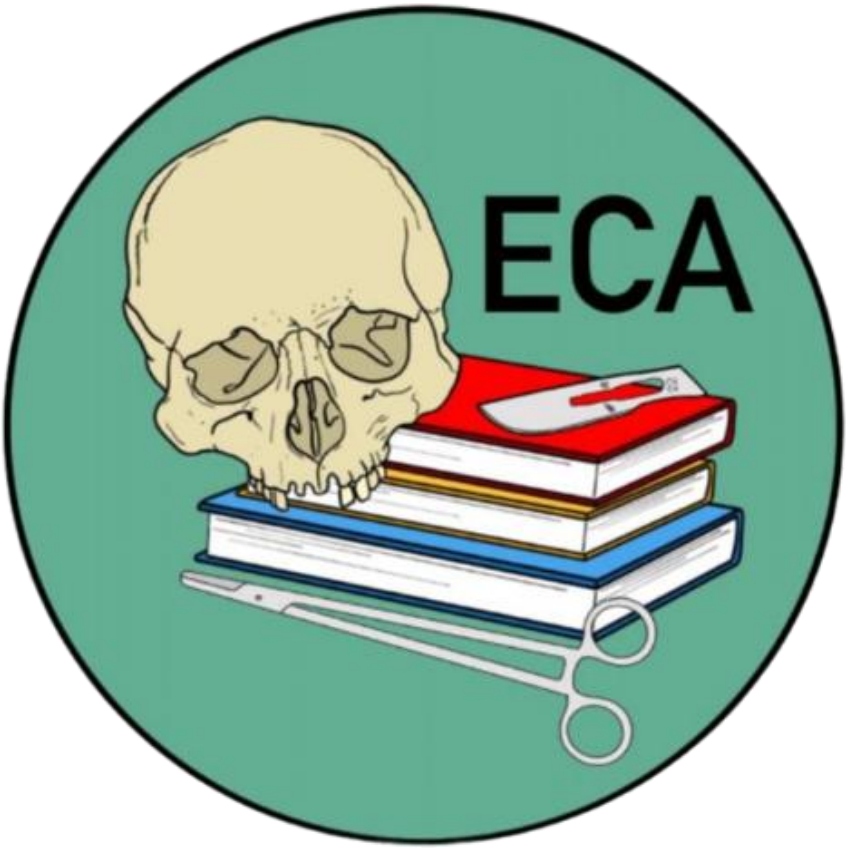


5th Early Career Anatomists Conference

3rd September 2026

Visualising Anatomy for A Sustainable Tomorrow

KENT AND MEDWAY MEDICAL SCHOOL

Canterbury Christ Church University

University of Kent

Hosted by Kent and Medway Medical School

Sponsored by

EDEN Guardian

Sponsored prizes provided by

4D Interactive Anatomy Vesalius Innovation Award by Karger Publishers

Cetra Health

ELEGOO

TeachMe Anatomy

NON SOLUS

ELSEVIER

General Information

Joining the Conference Online

Please ensure that you have a stable internet connection to enjoy the best possible conference experience. The **conference joining link will be sent directly to the email address you used to purchase your ticket.** Please keep an eye on your inbox for that email and use the link provided to access the event.

To help maintain the integrity and security of the conference, please do not share your joining link with anyone else. Please all join as a guest though the link provided to you.

For Presenters

Your joining link is unique to your email, so you must join using this link to be able to present. Again, please do not share this link with anyone else.
If you wish to practice sharing your slides before the conference begins, you will be able to do so from 8:15am – 8:40am.
Fanny Mozu-Simpson will act as timekeeper and will raise her hand to give you a warning for how much time you have left. Oral presentations will be provided with 5-minute and 1-minute warning. Bitesize will receive a 1-minute warning only. When time has lapsed the Chair will join back into the meeting to facilitate and questions from the audience.

