

# Paediatric Radiology Rapid Reporting

Michael Paddock  
Caoilfhionn Ní Leidhin  
Amaka C. Offiah

*Second Edition*



Springer

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Second Edition

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*To Luke, 我的小宝宝—for putting me back  
together*

*MP*

*To Sumanth, Ciara, bump & Muintir Uí  
Leidhin ar fad—for your love and support*

*CNL*

*To Nkechi—Laru k'oke, ka mmunwa laru  
ka ngwele*

*ACO*

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## Foreword to the First Edition

I was delighted to be asked to prepare a foreword for this book written by my colleagues, Dr. M Paddock and Dr. AC Offiah. As the Training Programme Director for South Yorkshire, it is wonderful to see an enthusiastic radiology trainee producing high-quality teaching material, supported by an established consultant expert in their field of interest. Passing down knowledge continues the important cycle of learning and teaching with benefit to future generations of radiologists.

Reading this book is a must for any specialist trainee in radiology preparing for the final FRCR examination. Paediatric radiology is often an area that is neglected during revision when the RCR curriculum requires a very wide breadth of knowledge. Many trainees have limited exposure to paediatric radiology during their training, and there may have been an interval between a paediatric attachment and preparing for the FRCR 2B examination. Paediatric imaging does however form part of all FRCR examinations, and you will be assessed in this area. I have been an examiner at the Royal College of Radiologists for many years, and there is a recognised reduced performance in questions related to paediatric imaging.

This book consists of cases set out in the style of the FRCR 2B Rapid Reporting examination. The high-quality images and attached notes are beautifully presented in a format that is easy to read. Your knowledge will be enhanced with what I think you will find to be an enjoyable learning experience. The carefully selected cases are either commonly seen in daily practice or are important to be aware of. This book will help you prepare for all components of the FRCR 2B examination (not just the Rapid Reporting element) and your future career as an independent practitioner.

Happy reading and good luck!

The Royal Hallamshire Hospital  
and Sheffield Children's Hospital  
Sheffield, UK

Ruth Batty

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## Foreword to the Second Edition

Preparing for the final Fellowship examination is a monumental undertaking and every candidate seeks the best possible assistance for each subspecialty. Paddock and Offiah's *Paediatric Radiology Rapid Reporting for FRCR Part 2B* has already proven itself as an invaluable resource, and careful study of this fully revised second edition will maximise candidates' chances of success.

Although the tests are set out in the style of the FRCR Part 2B Rapid Reporting examination, there is a comprehensive coverage of the field. The concise explanations of each case, along with the recommended further reading, provide a depth of knowledge that furthers its utility for other components of the FRCR Part 2 examination. For example, one of the specimen questions for the Part 2A Single Best Answer test asks:

*'An athletic 13-year-old boy presents to the emergency department with a painful right hip. Pelvic x-ray demonstrates an irregular shaped bone [fragment] adjacent to the anterior inferior iliac spine. The avulsion of which muscle is most likely to have caused this injury?'* If you go to the explanations for Test 4, you will find a list of all the pelvic and proximal femoral avulsion fractures that you need to know.

The material covered in this book is universal and so would also be useful for candidates preparing for Fellowship (or Board) examinations in other training systems. Of course, once all the tests are passed, the candidate will emerge into a new life as a consultant radiologist and the knowledge gleaned from this book will stand them in good stead throughout their career. The much-lauded first edition of this book has cemented its place amongst radiologists and all those involved in the interpretation of paediatric radiographs. The addition of three new tests, as well as meticulous revision of the original ten tests, will send it even further down the road to classic status.

Perth Children's Hospital  
and The University of Western Australia  
Perth, Australia

Derek Roebuck

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## Preface to the First Edition

Firstly, congratulations on passing the FRCR Part 2A—well done! Now to the FRCR 2B examination where the fun can really begin...

