Paediatric Body MRI: What every radiologist and technologist scanning children & adolescents needs to know!

Course Director: Dr. Govind Chavhan, SickKids

“This course will be of interest to general radiologists doing paediatric MRI in their practice, paediatric radiologists, paediatric radiology fellows and MRI technologists scanning children.”

Course Objectives:

At the end of this event, participants should be able to:

- Understand properties of sequences and apply them to routine clinical practice in various paediatric body pathologies.

- Apply to routine clinical practice various MRI techniques to various body parts in children, including chest, abdomen, pelvis, cardiac and MSK examinations.


- Review various contrast media used in MRI and discuss their specific properties and uses.

- Evaluate current applications and role of body MRI in children.

- Recognize and assess the clinical and imaging features of common vascular malformations and superficial lesions in children.
## Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>07:00−07:30</td>
<td>Registration and Breakfast</td>
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| 07:30−07:40 | Welcome and Introductions<br>
Dr. Giuseppe Tarulli, Past President, Ontario Association of Radiologists & Chair of OAR CME Committee<br>
Dr. Manohar Shroff, Radiologist-in-Chief, The Hospital for Sick Children (SickKids), Toronto |
| 07:40−08:40 | Interactive Workshop 1: When to Use What Sequences<br>
Dr. Govind Chavhan, The Hospital for Sick Children (SickKids), Toronto |
| 08:40−09:25 | MR Urography: Evolution of Uroradiology in Children<br>
Dr. J. Damien Grattan-Smith, Children’s Healthcare of Atlanta |
| 09:25−10:00 | How We Do It: Optimization of Abdominal MRI<br>
Dr. Govind Chavhan, The Hospital for Sick Children (SickKids), Toronto |
| 10:00−10:10 | Q&A                                                                                         |
| 10:10−10:30 | Break                                                                                       |
| 10:30−11:00 | Liver Specific MR Contrast Media<br>
Dr. Kartik Jhaveri, University Health Network, Mount Sinai Hospital and Women’s College Hospital, Toronto |
| 11:00−11:30 | How We Do It: Liver MRI<br>
Dr. Govind Chavhan, The Hospital for Sick Children (SickKids), Toronto |
| 11:30−12:00 | Paediatric MRCP and Clinical Applications<br>
Dr. Paul Babyn, Saskatoon Health Region |
| 12:00−12:30 | Obstructive Uropathy<br>
Dr. J. Damien Grattan-Smith, Children’s Healthcare of Atlanta |
| 12:30−12:40 | Q&A                                                                                         |
| 12:40−13:30 | Lunch                                                                                       |
| 13:30−14:10 | How We Do It: Cardiac MRI<br>
Dr. Shi-Joon Yoo, The Hospital for Sick Children (SickKids), Toronto |
| 14:10−14:40 | MRI of Paediatric Non-Cardiac Chest<br>
Dr. David Manson, The Hospital for Sick Children (SickKids), Toronto |
| 14:40−15:20 | How We Do It: MR Angiography<br>
Dr. Govind Chavhan, The Hospital for Sick Children (SickKids), Toronto |
| 15:20−15:30 | Q&A                                                                                         |
| 15:30−15:45 | Break                                                                                       |
| 15:45−16:15 | How We Do It: MR Enterography<br>
Dr. Mary-Louise Greer, The Hospital for Sick Children (SickKids), Toronto |
| 16:15−16:45 | MRE Findings of Crohn Disease<br>
Dr. Govind Chavhan, The Hospital for Sick Children (SickKids), Toronto |
| 16:45−17:15 | MRI in Paediatric Gynecology: A Case Based Review<br>
Dr. Zehour Alsabban, The Hospital for Sick Children (SickKids), Toronto |
| 17:15−17:25 | Q&A                                                                                         |

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**Note:** Each lecture contains 5 minutes of interactive Q & A using an ARS (audience response system) and each interactive workshop also uses ARS.
### Schedule continued:

