British Society of Interventional Radiology

Paediatrics

BSIR Paediatric IR UK Meeting

Monday 18th May 2026

Austin Court, Birmingham, B1 2NP

Welcome

It's a pleasure to welcome you all to Birmingham again for Paediatric IR UK 2026. This meeting is a key event in the paediatric IR calendar, providing an opportunity for delegates to hear updates from experts on the latest advances in the field, develop strategies for service development, and take time to think about the non-clinical skills and the patients who are at the heart of what we do.

This year, we have a special focus on technology and devices - always one of the biggest challenges in paediatric IR. We're hoping to hear views from many of you in the feeding tube debate! We are also thrilled to have world-class speakers from beyond the IR world, bringing us their expertise and insights on topics from genetics advances in vascular anomalies, to the ethics behind our practice and communication with children and families. And I'm delighted that we have a dedicated session by, and for, allied health professionals this year - thank you to all those who have contributed to developing the session.

It has been immensely gratifying to have received very high-quality poster submissions again this year, confirming that there is a strong appetite across the country to explore the data and develop practice in paediatric IR. Thank you to all those who have taken time to submit their work and discuss their posters with us today.

It is wonderful to see representation from so many children's hospitals on the faculty list again. This meeting is a unique opportunity to meet others delivering paediatric IR around the UK and beyond, to make new connections and catch up with old friends. During the lunch break, we will be hosting the popular 'Trainee Corner' again, an opportunity for trainees to speak to each other and to consultant IRs who can give them some pointers on how to source training experience in the UK.

A big thank you to Alice Ashworth and Jins Kallampallil, the two trainee representatives in the BSIR PIR special interest group, who have created the quiz for us this year.

But most of all, thank you to all of you for choosing to spend today with us, and share your interest, expertise and passion for paediatric IR!

BSIR Paediatric IR UK Meeting Programme

Monday 18th May 2026

08:30 - 09:15 **Registration**

09:15 - 09:25 **Welcome & Opening Remarks**
Alex Barnacle & Nasim Tahir

09:25 - 10:30 **Zap, Map & Untangle: Vascular Anomalies**
Moderator: Alex Barnacle

- Bleomycin electrosclerotherapy
  Premal Patel
- Genetics: what the IR needs to know
  Maanasa Polubothu
- Lymphatic imaging and intervention
  Narayan Karunanithy

10:30 - 11:00 **Coffee**

11:00 - 12:20 **Our Favourite Toys: Confessions of Paediatric IRs**
Moderator: Siobhan Hoare

- Paediatric hybrid IR suite: one room, every option
  Ralph Gnannt
- Feeding tubes: the big debate
  Iwan Roberts & Rachael Watson
- My favourite device - Nasim Tahir
- My favourite device - Jeremy Jones
- My favourite device - Andy Healey
- My favourite device - Sam Byott

12:20 - 13:10 **Lunch & Trainee Corner**

13:10 - 13:50 **Industry Spotlight & Poster session**
Moderator: Sam Byott

BSIR Paediatric IR UK Meeting Programme

Monday 18th May 2026

13:10 - 13:50 **Dedicated AHP Session**
Moderator: Nasim Tahir

13:50 - 15:20 **Ethics, Empathy & Everyday IR**
Moderator: Sam Byott

- Ethical challenges in paediatric IR
  Joe Brierley
- Communicating with children and young people
  Cillian Gray
- A family's perspective: interview
  Premal Patel

15:20 - 16:00 **Beyond the traditional IR model**
Moderator: Leo Monzon

- Developing a PIR service: how we are doing it
  Chris Davis
- Expanding roles in PIR for AHPs
  Emma Rose

16:00 - 16:15 **Comfort Break**

16:15 - 16:50 **Things I Wish I'd Known**
Moderator: Alex Barnacle

- Things I Wish I'd Known - Andrea Bhardwaj
- Things I Wish I'd Known - Mark Phillips
- Things I Wish I'd Known - Ian McCafferty

16:50 - 17:00 **Closing Remarks & Poster Prize Presentation**
Moderator: Premal Patel & Sam Byott

Get ready to put your Paediatric IR brainpower to the test.....

OUR MUCH-LOVED QUIZ IS BACK BY POPULAR DEMAND!

It was a hit last year, and this time there's a surprise prize up for grabs. Details on how to enter will be revealed on the day, so bring your wits (and your competitive spirit!).