All three components of the 2B examination may contain a significant proportion of paediatric imaging. Candidates ‘struggle with interpretation of paediatric imaging—even for common paediatric pathologies’ as identified in the Royal College of Radiologists Examiners’ report. Better preparation in this component will also help you when faced with paediatric cases in the long case reporting and viva sections, and you will definitely get some!

The amount of paediatric radiology training up and down the country is variable, and some candidates may not feel adequately prepared to tackle paediatric imaging in the Rapid Reporting section of the examination. The reality is that the majority of radiologists will go on to work in District General Hospitals (DGHs) where paediatric imaging can feature prominently in the day-to-day workload of the department. Most children will initially present to and be imaged in DGHs, given that most do not live next to a dedicated paediatric tertiary centre.

The examiners need to make sure that you are a safe radiologist and that you are able to provide a sound radiological opinion which may contribute to effective patient management and care. This is what the 2B examination is assessing—your ability to use your knowledge and skills effectively and your preparedness to practise radiology safely as an independent practitioner.

We felt that there was a lack of dedicated paediatric radiology revision resources for the 2B examination, and we wrote this book to address that need. All radiographs are from standard day-to-day practice and have been collected over a 3-year period by one of the authors: the images range from the obvious buckle fracture to the subtle metaphyseal fracture (specific to physical child abuse) which is easily missed.

Following the answer key for each test, we have expanded on certain abnormal findings or normal variants to further enhance your learning. We have purposefully not used arrows or line diagrams to show you where or what the abnormality is—abnormal radiographs do not come with this in the examination or in real life. As clinical radiologists, we have described the abnormality, and where subtle, it has been magnified as you would do in the examination and in clinical practice. Being a text comprised of paediatric radiographs, the image quality is dependent on the limited dose used to acquire the images. Thus, the quality of some of the magnified



images in the explanations may be degraded but still remain adequate to sufficiently demonstrate the pathology. Where relevant, we have included tips for the viva examination. The references also include excellent pictorial reviews and links to educational websites so that you can get the most out of your revision.

We emphasise that the best practice for the Rapid Reporting section of the examination is to report paediatric radiographs and get them checked by your local paediatric radiologists. This book can be used to supplement your learning during normal working hours.

We are extremely grateful to Dr. Jonathan M. Smith and Dr. Robin Dale, specialty trainees on the Sheffield radiology training scheme, for their insight and feedback throughout the preparation of this book.

Finally, we wish you the best of luck in all components of the examination and your future careers. We hope that you will use this book as a future reference text, even after the examination. We welcome any comments, suggestions or feedback, and if you have any queries, please email us on [paedsradrapidreporting@gmail.com](mailto:paedsradrapidreporting@gmail.com).

Good luck!

Sheffield, UK

Michael Paddock  
Amaka C. Offiah

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## Preface to the Second Edition

Following the international success of the first edition, we were delighted to be asked to prepare a second edition of this text. The content of the first edition has been fully revised and, with the addition of three new tests, this comprehensive resource now includes nearly 400 practice paediatric radiographs providing an unrivalled educational resource to aid candidates in their examination preparation. It has always been our goal to provide an accessible and valued paediatric radiology text to bridge the gap in knowledge for those candidates preparing for the FRCR 2B examination, and indeed for any healthcare professional reviewing and reporting paediatric radiographs.

Since the publication of the first edition in 2019, the world has been impacted significantly by the COVID-19 pandemic. This has also extended to the delivery of the FRCR 2B examination which has evolved to computer-based assessment of the reporting components and the oral component being delivered via video conferencing at selected venues. Given these changes, candidates are strongly advised to read all relevant information pertaining to the delivery and format of the examination on the Royal College of Radiologists' website prior to their examination sitting for any further changes.

Whilst most of the images included in this text reflect the format of the examination, i.e. those that would be expected to be encountered in a typical Emergency Department reporting session or referred by a General Practitioner, we have also included a handful of neonatal radiographs which demonstrate important pathology. There is a notable decreased performance of candidates in relation to paediatric imaging, and we hope that inclusion of these images and their accompanying explanations will enable candidates to maximise their revision given that these cases may be tested in the other components of the examination.