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<tr>
<td>07:10−07:40</td>
<td>Registration and Breakfast</td>
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<tr>
<td>07:40−08:20</td>
<td>Diffusion-weighted Imaging in Paediatric Body</td>
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<td>Dr. Govind Chavhan, The Hospital for Sick Children (SickKids), Toronto</td>
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<tr>
<td>08:20−09:20</td>
<td>Interactive Workshop 2: Paediatric Sports Knee</td>
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<td>Dr. J. Herman Kan, Texas Children’s Hospital</td>
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<td>09:20−10:00</td>
<td>Marrow Imaging in Children</td>
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<td>Dr. Paul Babyn, Saskatoon Health Region</td>
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<td>10:10−10:30</td>
<td>Break</td>
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<td>How We Do It: SPICA MRI</td>
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<td>Dr. J. Herman Kan, Texas Children’s Hospital</td>
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<td>11:00−11:30</td>
<td>MRI of Paediatric Arthropathies</td>
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<td>Dr. Paul Babyn, Saskatoon Health Region</td>
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<td>11:30−12:00</td>
<td>Post-Pyeloplasty Evaluation of UPJ Obstruction</td>
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<td>Dr. J. Damien Grattan-Smith, Children’s Healthcare of Atlanta</td>
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<td>13:00−13:30</td>
<td>Interesting Cases in MSK</td>
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<td>Dr. J. Herman Kan, Texas Children’s Hospital</td>
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<td>13:30−14:00</td>
<td>Vascular Anomalies: Useful Clinical Aspects for Radiologists</td>
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<td>Dr. Philip John, The Hospital for Sick Children (SickKids), Toronto</td>
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<tr>
<td>14:00−14:30</td>
<td>MRI of Vascular Anomalies</td>
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<td>Dr. Oscar Navarro, The Hospital for Sick Children (SickKids), Toronto</td>
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<td>14:40−15:00</td>
<td>Break</td>
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<tr>
<td>15:00−15:30</td>
<td>MRI of Non-Vascular Soft Tissue Lesions</td>
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<td>Dr. Oscar Navarro, The Hospital for Sick Children (SickKids), Toronto</td>
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<td>15:30−16:15</td>
<td>How We Do It: Miscellaneous Protocols</td>
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<td>Dr. Govind Chavhan, The Hospital for Sick Children (SickKids), Toronto</td>
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<tr>
<td>16:15−16:25</td>
<td>Q&amp;A</td>
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<tr>
<td>16:25−16:30</td>
<td>Closing Remarks</td>
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**Adjourn**
Keynote Speakers:

Paul Babyn, MD, FRCPC

Head of Medical Imaging for the Saskatoon Health Region and the University Department of Medical Imaging at the University of Saskatchewan, Canada

Prior to joining the Saskatoon Health Region in December 2010, Dr. Babyn was on staff at the Toronto Hospital for Sick Children (SickKids) for 22 years, including 12 years as head of the Diagnostic Imaging Department.

Dr. Babyn graduated from McGill University in 1982 with his MDCM, and from Massachusetts Institute of Technology in 1978 with SBEE (Electrical Engineering) and SB (Biology). He completed his residency in diagnostic imaging at the Pennsylvania Hospital in Philadelphia in 1986 and fellowships in general radiology and division of neuroradiology/special procedures at the Hospital for Sick Children in 1988.

Dr. Babyn has published more than 150 publications, is involved in a variety of funded research projects and has an active role in teaching. He is a member of the Radiological Society of North America, Canadian Association of Radiology and the Society of Paediatric Radiology. Dr. Babyn’s main research interests are in Musculoskeletal Radiology and Cross-Sectional Imaging and Healthcare Informatics.

J. Damien Grattan-Smith, MD

Medical Director, Radiology, Children’s Healthcare of Atlanta (CHOA) Georgia U.S.A. and Founding Member of Children’s Diagnostic Imaging of Atlanta, Georgia U.S.A.

Dr. Grattan-Smith has been practicing paediatric radiology at CHOA for more than 15 years. His areas of expertise are in paediatric neuroradiology, paediatric interventional radiology, and MR urography.

Dr. Grattan-Smith earned his medical degree at the University of Sydney, Australia and completed his radiology residency at the University of South Alabama Medical Centre. He subsequently completed his paediatric radiology fellowship at Texas Children’s Hospital in Houston, Texas.

He has authored or co-authored more than 40 publications in scientific journals and has been a two-time winner of the prestigious Caffey Award for his pioneering research in MR urography at the annual meetings of the Society of Paediatric Radiology.

Dr. Grattan-Smith is a member of the American College of Radiology, American Roentgen Ray Society, Society of Paediatric Radiology, American Society of Paediatric Neuroradiology, International Society of Magnetic Resonance in Medicine, John Caffey Society, Society of Paediatric Imaging and the Australian Society for Paediatric Imaging. He travels throughout the world as an invited speaker on paediatric urologic imaging.

J. Herman Kan, MD

Section Chief, Musculoskeletal Radiology, Texas Children’s Hospital and Medical Director, West Campus Radiology, Houston, Texas, U.S.A.

Dr. Kan is head of the musculoskeletal imaging at Texas Children’s Hospital and Associate Professor of Radiology at Baylor College of Medicine. His clinical expertise is in paediatric radiology. Dr. Kan performs all aspects of paediatric radiology in addition to multi-modality imaging and interventional musculoskeletal imaging.