Oral & Bitesize Presentations

There will be a short amount of time allocated for questions after each talk. If you have a question, please use the Q&A chat to add your question. A facilitator will read the questions out in the order that they appear in the chat. If we don't have enough time for all questions we can facilitate communication with presenters.

Poster Presentations

- Please use the allocated time to view the posters (the scheduled breaks and lunch break).
- A link will be shared at the start of the conference for you to view the posters. This link will direct you to a secure OneDrive folder that will contain all the posters for you to view.
- The link will remain active for the duration of the conference, after which it will be revoked.
- Please do not screenshot or take images of the posters as they may contain sensitive information and images.
- Please engage with poster presentations by asking questions using the Q&A function. Presenters will be able to answer questions here during the scheduled breaks.

Code of Conduct for Early Career Anatomists

The ECA group is committed to creating a safe, welcoming space where the differences of all members and participants cohabit, are respected and celebrated to ensure everyone can share their enthusiasm and curiosity for the anatomical sciences.
Our events provide a friendly forum in which to share information and knowledge and discuss the challenges and opportunities facing our industry. We encourage open discussions and debate, balanced with respect and consideration; therefore, we expect this to be reflected throughout your interaction with the community.

The ECA Committee is dedicated to providing a harassment-free experience for everyone interested in anatomical education, research and scholarship regardless of:

- gender identity
- sex characteristics
- sexual orientation
- age
- mental or physical ability/impairment/illness
- belief system (or lack thereof)
- ethnicity and nationality
- partnership status and circumstance (or lack thereof)
- pregnancy and family status
- economic background

All participants at ECA events must agree with the following code of conduct, whose purpose is to set out standards of behavior expected from individuals in the ECA community.

DO:

- treat others equally and fairly, without prejudice or bias
- promote relations with people involved in the ECA community that are based on openness, honesty and respect
- consider how you behave and use appropriate language (verbal and physical) when talking to, about, or in front of any individual involved in ECA or out with the community; ensuring it is not offensive, insensitive, sarcastic, derogatory or discriminatory
- challenge unacceptable and inconsiderate behavior which has the potential or causes harm/distress of any kind, reporting any concerns or breaches of this Code.

Violation of these rules may result in participants being investigated and potentially resulting in individuals being removed from the community without a refund at the discretion of the ECA Committee.
If any person believes that they have been subject to harassment, bullying or discrimination, please contact the President, Dr Jo Tomlinson (j.tomlinson@bristol.ac.uk), and Equality, Diversity and Inclusion Officer, Mx Alex Impedovo (aleximpedovo@gmail.com) as soon as possible. Any complaint will be investigated promptly.
If you have any questions or concerns, feel free to contact the Equality, Diversity and Inclusion Officer, Mx Alex Impedovo (aleximpedovo@gmail.com).