As with any printed text there will always be some loss of image quality, even more so with paediatric radiographs given the lower dose used to acquire the images and the technical challenge that comes with imaging children who do not want to be imaged! An electronic version of this book is also available which candidates are encouraged to use: this format not only replicates an authentic examination experience but will also help to remediate any perceived decrease in image quality.

We are incredibly grateful to the clinical radiology speciality registrars, Dr. Katherine Hocking (South Yorkshire radiology training programme, UK) and Dr. Tony Bose, Dr. Nihar Jha and Dr. Roger Smyth (Western Australia radiology

training programme, Australia), whose insight and feedback were invaluable to ensure the ongoing relevance and high-impact educational value of this revised edition.

Finally, we welcome and thank Dr. Caoilfhionn Ní Leidhin for joining the authorship. Her invaluable contributions in revising the first edition and co-authoring the three new tests have been instrumental in making the second edition a richer and more impactful text for which we are indebted.

We hope that you enjoy using this text as much as we have enjoyed preparing it. We wish you the very best of luck in the examination and your future careers.

Perth, WA, Australia

Sheffield, UK

Michael Paddock  
Caoilfhionn Ní Leidhin  
Amaka C. Offiah

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## Testimonies for the First Edition

*Excellent resource for the paediatric components of the FRCR exam, highly recommend! The authors are experts in their field and deliver some excellent cases – 5\*.*

Dr. Vartan Bailan FRCR

*Unlike the online rapids packets I used, this book offers explanations which are really helpful for confidently identifying abnormalities and discounting normal findings unique to paediatric radiology. The discussions are also great for viva preparation. It definitely helped me to pass the FRCR 2B examination.*

Dr. Robin Dale FRCR

*Large number of paediatric cases covering an extensive range of pathologies. Extremely well-written explanations to complement the cases means this book is not only helpful in preparing for the Rapids but also for the long reporting and viva components of the FRCR 2B examination. Very helpful in my exam preparation as other resources cover very little paediatric content.*

Dr. Thomas Geh FRCR

*Most UK registrars will know that perhaps the easiest way to fail the 2B exam is to lose points on the Rapid Reporting section. Equally, an 8 on the Rapids will really take the pressure off for the remaining components of the exam. An outsized portion of the Rapids exam consists of paediatric MSK films, and seeing a good number of these is hardest during a normal working week. This book is an excellent resource to get good at paediatric MSK and to make sure that you don't drop points on the Rapids.*

Dr. Nathan Jenko FRCR

*I recently sat the final FRCR and found this book to be invaluable. The case selection is perfect and really reflects the topics that come up in the exam. Where the book really excels is in the explanations following each case. They manage to be detailed enough while not being too long. I've seen some other reviews critiquing the image quality. From my experience of using multiple revision books for this exam there is always some degradation in image quality when printed. I do not think the image quality is any worse than the other books I have used, and they are in fact better than some of the most popular 2B books. Overall, I think this book is a must*

*have for the exam. Paediatrics is always a difficult area and many UK trainees have minimal experience in this area. I would highly recommend this book and I think the authors should be commended!*

Dr. Matthew S. Kinsella FRCR

*Whilst a challenging topic at FRCR 2B level, after reading this book I significantly improved my confidence when assessing paediatric plain films, which helped me in both the Rapid Reporting and viva components of the exam. Highly recommended to anyone studying for the FRCR 2B exam or any practicing radiologist wishing to familiarise themselves with paediatric plain film interpretation.*

Dr. Sam Kular FRCR

*Great book and very useful in 2B prep.*

Dr. Christine McMullin FRCR

*This book is a great resource for the FRCR 2B Rapid Reporting component and also for the viva component. The image quality is very good and far superior compared to other books. I highly recommend this book for the FRCR 2B. I sat the exam recently and passed. Paediatric imaging, mainly plain films, is an essential component of the exam. This book will enable you to ace the paediatric plain films when encountered in the exam.*

