injury of the Ankle**
Prof. Huishu Yuan, CN
4. **MSK Manifestations of Miscellaneous Diseases**
Prof. Fengdan Wang

Lectures Hongkong

1. **Immune Therapy in Musculo-skeletal Tumours**
Prof. Kumta Shekhar Madhukar, HK
2. **Radiomics and Radiogenomics of Brain Tumours**
Prof. Seung-Koo Lee, KR
3. **Demyelination and White Matter Disease: Beyond Multiple Sclerosis**
Dr. Tchoyoson Lim, SG
4. **What's New in Sarcoma Surgery and Management**
Dr. Thomas Yau Chung Cheung, HK

主题演讲 北京

1. 颅内生殖细胞瘤的MRI诊断
马林
2. 痴呆的PET成像
艾林
3. 踝关节运动创伤的MR诊断
袁慧书
4. 杂症的骨肌表现
王凤丹

主题演讲 香港

1. 骨肌系统肿瘤的免疫疗法
Prof. Kumta Shekhar Madhukar, HK
2. 脑肿瘤的影像组学与影像基因组学
Prof. Seung-Koo Lee, KR
3. 脱髓鞘与脑白质病多发性硬化以外的疾病
Dr. Tchoyoson Lim, SG
4. 肉瘤的手术方式及
Dr. Thomas Yau Chung Cheung, HK

Course Schedule

Group 1 Group 2 Group 3 Group 4

Beijing, Friday, June 8, 2018 / Hong Kong, Friday, June 15, 2018

07.30 - 08.30	Registration			
08.30 - 08.45	Welcome and Introduction Prof. Gustav von Schulthess			
08.50 - 09.20	Lecture 1			
09.20 - 09.45	Teacher Discussions Coffee Break			
09.45 - 11.00	Kucharczyk 1	Mak 1	Hoang 1	Anderson 1
11.15 - 12.30	Griffith 1	Kucharczyk 1	Mak 1	Hoang 1
12.30 - 13.45	Lunch Break			
14.00 - 15.15	Hoang 1	Palmer 1	Anderson 1	Griffith 1
15.15 - 15.40	Teacher Discussions Coffee Break			
15.45 - 17.00	Mak 1	Hoang 1	Griffith 1	Palmer 1
17.15 - 18.30	Palmer 1	Anderson 1	Griffith 2	Kucharczyk 1

Beijing, Saturday, June 9, 2018 / Hong Kong, Saturday, June 16, 2018

08.00 - 09.15	Anderson 1	Griffith 1	Palmer 1	Parizel 1
09.20 - 10.45	Hoang 2	Anderson 2	Parizel 1	Mak 1
10.45 - 11.15	Teacher Discussions Coffee Break			
11.15 - 12.30	Lecture 2 / Lecture 3			
12.30 - 13.45	Lunch Break			
14.00 - 15.15	Anderson 2	Parizel 1	Kucharczyk 1	Palmer 2
15.15 - 15.40	Teacher Discussions Coffee Break			
15.45 - 17.00	Parizel 1	Kucharczyk 2	Hoang 2	Mak 2
17.15 - 18.30	Kucharczyk 2	Hoang 2	Anderson 2	Griffith 2

Beijing, Sunday, June 10, 2018 / Hong Kong, Sunday, June 17, 2018

08.00 - 09.15	Mak 2	Palmer 2	Kucharczyk 2	Parizel 2
09.20 - 10.45	Palmer 2	Griffith 2	Parizel 2	Anderson 2
10.45 - 11.15	Teacher Discussions Coffee Break			
11.15 - 11.45	Lecture 4			
11.45 - 13.00	Lunch Break			
13.15 - 14.30	Griffith 2	Parizel 2	Mak 2	Hoang 2
14.30 - 15.00	Teacher Discussions Coffee Break			
15.00 - 16.15	Parizel 2	Mak 2	Palmer 2	Kucharczyk 2