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Learning Objectives

Zap, Map and Untangle: Vascular Anomalies

Session Learning Objectives

1. To discuss the role of interventional radiology within evolving treatment pathways, including genetic and imaging considerations
2. To identify opportunities to expand local practice through advanced techniques and referral pathways

Bleomycin electrosclerotherapy

1. To describe the principles and indications for bleomycin electrosclerotherapy (BEST) in vascular anomalies
2. To outline patient selection and factors influencing treatment outcomes
3. To discuss integration of BEST into local treatment pathways

Genetics: what the IR needs to know

1. To describe the role of genetic testing in the classification of vascular anomalies
2. To outline how genetic findings influence clinical decision-making and management
3. To identify indications for referral for genetic evaluation

Lymphatic imaging and intervention

1. To describe lymphatic imaging techniques and their indications
2. To outline the role of interventional radiology in lymphatic disorders
3. To identify patients suitable for lymphatic intervention and referral

Our Favourite Toys: Confessions of Paediatric IRs

Session Learning Objectives

1. To describe devices and technologies used in paediatric IR practice
2. To discuss variation in practice and application of different tools in clinical scenarios
3. To identify opportunities to broaden practice through adoption of new techniques and technologies

Paediatric hybrid IR suite: one room, every option

1. To describe the principles and capabilities of hybrid CT angiography suites in paediatric IR
2. To discuss clinical applications and advantages over conventional imaging
3. To outline how hybrid CT angiography may support future service development

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Learning Objectives

Feeding tubes debate

1. To describe feeding tube options available in paediatric practice
2. To compare advantages and limitations of different devices
3. To identify factors influencing device selection

Favourite devices

1. To describe examples of devices commonly used in paediatric IR
2. To outline practical considerations in device selection and use
3. To identify tools and techniques transferable to individual practice

Industry Spotlight & Poster Session

Session Learning Objectives

1. To review how industry developments may support improved paediatric care
2. To identify key learning points from national experience presented in scientific posters

Ethics, Empathy and Everyday IR

Session Learning Objectives

1. To discuss ethical challenges in paediatric interventional radiology practice
2. To describe approaches to effective communication with children, young people and families
3. To recognise the impact of IR interventions on patients and families

Ethical challenges

1. To describe common ethical dilemmas in paediatrics
2. To outline frameworks for complex decision-making
3. To recognise factors influencing risk–benefit discussions

Communication with children and young people

1. To describe principles of communication with paediatric patients
2. To outline strategies for explaining procedures and risks in an age-appropriate manner
3. To identify approaches to managing challenging communication scenarios

Patient perspective

1. To recognise how patient perspectives inform communication and clinical practice

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Learning Objectives

Beyond the Traditional IR Model

Session Learning Objectives

1. To describe models of paediatric IR service delivery incorporating multidisciplinary roles
2. To discuss the contribution of radiographers and nurses to service delivery
3. To identify practical steps for developing and implementing enhanced workforce models within the NHS

Developing a PIR service

1. To describe key components required to establish a paediatric IR service
2. To outline challenges and solutions in NHS service development
3. To identify practical steps for implementing or expanding a local service

Expanding roles for AHPs

1. To describe current and potential roles of radiographers and nurses in paediatric IR
2. To discuss how extended roles support service delivery and patient care
3. To identify opportunities to implement extended roles locally

Things I Wish I'd Known

Session Learning Objectives

1. To discuss challenges encountered at different stages of an IR career
2. To describe strategies to support professional development and decision-making
3. To recognise approaches to avoiding pitfalls and accelerating career progression

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Faculty List

Alex Barnacle	Great Ormond St Hospital, London
Premal Patel	Great Ormond St Hospital, London
Maanasa Polubothu	Great Ormond St Hospital, London
Narayan Karunanithy	Evelina London Children's Hospital
Siobhan Hoare	Children's Health Ireland at Temple St
Ralph Gnnant	University Children's Hospital, Zurich
Iwan Roberts	Sheffield Children's Hospital
Rachael Watson	Birmingham Children's Hospital
Nasim Tahir	Leeds Children's Hospital
Jeremy Jones	Royal Hospital for Children, Edinburgh
Andy Healey	Alder Hey Children's Hospital
Sam Byott	Royal Manchester Children's Hospital
Joe Brierley	Great Ormond St Hospital, London
Cillian Gray	Great Ormond St Hospital, London
Chris Davis	Royal Manchester Children's Hospital
Emma Rose	Great Ormond St Hospital, London
Andrea Bhardwaj	Oxford Children's Hospital
Mark Phillips	Leeds Children's Hospital
Ian McCafferty	Birmingham Children's Hospital
Leo Monzon	Evelina London Children's Hospital