Dr. Yousef A Shahin FRCR

*Excellent resource for Registrars doing paediatric radiology rotations and for revising for the FRCR 2A or 2B exams, or general consultants who want to keep up to date. The image quality is good and the cases are suitably challenging but the book really comes into its own with the detailed explanations of findings and pathology. This should be in every radiologist's collection.*

Dr. Lisa Shannon FRCR

*I used this book in the run up to sitting the Final FRCR Part B examination in autumn 2018 and I believe it played an important role in obtaining a high score in the Rapid Reporting element. Most practice exam sets include a few paediatric radiographs, but no other resource on the market provides a concentrated bank of paediatric radiographs with which you can hone your skills. This makes it particularly useful for candidates like me, who had completed their paediatric rotation a long time before sitting the exam, or for those candidates who are not very confident in paediatric reporting. The explanations are thorough and provide some useful tips for the viva component of the exam, also.*

Dr. Jonathan M. Smith FRCR

*Excellent book covering an often-challenging area for the final FRCR exam: paediatric imaging, in particular Rapid Reporting. Clear and concise explanations. Good image quality.*

Dr. Daniel Ward FRCR

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# Introduction

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## Purpose of the Rapid Reporting Component of the FRCR 2B Examination

Emergency Department imaging constitutes a significant proportion of most radiologists' workload. The Rapid Reporting component of the FRCR 2B examination assesses candidates' ability to decide rapidly if an image is normal or abnormal, and where abnormal, provide a diagnosis. This component of the examination tests your ability to confidently state when an abnormality is present and exclude it when it is not.

The examination contains 30 radiographs to be reported with no other imaging modality examined. The majority of the images are trauma cases, primarily musculoskeletal/extremity radiographs, in addition to some chest and abdominal radiographs, as would be expected in a typical emergency department reporting session or those referred by a general practitioner. We have replicated this brief, except that all the radiographs are paediatric, ranging from neonates to adolescents, recognising the inherent challenges of interpreting radiographs of the developing skeleton. In this second edition, we have also included a handful of neonatal radiographs of important pathologies to allow prospective candidates to maximise their revision time for other components of the 2B examination.

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## Structure

Candidates will have 35 min to report 30 images and denote each image as either normal or abnormal. Approximately 45–50% of the cases will be normal. Each image contains one significant diagnosable abnormality which is *not* complex; as such, differential diagnoses should not be offered. Images will be viewed on a single monitor. In the examination, some cases may show either a single or several projections.

Any anatomical variants, including those which do not cause symptoms, may be examined and should be denoted as 'normal'. Those normal variants which may cause symptoms will *not* be included, e.g. accessory navicular, supracondylar spur. Minor age-related change should also be recorded as 'normal'.

Candidates should keep their comments short and precise regarding the site and nature of the abnormality. For those radiographs that demonstrate a well-recognised fracture pattern in which two fractures would be expected to occur together, e.g. fractures of the distal radius *and* ulna, you will be expected to identify and write down *both* fractures to get the mark. Candidates will lose marks where responses are incomplete, e.g. ‘Monteggia’ instead of ‘Monteggia fracture-dislocation left forearm’, or inaccurate.

## Scoring

Since the publication of the first edition, the Royal College of Radiologists (RCR) has updated the scoring system for this component of the examination. Candidates report 30 radiographs and have the opportunity to attain two marks per image for a maximum of 60 marks. The scoring system used is taken directly from the RCR website and is outlined below:

Image type	Candidate response	Mark
Normal image	Correctly classified	+2
	Incorrectly classified (false positive)	+2
	No answer given	0
Abnormal image	Correctly classified and correctly identified	+2
	Correctly classified with partially correct answer	+1
	Correctly classified but incorrectly identified	0
	Incorrectly classified (false negative)	0
	No answer given	0

Subsequently, the total marks obtained in the Rapid Reporting component are converted into an overall mark between 4 and 8:

Total marks	Overall mark
00–48	4
49	4.5
50–51	5
52–53	5.5
54	6
55–56	6.5
57–58	7
59	7.5
60	8

This score is combined with the converted overall scores from the long case reporting component and the *viva voce* examination (which comprises two stations taken over 1 h). Candidates will be given a score of 4–8 in each of the four components, of which the pass mark in each section is 6, giving an overall pass mark of 24.