IDKD Course Overview

Friday,
June 8, 2018 Beijing
June 15, 2018 Hongkong

Saturday,
June 9, 2018 Beijing
June 16, 2018 Hongkong

Sunday,
June 10, 2018 Beijing
June 17, 2018 Hongkong

07.30 - 08.30
Registration

08.30 - 08.45
Welcome and Introduction

08.50 - 09.20
Highlight Lecture 1

09.45 - 11.00
Workshops

11.15 - 12.30
Workshops

14.00 - 15.15
Workshops

15.45 - 17.00
Workshops

17.15 - 18.30
Workshops

08.00 - 09.15
Workshops

09.20 - 10.45
Workshops

11.15 - 12.30
Highlight Lecture 2 + 3

14.00 - 15.15
Workshops

15.45 - 17.00
Workshops

17.15 - 18.30
Workshops

08.00 - 09.15
Workshops

09.20 - 10.45
Workshops

11.15 - 11.45
Highlight Lecture 4

13.15 - 14.30
Workshops

15.00 - 16.15
Workshops

Venue Beijing:
Capital Hotel Beijing
3 Qian Men East Street
100006 Beijing, China

Venue Hongkong:
HKCEC - Hongkong Convention
& Exhibition Centre
Level 2, Rooms S221-S228
1, Expo Drive,
Wanchai Hongkong

For topics of Workshops
and Lectures, please see
pages 8-9.

General Information

一般信息

Registration

Registrations are accepted online at www.idkd.org starting January 2, 2018.

After registration, the participants will receive an invoice by email

注册

2018年1月2日开始在网上(www.idkd.org)进行注册。

注册后，参会者会通过电子邮箱收到收据信息

Registration Fees (in €)

Registration fees include the full teaching program, online course book, coffee breaks, and buffet lunches

注册费 (欧元)

注册费中包含了全部教学日程、U盘课程大纲、茶歇和自助午餐。

Beijing 北京

	Regular	Resident
Early fees (until May 13, 2018) 提早注册 (2018年5月13日前)	€ 475.00 RMB 3750	€ 400.00 RMB 3150
Standard fees 标准注册	€ 575.00 RMB 4500	€ 500.00 RMB 3950

Hong Kong 香港

	Regular	Resident
Early fees (until May 13, 2018) 提早注册 (2018年5月13日前)	€ 520.00 HKD 4800	€ 450.00 HKD 4150
Standard fees 标准注册	€ 620.00 HKD 5750	€ 550.00 HKD 5100

Important

All residents must submit proof of their resident status to asia@idkd.org within 10 days of registering online

重要提醒

所有住院医师必须在注册10天内提供住院医师证明到asia@idkd.org

Payments by Bank Transfer (€ only) - 付款方式-银行转账 (仅限欧元!)

Bank - 银行	UBS AG, CH-8098 Zurich
Account No - 银行账号	251-964156.68Y
BIC/ Swift Code - 银行识别码	UBSWCHZH80A
IBAN - 国际银行账户号码	CH80 0025 1251 9641 5668 Y
Reference - 依据	IDKD ASIA/S.AMERICA

Payments with Credit Cards (€ only) - 付款方式-信用卡 (仅限欧元!)

VISA or MasterCard - 维萨或万事达信用卡

Cancellation of Registration

Written notification is required for cancellations. Refunds are made as follows:

- 80 % before May 12, 2018
- 50 % before May 26, 2018.
- No refund thereafter

取消政策

取消和变更需要提交正式书面说明。于2018年5月12日前取消课程者退还80%课程费，2018年5月26日前取消课程者退还50%，之后不退还课程费。

Disclaimer

The IDKD and the Course Management cannot accept liability for acts of any suppliers to this meeting nor the safety of any attendee while in transit to or from this event nor for any accidents or injuries that may occur. Any liability of IDKD and the Course Management is excluded. All participants are strongly advised to carry sufficient travel and health insurance.