Dr. Kan earned his medical degree at Albany Medical College in New York and completed his internship in internal medicine and residency in diagnostic radiology at University of Chicago Hospitals. He completed both a general paediatric radiology fellowship and a second year paediatric radiology fellowship with focus on musculoskeletal imaging at Children’s Hospital in Boston. He has authored or co-authored 33 peer-reviewed manuscripts, and co-authored the textbook, “Paediatric and adolescent musculoskeletal MRI: A Case-based approach.”

His current research and clinical interests include quantitative cartilage mapping techniques including DGMERIC, T2 mapping, and T1rho mapping, and optimizing multi-modality imaging clinical practice guidelines for the care of paediatric and adolescent musculoskeletal and sports medicine injuries.

Dr. Kan is a member of the Radiological Society of North America, Society of Skeletal Radiology, American Roentgen Ray Society and the American College of Radiology.
Faculty Speakers:

**Govind Chavhan, MD, DNB, DABR**

Dr. Chavhan is a staff paediatric radiologist at Toronto’s Hospital for Sick Children (SickKids) and Assistant Professor at the University of Toronto. He currently works in paediatric body imaging with a research focus in paediatric body MRI. He is actively involved in educational outreach programs and has lectured on many paediatric imaging topics. Dr. Chavhan has published two books: “MRI Made Easy” and “Cross-Sectional Anatomy – CT and MRI” in addition to several peer-reviewed papers and book chapters.

**Mary-Louise Greer, MBBS, FRANZCR**

Dr. Greer is a staff radiologist at Toronto’s Hospital for Sick Children (SickKids) and an assistant professor of medical imaging at the University of Toronto. She has been on staff at SickKids as a paediatric radiologist in the general division since June 2011.

She trained in Brisbane, Australia, obtaining her medical degree from The University of Queensland in 1989, and becoming a Fellow of the Royal Australian and New Zealand College of Radiologists (FRANZCR) in 2000. She has completed Fellowships in Paediatric Body Imaging, Body Intervention and Cardiac MRI at the Hospital for Sick Children.

Dr. Greer served as President of the Australia and New Zealand Society for Paediatric Radiology in 2008/9 and Director of Radiology at the Royal Children’s Hospital in Brisbane from 2003 to 2006, helping establish their dedicated MRI service. She has a special interest in advanced MRI techniques, body MRI and bowel imaging in particular, with on-going educational and research activities in inflammatory bowel disease, as part of an international collaboration.

**Philip John, MBChB, DCH, FRCR, FRCPC**

Dr. Philip John is the Division Head of Interventional Radiology at The Hospital for Sick Children (Toronto) and is Co-Lead of the Image-Guided Therapy Centre. His work involves vascular and non-vascular intervention. Dr. John is also Director of the Vascular Anomalies Clinic, which manages infants and children with all types of vascular malformations and selected vascular tumours. He has developed two unique clinics for children with Klippel-Trenaunay Syndrome and those with complex osteoarticular vascular malformations.

Dr. John also holds an Associate staff position at Toronto General Hospital where he has initiated an adult Vascular Malformation Clinic in collaboration with the adult vascular surgical service. He is also an Associate Professor for the Department of Medical Imaging at the University of Toronto.

Before joining SickKids in March 2002, Dr. John was a consultant paediatric radiologist for 10 years at Birmingham Children’s Hospital in Great Britain where much of his work focused on vascular, hepatobiliary and transplant imaging, including interventional radiology.

Dr. John’s research focuses on vascular malformations and hepatovascular disorders. He has written and lectured extensively on these topics.

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**Wesley D. Block, MD – CME Program Assistant for this Course**

Dr. Block is Chief Resident, University of Toronto Radiology Residency Program

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**Zehour Al-Sabban, MBBS**

Dr. Al-Sabben is half way through the two-year fellowship in paediatric imaging at the Hospital for Sick Children (SickKids) that she started in June 2012.

She completed medical school at King Abdal Aziz University (MBBS) in 2006 and obtained the Saudi Board in Diagnostic Imaging, training at King Faisal Specialist Hospital in Jeddah, Saudi Arabia in 2011.