Additionally, candidates must obtain a mark of 6 (or above) in *at least* two of the four sections to pass the FRCR 2B examination overall.

All candidates should aim for a minimum score of 54/60 (90%) in the Rapid Reporting component to achieve a converted overall mark of 6. Whilst this component is thought of as the most difficult, it is possible for candidates to score full marks and receive a converted overall mark of 8. This can contribute significantly to the final overall score when combined with the scores from the long case reporting and *viva voce* examination stations, emphasising the importance of scoring highly in the Rapid Reporting component.

We encourage candidates to read *all* available Examiners Reports in preparation for their upcoming examination sitting, in particular, the Spring 2021 report which provides example answers. Candidates must be aware of the need to supply **full and accurate descriptions** so that full marks can be awarded for their responses:

<https://www.rcr.ac.uk/exams-training/rcr-exams/clinical-radiology-exams/examiners-reports-radiology/>

The latest information pertaining to all examination components, the format, the scoring system, allocation of marks, along with general candidate guidance can be found on the RCR website which should be checked regularly for updates. This is particularly important in light of the introduction of computer-based assessment and video conferencing for the reporting and oral components of the examination, respectively.

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## Hints and Tips

Revising for the FRCR 2B examination seems like a daunting task, but, as with anything, organisation and preparation are key. Below are a few hints and tips to help prepare you for your up-and-coming examination sitting:

- Treat the examination as if you were at work and report the radiographs as you would in daily practice.
- Before the exam, report as many radiographs as possible and get them checked by consultant radiologists. This is the only way to receive feedback on your practice and to identify areas for development. Where areas for improvement have been identified, report more of these radiographs and get them checked.
- Best practice, both in the examination and in clinical practice, is to state the side of the abnormality. Given the time limitations in the examination, L and R can be typed in place of ‘left’ and ‘right’, respectively. Additionally, typing # in place of ‘fracture’ is acceptable and will also save time.
- Develop review areas for each body part: there are a number of resources and ‘checklists’ available online.
- If unsure, denote the radiograph as ‘normal’.
- Completing each test in this book within the allotted 35 min (be strict with the timing) will give you the realistic practice needed to succeed in this component of the examination.



Good luck!

## Further Reading

The Royal College of Radiologists, accessed February 2023:

- Final FRCR Part B Examination.  
<https://www.rcr.ac.uk/exams-training/rcr-exams/clinical-radiology-exams/frcr-part-2b-radiology-cr2b/>
- Final FRCR Part B Examination–Purpose of Assessment Statement.  
<https://www.rcr.ac.uk/exams-training/rcr-exams/clinical-radiology-exams/frcr-part-2b-radiology-cr2b/frcr-part-2b-radiology-purpose-of-assessment-statement/>
- Final Examination for the Fellowship in Clinical Radiology (Part B)–Guidance Notes for Candidates.  
<https://www.rcr.ac.uk/exams-training/rcr-exams/clinical-radiology-exams/frcr-part-2b-radiology-cr2b/frcr-part-2b-radiology-guidance-notes-for-candidates/>
- Final Examination for the Fellowship in Clinical Radiology (Part B)–Scoring System.  
<https://www.rcr.ac.uk/exams-training/rcr-exams/clinical-radiology-exams/frcr-part-2b-radiology-cr2b/frcr-part-2b-radiology-cr2b-scoring-system/>
- Final FRCR Part B Examination Board–Examiners Reports.  
<https://www.rcr.ac.uk/exams-training/rcr-exams/clinical-radiology-exams/examiners-reports-radiology/>

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## About the Authors

**Michael Paddock** is a Fellow in Paediatric Radiology at Perth Children's Hospital, Australia, and a Senior Clinical Lecturer at the University of Sheffield and the University of Western Australia (UWA).