The Impact of the Interventional Radiology Clinical Nurse Specialist in Transforming Care for Paediatric Oncology and Palliative Patients

Author: Larriane Balinong

Background: Children undergoing cancer treatment or receiving palliative care often require interventional radiology (IR) procedures for diagnosis, symptom relief, and supportive therapies. These patients face complex clinical needs, emotional vulnerability, and frequent hospital encounters. Delays, fragmented communication, and inconsistent preparation can heighten distress and disrupt list flow. The Paediatric Interventional Radiology Clinical Nurse Specialist (IRCNS) role was introduced to improve coordination, enhance family support, and strengthen procedural reliability.

Aim: To evaluate how the IRCNS role improves hospital experience, emotional support, and IR list efficiency for paediatric oncology and palliative care patients.

Methods:

- Mixed methods service evaluation.
- Pathway mapping of oncology and palliative IR journeys.
- Retrospective review of list utilisation, cancellations, and delays.
- Qualitative feedback from families, oncology teams, palliative care teams, and IR staff.

Key Measures: pre-procedure readiness, symptom related complications, communication quality, and family reported experience.

Results:

1. Improved Patient & Family Experience. There is a reduced anxiety through consistent specialist contact, tailored preparation for complex symptoms and treatment regimens and enhanced emotional support for families during high stress procedures.
2. Enhanced Clinical Readiness. There is a proactive screening identified risks early, better alignment with oncology and palliative care plans and fewer same day cancellations due to symptom instability.
3. Optimised List Flow. There is a smoother coordination across IR, anaesthetics, and other teams, timely scheduling, reduced delays and improved list utilisation and clearer escalation pathways and reduced administrative burden for staff.

Conclusion: IRCNS role significantly improves both patient experience and operational efficiency for paediatric oncology and palliative care patients requiring IR procedures. By combining advanced clinical expertise with compassionate family support and robust pathways.

Clinical audit of Paediatric liver biopsies performed in a Children's hospital 2024-2025

Author: Alice Ashworth

Aims: The Royal College of Pathologists define an adequate liver biopsy sample as ≥20 mm in length with >10 portal tracts, typically obtained using a 16G needle. There is little to no formal guidance on the recommended technique and core requirements for paediatric liver biopsies, therefore a sizeable audit is needed to inform national guidance.

Materials and methods: A retrospective review was conducted of all paediatric liver biopsies performed at a tertiary children's hospital between 1 January 2024 and 31 December 2025. Patients were identified using a Paediatric Interventional Radiology dataset. The clinical records, procedure reports, pathology findings and clinic follow-up notes were analysed via the online patient records and recorded on a datasheet.

Results: A total of 291 biopsies were performed percutaneously under ultrasound guidance and general anaesthesia. All utilised a co-axial technique with an 18G core needle and tract plug. 48.8% contained >10 portal tracts and 9.3% had a core length ≥20 mm. Despite not consistently meeting adult adequacy thresholds, all samples were sufficient for histological diagnosis with no repeat biopsies required. Delayed complications occurred in 3.8% (11/291) of patients and included a small haematoma, hypotension, vomiting, and transient biochemical abnormalities, likely related to anaesthesia. Fever or sepsis occurred only in patients undergoing concurrent procedures, making biopsy-related causation less likely.

Conclusion: Paediatric liver biopsies performed using an 18G co-axial technique yield diagnostically adequate samples with a low complication rate, even when core adequacy criteria are unmet. Contribution to larger national audits are needed to fully inform paediatric-specific biopsy guidance.

Endovascular Management of Paediatric Varicocele: Technique and Outcomes from a Single Institution

Author: Bar Velan

Learning Points:

1. Varicocele is a common condition that may present in childhood or adolescence.
2. Early detection and treatment improved outcomes (symptom relief and preserve fertility).
3. Endovascular embolization has high success rates with lower recurrence rates in comparison with surgical ligation.