Dr. Al-Sabban is interested in body MRI and working on a couple of research projects related to MRI and Chrohn’s disease imaging.
Kartik Jhaveri, MD, DABR

Dr. Kartik Jhaveri is the Director of Abdominal MRI and Faculty Abdominal Radiologist in the Joint Department of Medical Imaging of the University Health Network, Mount Sinai Hospital and Women’s College Hospital. He is currently an Associate Professor at the University of Toronto. He has focused clinical and research interest in the field of Abdominal MRI. He has lectured internationally on Abdominal MRI topics including at the RSNA and ISMRM. He also leads multiple grant-funded research initiatives in body MRI. His special areas of clinical and research interest are focused on hepatobiliary and pancreas, renal and rectal diseases. He has authored several peer-reviewed publications, book chapters, clinics and scientific presentations. He serves on multiple international and/or North American radiology organization committees such as RSNA, ISMRM, and the Society of Abdominal Radiology. He has also served as an Assistant Editor on the Editorial Board of the American Journal of Roentgenology.

David Manson, MD, FRCPC, FAAP

Dr. Manson is Associate Chief, Body Imaging and Clinical Care at the Toronto Hospital for Sick Children (SickKids), and an Associate Professor of Medical Imaging, University of Toronto. He has been on staff in the Department of Diagnostic Imaging since 1989. His clinical areas of expertise are primarily in body imaging, with a specific interest in lung imaging. He has an active role in daily resident and fellow teaching, as well as various weekly teaching and clinical rounds. These are limited to pulmonary imaging, but include general Emergency Room imaging, neonatal imaging, as well as imaging in child abuse.

Dr. Manson’s current research interests include MDCT imaging of pulmonary vascular diseases, MRI imaging of the paediatric lung and pulmonary imaging of children with rheumatological diseases.

Oscar Navarro, MD

Dr. Navarro graduated from the Faculty of Medicine at the Pontificia Universidad Católica de Chile in 1990. He trained in radiology in Santiago, Chile and completed a fellowship in paediatric radiology at the Hospital for Sick Children in 2000.

After working as a staff paediatric radiologist at Clínica Alemana de Santiago, Chile, he joined the staff in the Department of Diagnostic Imaging at the Hospital for Sick Children in April 2001. His present work is in the area of general paediatric body imaging, with special interest in sonography, abdominal imaging and imaging of soft tissue masses.

Dr. Navarro is an Associate Professor in the Department of Medical Imaging at the University of Toronto. He is the Fellowship Program Director of the Department of Diagnostic Imaging at the Hospital for Sick Children, Head of the Ultrasound Section, and co-ordinator of teaching rounds in ultrasound for residents and fellows.

Shi-Joon Yoo, MD, FRCPC

Dr. Yoo is Section Head, Cardiac Imaging at Toronto's Hospital for Sick Children, a post he has held since 1999 and Professor of Medical Imaging and Paediatrics at the University of Toronto.

Dr. Yoo studied medicine and subsequently completed Master and PhD courses at the College of Medicine, Seoul National University in Korea. He completed his internship and radiology residency at Seoul National University Hospital and his fellowship in the Department of Diagnostic Imaging at Toronto’s Hospital for Sick Children (SickKids).

From 1982 to 1998 he held several senior positions in radiology with the Seoul District Army Hospital, the Sejong Heart Institute, Samsung Cheil Hospital, and Asan Medical Center University of Ulsan in Korea.

Dr. Yoo specializes in paediatric and fetal cardiac imaging and has published numerous papers, four books and 18 book chapters on these topics.
Paediatric MRI

REGISTRATION
(includes meals, refreshment breaks, and course materials)

- OAR Member $700 (Before Sept 15, 2013) $750 (After Sept 15, 2013)
- Non-OAR Member $900 (Before Sept 15, 2013) $1000 (After Sept 15, 2013)
- Ontario only Radiology Residents/Fellows No Charge
- Non-Ontario Radiology Residents/Fellows $100 (Before Sept 15, 2013) $125 (After Sept 15, 2013)

Please note that on-line registration for all OAR CME events is available at: http://oarinfo.ca/cme

Access to archived versions of the CME program will be made available to all CME participants. Two archived formats will be available. Participants can choose to access the entire event, or access the program on a lecture by lecture basis.

Instructions on how to access the archived CME program will be emailed to all participants (live program and webcast of the live program) as soon as they are available.

Archived versions of the CME are usually available within a week of the live event.

CANCELLATION POLICY
For OAR members, if cancellation to this event is necessary please, contact the OAR office for assistance. For non-members, a refund will be made less a $50 processing fee, if cancellation is received in writing two weeks prior of the CME event date. No refunds will be given within two weeks of the CME event. Delegates may substitute an alternate attendee. Please advise the OAR if any changes are made. The OAR reserves the right to cancel or move the conference should it become necessary. In this case, each registrant will be notified by telephone or email and a full refund will be given. Therefore it is important that you provide us with an email address and phone number. The OAR is not responsible for any other costs incurred.