He completed an EPSRC-funded Biomedical Imaging MSc during his undergraduate medical training at Guy's, King's & St Thomas' School of Medicine at King's College London. He went on to clinical paediatric training on the North-West London rotation including a post at Great Ormond Street Hospital for Children.

Subsequently, he completed an NIHR Academic Clinical Fellowship in Clinical Radiology at the University of Sheffield conducting research into fetal brain development using *in utero* MRI whilst successfully completing his postgraduate clinical radiology training and attaining the FRCR. He has numerous first author publications and has won several national and international research awards. He is currently working towards a PhD in the radiological investigation of suspected physical child abuse supervised by Professor Amaka C. Offiah.

He holds postgraduate certificates in Clinical Research, Medical Education and Advanced Child Protection Studies, alongside the Diploma in Legal Medicine from the Faculty of Forensic & Legal Medicine of the Royal College of Physicians. He is one of only a handful of individuals internationally to have been awarded the inaugural European Diploma in Paediatric Radiology administered by the European Society of Paediatric Radiology, and is a Fellow of both the Higher Education Academy and the Academy of Medical Educators.

**Caoilfhionn Ní Leidhin** is a Fellow in Paediatric Radiology at Perth Children's Hospital, Australia.

She received her undergraduate medical degree from University College Dublin, Ireland. Following several years of postgraduate clinical work, she obtained a role as a Lecturer/Registrar in Radiology with Trinity College Dublin. During this time, she conducted research on arterial spin labelling magnetic resonance imaging leading to an MD (Res). She completed her first 4 years of specialist training in clinical radiology at St. James's Hospital, Dublin, successfully completing the FFR RCSI examinations, which was followed by a final year of subspecialty paediatric radiology training at Children's Health Ireland.

She has several first author publications and has delivered numerous national and international presentations. She has previously served as Vice-Chair of the Faculty of Radiology Trainee Committee, Ireland.

**Amaka C. Offiah** is Chair of Paediatric Musculoskeletal Imaging at the University of Sheffield and an Honorary Consultant Paediatric Radiologist at Sheffield Children's NHS Foundation Trust.

After completing radiology training in Sheffield, she worked at Great Ormond Street Hospital for Children where she obtained her PhD in the imaging of suspected inflicted injury at the Institute of Child Health, University College London. She returned to Sheffield as a HEFCE-funded Clinical Senior Lecturer and was promoted to Professor in 2020. She is a Fellow of the Higher Education Academy.

In addition to over 200 original scientific publications, over 35 peer-reviewed review articles and 15 book chapters, she has co-authored two 'Highly Commended' textbooks: *A Radiological Atlas of Child Abuse* and *Fetal and Perinatal Skeletal Dysplasias: An Atlas of Multimodality Imaging*.

She is currently Managing Editor (Outside Americas) for *Pediatric Radiology*, the leading international peer-reviewed paediatric radiology medical journal, and was the first female and first paediatric radiologist to be appointed the Royal College of Radiologists Roentgen Professor. She is Chairperson of the ESPR Child Abuse Taskforce, Convenor for the Skeletal Dysplasia Group for Teaching and Research and has been an expert witness for the courts in over 500 cases of suspected child abuse.