Background: Varicocele is a dilatation of the pampiniform plexus, resulting in retrograde flow within the testicular vein. This common condition may present during childhood with symptoms of pain and discomfort and, if untreated, can lead to testicular atrophy and infertility. Treatment options include surgical ligation and endovascular embolisation. Endovascular management has demonstrated a technical success rate exceeding 90%, with lower recurrence rates compared to surgical intervention (0–4% vs. approximately 11%).

Description of Findings / Procedure: Between 2018 and 2025, our institution performed 14 cases of testicular vein embolisation in paediatric patients aged 11–17 years (mean age: 14.6 years). Pre-procedural ultrasound was performed in 12 patients, demonstrating a mean varicocele diameter of 3.23 mm. Procedures were predominantly performed under general anaesthesia. Vascular access was via the right internal jugular vein, and a 4F catheter system was used to cannulate the left testicular vein. Venography identified dilatation of the testicular vein and collateral vessels. In most cases, superselective cannulation was achieved using a microcatheter system. Embolisation was performed using detachable coils, with 57% of cases utilising a combination of coils and sodium tetradecyl sulfate (STS). In one patient with prior failed surgical ligation, no reflux was demonstrated on venography; therefore, STS was used as a sole agent. The technical success rate was 100%. One minor complication occurred, involving extravasation from a small collateral vessel, which resolved with no further intervention.

Conclusion: Endovascular testicular vein embolisation is a safe and effective treatment in the paediatric population, demonstrating high technical success rates and low complication and recurrence rates.

Role of Bleomycin and Bleomycin Electro Sclerotherapy (BEST) in Complex Paediatric Vascular Malformations: A Single-Centre 18-Month Experience

Author: Amrin Israrahmed

Background: Paediatric vascular malformations often require minimally invasive management to reduce morbidity. Bleomycin sclerotherapy is widely used, while bleomycin electro sclerotherapy (BEST) may enhance efficacy in selective cases.
Aim: To evaluate our 18-month experience with bleomycin-based therapy in paediatric vascular malformations.
Materials and Methods: A retrospective review of 35 patients aged 6 months to 16 years was conducted. Lesions included 17 venous, 3 venolymphatic, and 15 lymphatic malformations. Distribution was cervicofacial (n=16), trunk (n=6), and extremities (n=13). All patients underwent intralesional bleomycin sclerotherapy; 12 with complex lesions received combined BEST treatment. Doses ranged from 500 to 10,000 IU (mode 5,000 IU). Outcomes were defined as excellent (>90% reduction), good (50–90%), and equivocal (<50%).
Results: Most patients showed reduction in lesion size and symptomatic improvement. BEST was mainly used for complex microcystic lesions and demonstrated encouraging responses. One patient developed a small area of skin breakdown, which responded well to conservative management. No major systemic complications were observed.
Conclusion: Bleomycin sclerotherapy, with selective use of BEST, is a safe and effective minimally invasive option for paediatric vascular malformations. Careful patient selection and dosing are crucial. Longer follow-up is required to assess long-term outcomes.

Transcranial venous sinus cannulation for embolisation of residual vein of Galen malformation – a hybrid approach

Author: Gilbert Gravino

Learning Points:
In the treatment of vein of Galen malformations:
1. A hybrid approach may be necessary for cases with bilateral internal jugular vein occlusions
2. Consider transverse sinus puncture over torcular puncture
3. Transvenous embolisation is a suitable alternative to transarterial embolisation
4. Preserving the Galenic venous pouch is likely associated with better outcomes

Background: Alder Hey Children's Hospital is one of only two centres in the UK commissioned to treat vein of Galen malformations (VOGM).
Procedure: The focus of this poster is on two patients with a VOGM, both with bilateral occlusion of the internal jugular veins (IJVs) and not amenable to further transarterial embolisation. These were treated with a hybrid approach involving direct open surgical access of the transverse sinus and transvenous selective endovascular embolisation of the malformation. In these cases, arterial feeders were selectively targeted from the venous route while preserving the main Galenic venous pouch. This retains venous drainage pathways which historically have been associated with overall better outcomes, and a decreased risk of venous infarction, haemorrhage, and consumptive coagulopathy. Both patients have been treated successfully with elimination and near complete occlusion of the high flow arteriovenous shunts.
Conclusion: While a staged transarterial approach is currently the preferred mainstay treatment for this malformation, transvenous embolisation is a suitable alternative when transarterial embolisation is not possible or deemed unsafe. In this context, the hybrid approach is applicable to particularly challenging cases involving bilateral occlusion of the IJVs, which is more common in delayed patient presentations.