注册

该IDKD和课程管理不承担任何供应商对本次会议行为的责任，包括参会者会议来往交通以及任何可能发生的故事和伤害责任。强烈建议所有参加者携带足够的旅费和医疗保险。

Applicable Law and Jurisdiction

Swiss law is applicable. The courts of Zurich, Switzerland, shall have exclusive jurisdiction.

适用法律及管辖权

适用于瑞士法律。瑞士苏黎世法院具有排他性管辖权。

Organization

组织机构

Course Directors

Prof. Juerg Hodler, Zurich (CH)
Prof. Rahel A. Kubik-Huch, Baden (CH)
Prof. Gustav K. von Schulthess, Zurich (CH)

Local Board Beijing

Prof. Dai Janping, Beijing (CN)
Prof. Jin Zhengyu, Beijing (CN)
Prof. Chen Min, Beijing (CN)
Prof. Zhou Chunwu, Beijing (CN)
Prof. Ma Lin, Beijing (CN)
Prof. Yuan Huishu, Beijing (CN)
Prof. Xue Huadan, Beijing (CN)
Prof. Ai Lin, MD, Beijing (CN)
Prof. Wang Yining, Beijing (CN)

Hong Kong Course Director

Pek-Lan Khong, MD, Hong Kong (CN)
Head, Dept. of Diagnostic Radiology,
The University of Hong Kong

Local Board Hong Kong

Lilian Leong, Chair of Local Board,
Founding President and Immediate
Past-President, Hong Kong College of
Radiologists

Jennifer Khoo, Senior Vice-President,
Hong Kong College of Radiologists

Hector Ma, Director & Senior Consultant
Radiologist, Scanning Department,
St. Teresa's Hospital, Hong Kong (CN)

课程主管

Juerg Hodler 教授, 苏黎世
Rahel A. Kubik-Huch 教授, 巴登
Gustav K. von Schulthess 教授, 苏黎世

北京董事会

戴建平, 北京 (中国)
金征宇, 北京 (中国)
陈敏, 北京 (中国)
周纯武, 北京 (中国)
马林, 北京 (中国)
袁慧书, 北京 (中国)
薛华丹, 北京 (中国)
艾林, 医学博士, 北京 (中国)
王怡宁, 北京 (中国)

香港课程主管

孔碧兰, 医学博士, 香港 (中国)
香港大学放射诊断学系系主任

香港董事会

梁冯令儀, 董事会主席
香港放射科醫學院創院及前院長

邱丽珊, 香港放射科醫學院首席副院長

马天竞, 香港圣德肋撒医院扫描部董事及
资深放射科顾问医生

Case Editor

Fabian Morsbach, Zurich (CH)

Foundation for the Advancement of Education in Medical Radiology

Christoph Schmid, Zurich (CH), Chairman
Thomas Kehl, Davos (CH)
Gustav K. von Schulthess, Zurich (CH)
Walter Weder, Zurich (CH)
Christoph L. Zollikofer, Kilchberg (CH)

Course Management

IDKD Asia Office, Zurich (CH)
Yela von Schulthess, asia@idkd.org

Local Organization Beijing

Lin Ai, Prof., MD
Depart. of Nuclear Medicine
Beijing Tiantan Hospital,
Capital Medical University
Beijing, 100050, China
e-mail: ailin@bjtth.org

Fengdan Wang, Assoc. Prof., MD

Depart. of Radiology
Peking Union Medical College Hospital
Beijing, 100703, China
e-mail: wangfengdan@pumch.cn

Local Organization Hong Kong

Toby Chui, Connexus Travel Limited
E-Mail: idkd-hk2018@connexustravel.com

Opening Hours Course Office

Friday 7.30 until 30 minutes after sessions.
Saturday and Sunday 7.30 until 30 minutes
after sessions.