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## Abbreviations

ABC	Aneurysmal bone cyst
ACJ	Acromioclavicular joint
AFP	Alpha-fetoprotein
AIS	Anterior inferior iliac spine
ALL	Acute lymphoblastic leukaemia
ALTE	Apparent life-threatening event
AP	Anteroposterior
ARCO	Association Research Circulation Osseous
ARPKD	Autosomal recessive polycystic kidney disease
ASIS	Anterior superior iliac spine
AVN	Avascular necrosis
BBI	Button battery ingestion
BRUE	Brief resolved unexplained event
$\beta$ hCG	Beta human chorionic gonadotropin
CCAM	Congenital cystic adenomatoid malformation
CDH	Congenital diaphragmatic hernia
CF	Cystic fibrosis
CHD	Congenital heart disease
CLE	Congenital lobar emphysema
CLO	Congenital lobar overinflation
CMCJ	Carpometacarpal joint
CML	Classic metaphyseal lesion
CMV	Cytomegalovirus
CPAM	Congenital pulmonary airway malformation
CRMO	Chronic recurrent multifocal osteomyelitis
CSF	Cerebrospinal fluid
CT	Computed tomography
CTPA	Computed tomography pulmonary angiogram
DA	Ductus arteriosus
DDH	Developmental dysplasia of the hip
DGH	District General Hospital
DIOS	Distal intestinal obstruction syndrome
DJ	Duodenojejunal
DRUJ	Distal radioulnar joint

---

ED	Emergency Department
ESWL	Extracorporeal shock wave lithotripsy
ETT	Endotracheal tube
FCD	Fibrous cortical defect
FDG	Fluorodeoxyglucose
FGFR3	Fibroblast growth factor gene 3
FOOSH	Fall onto an outstretched hand
FRCR	Fellowship of the Royal College of Radiologists
GAS	Group A <i>Streptococcus</i>
GCT	Giant cell tumour
GI	Gastrointestinal
GP	General practitioner
HIV	Human immunodeficiency virus
HMD	Hyaline membrane disease
HME	Hereditary multiple exostoses
IJV	Internal jugular vein
IO	Intraosseous
ITU	Intensive therapy unit
IV	Intravenous
IVC	Inferior vena cava
LCH	Langerhans cell histiocytosis
MCDK	Multicystic dysplastic kidney
MIBG	Metaiodobenzylguanidine
MPR	Multiplanar reconstructions
MPS	Mucopolysaccharidosis
MRI	Magnetic resonance imaging
NAI	Non-accidental injury
NEC	Necrotising enterocolitis
NGT	Nasogastric tube
NICE	National Institute for Health and Care Excellence
NICU	Neonatal Intensive Care Unit
NOF	Non-ossifying fibroma
NRSTS	Non-rhabdomyosarcoma soft-tissue sarcoma
NSAID	Non-steroidal anti-inflammatory drug
OA	Oesophageal atresia
OCD	Osteochondral defect
OI	Osteogenesis imperfecta
OPG	Orthopantomogram
ORIF	Open reduction and internal fixation
PACS	Picture archiving and communication system
PDA	Patent ductus arteriosus
PET-CT	Positron emission tomography-computed tomography
PPB	Pleuropulmonary blastoma
pPNET	Peripheral primitive neuroectodermal tumour
PSIS	Posterior superior iliac spine

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PUJO	Pelviureteric junction obstruction
RCR	Royal College of Radiologists
RDS	Respiratory distress syndrome
RTA	Road traffic accident
SCBU	Special Care Baby Unit
SCFE	Slipped capital femoral epiphysis
SDD	Surfactant deficiency disorder
SH	Salter-Harris
SLE	Systemic lupus erythematosus
SPA	Suspected physical abuse
SPNBF	Subperiosteal new bone formation
ssp.	subspecies
SUFE	Slipped upper femoral epiphysis
TEF	Tracheo-oesophageal fistula (in the USA)
TFCC	Triangular fibrocartilage complex
TOF	Tracheo-oesophageal fistula (in the UK)
TORCH	Toxoplasmosis; Others (HIV, syphilis); Rubella; Cytomegalovirus; Herpes Simplex
UAC	Umbilical arterial catheter
UBC	Unicameral bone cyst
UK	United Kingdom
UVC	Umbilical venous catheter
VACTERL	Vertebral anomalies; Anorectal anomalies; Cardiac anomalies; Tracheo-oesophageal fistula; Renal/radial ray anomalies; Limb anomalies
VP	Ventriculoperitoneal
VR	Volume rendered
VSD	Ventricular septal defect





# Test 1

# 1

## 1.1 Images

Image 1



**Image 2**



Image 3



**Image 4**



Image 5