Percutaneous Drainage in Paediatric Patients: A Four-Year Audit from a Tertiary Children's Hospital

Author: Lise Humbert

Aims: Paediatric interventional radiology is an expanding subspecialty offering minimally invasive alternatives to surgery. Image-guided percutaneous drainage is increasingly used to manage fluid collections and abscesses in children, reducing the need for operative intervention, general anaesthesia, and prolonged hospital stay. However, outcome data in paediatric populations remain limited. This medical-student led audit evaluated the safety, technical success, and clinical outcomes of these procedures at a tertiary paediatric centre.

Materials and Methods: A retrospective audit was performed of paediatric patients undergoing image-guided percutaneous drainage or aspiration at Leeds Children's Hospital between January 2022 and December 2025. Cases were identified via the radiology information system (CRIS) and electronic records (PPM+). Data collected included demographics, procedure type, imaging guidance, anaesthesia use, and outcomes. Technical success was defined as successful drain placement or aspiration. Clinical success was defined as resolution without surgical intervention.

Results: A total of 177 patients were included (mean age 7.9 years; male:female 99:78). Procedures comprised 115 drain insertions and 62 aspirations. Technical success was achieved in 175/177 cases (98.9%), with two failed drain placements. Clinical success occurred in 135/177 cases (76.3%). Repeat interventional procedures were required in 36 patients. Surgery was avoided in 129 patients (72.9%).

Conclusion: Image-guided percutaneous drainage and aspiration demonstrate high technical and clinical success in children. These findings support paediatric interventional radiology as a safe, effective alternative to surgery. Further multicentre studies are needed to strengthen the evidence base.

Role of Fractional Flow Reserve in Evaluating and Treating Complex Paediatric Reno-vascular Lesions

Author: Amrin Israrahmed

Learning Points:

- FFR provides functional assessment in addition to anatomical imaging.
- It helps identify lesions that truly require intervention, avoiding unnecessary procedures especially in paediatric patients.
- Post-intervention FFR measurement confirms procedural success and restoration of renal perfusion, especially in complex paediatric renovascular anatomy.

Background: Assessing the haemodynamic significance of renal artery stenosis in children can be challenging, particularly in complex anatomy or post-intervention scenarios. Fractional Flow Reserve (FFR) provides physiological assessment to guide intervention.

Description of Findings / Procedure: First. case is a 2-year 6-month-old girl with multiple co-morbidities and reno-vascular hypertension. Ultrasound Doppler suggested parvus-tardus waveform, and MR angiography showed high-grade right ostial stenosis, Baseline FFR was 0.8, measured under isosorbide dinitrate challenge. Balloon angioplasty (4 mm) was performed, resulting in post-procedure FFR of 1.0, no gradient, and angiographic resolution of stenosis.

Second case is a 7-year-old girl with Alagille syndrome, solitary left kidney, and complex vascular history including prior stenting, balloon angioplasty, and saphenous jump graft from aorta to renal artery. She presented with hypertension requiring three antihypertensives. CT angiography suggested in-stent stenosis with parvus-tardus waveform. Baseline FFR was 0.7. Cutting balloon angioplasty resulted in post-procedure FFR of 1.0, despite citrate challenge, and angiographic improvement.

Conclusion: FFR is a valuable tool for objectively assessing the haemodynamic significance of reno-vascular stenosis in children. It can guide the timing and extent of intervention and confirm procedural success beyond angiographic appearance, particularly in complex or recurrent lesions.

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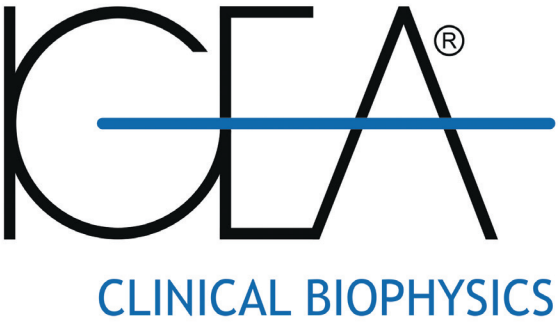

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