病例编辑

Fabian Morsbach, Zurich (CH)

放射学教育促进基金会

Christoph Schmid, Zurich (CH), Chairman
Thomas Kehl, Davos (CH)
Gustav K. von Schulthess, Zurich (CH)
Walter Weder, Zurich (CH)
Christoph L. Zollikofer, Kilchberg (CH)

课程管理

IDKD 亚洲办公室, 瑞士苏黎世

北京组织机构

艾林, 主任医师
核医学科
首都医科大学北京天坛医院
中国北京
邮箱地址: ailin@bjtth.org

王凤丹, 副主任医师

放射科
北京协和医院
中国北京
邮箱地址: wangfengdan@pumch.cn

香港机构

全旅達國際旅遊有限公司
邮箱地址: idkd-hk2018@connexustravel.com

课程办公室开放时间

早上07:30开始 直至会议开始后30分钟
早上7:30开始 直至会议开始后30分钟

Venue and Accommodation

会场和住宿

Venue and Accommodation Beijing

Capital Hotel Beijing

3 Qian Men East Street
100006 Beijing, China
Phone: (86-10) 5815 9988
www.capitalhotel.com.cn

- different room categories available
- please make your hotel reservation online through reservation form on www.idkd.org
- situated in the historic Dong Jiaominxiang Alley within walking distance to many interesting monuments and scenic spots including Forbidden City, Qiamen, Temple of Heaven, Tiananmen Square etc.

Venue Hong Kong

HKCEC - Hong Kong Convention & Exhibition Centre

Level 2
1, Expo Drive, Wanchai Hong Kong

Accommodation Hong Kong

- Accommodation is available at special rates in different categories
- Hotels close to the HKCEC may be booked online at [www.idkd.org/ Accommodations](http://www.idkd.org/Accommodations).
- Headquarter is the 'Renaissance Harbour View Hotel' situated next to HKCEC.

会场-住宿-北京

北京首都大酒店

东城区前门东大街3号
中国北京
电话: (86-10) 5815 9988
www.capitalhotel.com.cn

IDKD课程将在坐落于东交民巷的北京首都大酒店进行, 从该酒店出发, 可步行至紫禁城、前门、天坛公园、天安门广场等许多景点。酒店设有不同种类的房型。请参会者通过www.idkd.org网站进行网上预订。

会场-香港

香港会议展览中心 (香港会展中心)
香港湾仔博览道一号

住宿-香港

住宿地点为临近HKCEC的香港万丽海景酒店。该酒店设有不同种类的房型, 提供特别优惠。请通过www.idkd.org/ Accommodations网站进行网上预订。

Acknowledgements

致谢

The organisers are grateful to all companies and persons who helped realise and develop this course through their collaboration and contributions.

Main Global Sponsor
Guerbet



Key Global Sponsor
GE



Global Sponsor
Siemens



Sponsors

AIYING



BAYER



Philips



Carestream



Bracco



Beijing Beilu Pharmaceutical Co., Ltd



Jiangsu Hengrui Medicine Co Ltd



Future IDKD Courses

IDKD 2018 South America

Diseases of the Chest, Heart and Vascular System

August 30 – September 2, 2018
Sao Paulo, Brazil

IDKD 2018 Greece

Musculoskeletal Diseases

September 7 – 9, 2018
Athens, Greece

IDKD 2019 Davos

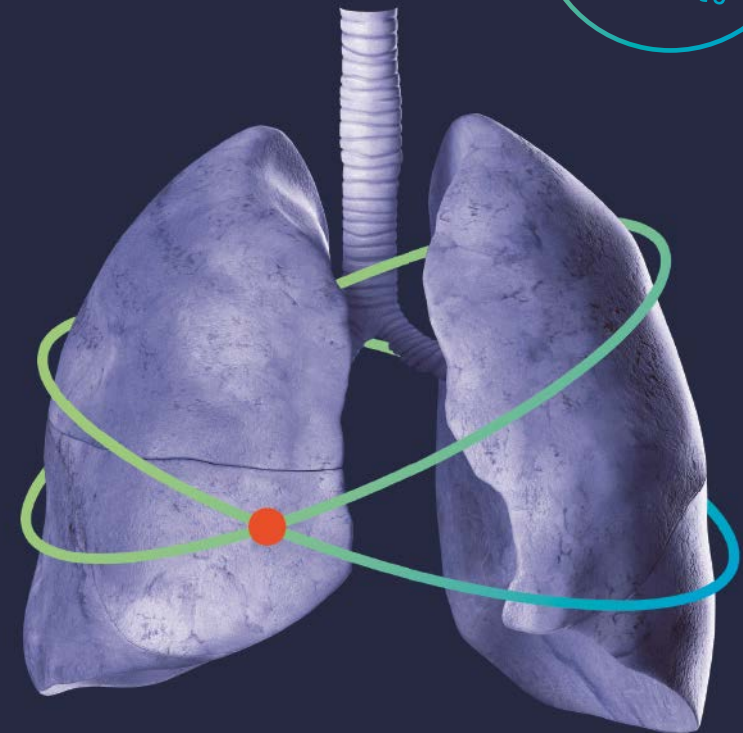
Diseases of the Chest, Breast, Heart and Vessels

March 31 – April 4, 2019

Visit the IDKD website at www.idkd.org for updated information

Chest, Heart and Vessels
including special track on Cardiac
Imaging | August 30 – September 2, 2018
São Paulo, Brazil

IN
COLLABORATION
WITH
UNIVERSITY
OF
SÃO PAULO



DOTAREM[®]

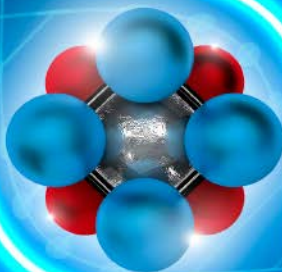
Gadoteric acid

Stability is in its DNA

Upon the conception of Dotarem[®], Guerbet's research team, in order to minimize the release risk of gadolinium, designed the gadoterate meglumine molecule to provide high chemical stability.¹

Dotarem[®] shows a unique profile based on its original features:

- Macrocyclic & ionic molecule developed by Guerbet's researchers
- Patented manufacturing process
- More than 70 million global injections with zero confirmed unconfounded cases of NSF²⁻⁴
- No visible brain hyperintensities related to dechelated Gd, even in cases of repeated injections⁵⁻⁸



Guerbet | 

COMMITTED

1. Meyer D et al. Gd-DOTA, a potential MRI contrast agent. Current status of physicochemical knowledge. Invest Radiol. 1988 Sep;23 Suppl 1:S232-5. 2. Internal data as of December 2017. 3. Dotarem[®] USA PI as of December 2017. 4. de Kerivler E et al. Adverse reactions to gadoterate meglumine: review of over 25 years of clinical use and more than 50 million doses. Invest Radiol. 2016 Sep;51(9):544-51. 5. Radbruch A et al. Gadolinium retention in the dentate nucleus and globus pallidus is dependant on the class of contrast agent. Radiology. 2015 Jun;275(3):783-91. 6. Eisele P et al. Lack of increased signal intensity in the dentate nucleus after repeated administration of a macrocyclic contrast agent in multiple sclerosis: An observational study. Medicine (Baltimore). 2016 Sep;95(39):e4624. 7. Radbruch A et al. No signal intensity increase in the dentate nucleus on unenhanced T1-weighted MR images after more than 20 serial injections of macrocyclic gadolinium-based contrast agents. Radiology. 2017 Mar;282(3):699-707. 8. Radbruch A et al. Pediatric brain: no increased signal intensity in the dentate nucleus on unenhanced T1-weighted MR images after consecutive exposure to a macrocyclic gadolinium-based contrast agent. Radiology. 2017 Jun;283(3):828-36.