Early Career Anatomists 5th Annual Conference Thursday 3rd September 2026		
TIME	**CONTENT**	
08:45 - 09:00	*Arrival, Networking and Registration*	
09:00 - 10:55	**SESSION 1: Creativity for Sustainability**	
09:00 - 09:10	**Olivia France: Conference Chair** Welcome & Housekeeping	
09:10 - 09:35	**Chris Holland: Founding Dean, Kent and Medway Medical School** Inception of KMMS - Visualising Anatomy in a New Medical School	
09:35 - 09:55	*Ice breaker*	
09:55 - 10:25	**Invited Speaker: Victoria McCulloch** The Future of Medical Art in Anatomy Education	
10:25 - 10:40	**Thaarabi Tharmapathy: Queen Mary University London** Jelly Phantom Use in the Development of Spatial Skills and Confidence in Ultrasound Teaching	
10:40 - 10:55	**Asma Fatima: University of Nottingham** Clinical Implications of Coeliac Trunk and Hepatic Artery Variants in Orthotopic Liver Transplantation: Systematic Review with a Morphometric Cadaver Study	
10:55 - 11:15	***Break & Poster Presentations***	
11:15 - 12:20	**SESSION 2: Digital & Physical Visualisation in Anatomy Education**	
11:15 - 11:30	**Ramada Khasawneh: Qatar University** Medical Students' Perceptions on the Use of Anatomage Table in Anatomy Education: A Large Cross-Sectional Study Highlighting Domain-Dependent Effectiveness	
11:30 - 11:45	**Lois Holt: University of Lancashire** An Accessible Low-Cost Visual Pathway Model to Enhance Spatial Understanding in Early Medical Education	
11:45 - 12:00	**Jitendra Yadav: University of Birmingham** Hands-on versus passive learning in anatomical visualisation: a comparative study across osteology, histology, and embryology in first-year medical students	
12:00 - 12:15	**Anthony Bright: University of Nottingham Medical School** Anatomy in Sports Science: Increasing 3D spatial awareness through tactile bespoke models	
12:15 - 12:20	**Karpagam Krishnamoorthy: Swansea Medical School** Visualising Engagement Through Multi-Rotation Anatomy Teaching in Graduate Entry Medicine	
12:20 - 12:50	***Lunch & Posters Presentations***	
12:50 - 14:40	**SESSION 3: Innovating for a Sustainable Tomorrow**	
12:50 - 13:35	**Workshop 1:** **Anatomy Careers: Looking beyond the ladder** *Leia Boote (University of Leeds) &* *Dr Jo Tomlinson (University of Bristol)*	**Workshop 2:** **Unlocking Anatomy: Designing Educational Escape Rooms for Engaging Learning** *Olivia France (Kent and Medway Medical School)*
13:35 - 13:40	Welcome back & Introduction to talks	
13:40 - 14:10	**Invited Speaker: Dr Ourania Varsou** From Anatomical Atlases to Generative AI: Innovating Sustainable Futures in Anatomy Education	

14:10 - 14:25	**Vanessa Nhara: Kent and Medway Medical School** Choosing the right 3D printing method for anatomical education: A reflective comparison of FDM and resin printing
14:25 - 14:40	**Oliver Sweeney: University of Leicester** Medical students' beliefs about whole body donation after engaging with cadaveric material: A scoping review
14:40 - 14:55	***Break, Poster Presentation***
14:55 - 16:05	**SESSION 4: Perspectives on a Sustainable Future in Anatomy Education**
14:55 - 15:55	**Panel Discussion** Building a Sustainable Tomorrow: Dissecting Sustainability **Dr Earle Abrahamson: University of Hertfordshire** **(Dr Rocky Cheung: King's College London** - has contributed answers virtually) **Harry Miles: Imperial College London** **Nishta Naik: London Anatomy Office** **Dr Anna Romito: formerly Kent and Medway Medical School**
15:55 - 16:05	**Andrew Marken: ECA Outreach Officer** ECA Outreach Scheme
16:05 - 16:25	**ECA Updates, Prizes, Handovers, Thanks & Close**

ECA 2025 Conference Committee

Conference Officer & Programme Lead
Leia Boote (she/her)
Surgical Training Programme Manager, University of Leeds

Deputy Conference Officer
Jemima Chukwu (she/her)
Anatomy Demonstrator, University of Birmingham

ECA Communications Chair & Social Media Lead
Fanny Mozu-Simpson (she/her)
Senior Teaching Fellow, Imperial College London

Finance Chair & ECA Deputy Treasurer
Harry Miles (he/him)
Senior Teaching Fellow and Head of Anatomy, The Pears Cumbria School of Medicine

ECA President
Dr Jo Tomlinson (she/her)
Lecturer in Anatomy, University of Bristol

Local Committee at Kent and Medway Medical School

Conference Chair & Lead Organiser
Olivia France (she/her)
Lecturer in Anatomy, KMMS

Annie Mettle (she/her) *(Teaching Fellow in Anatomy, KMMS)* – Conference Co-Chair

Vanessa Nhara (she/her) *(Lecturer in Anatomy, KMMS)* – Conference Co-Chair

Workshops

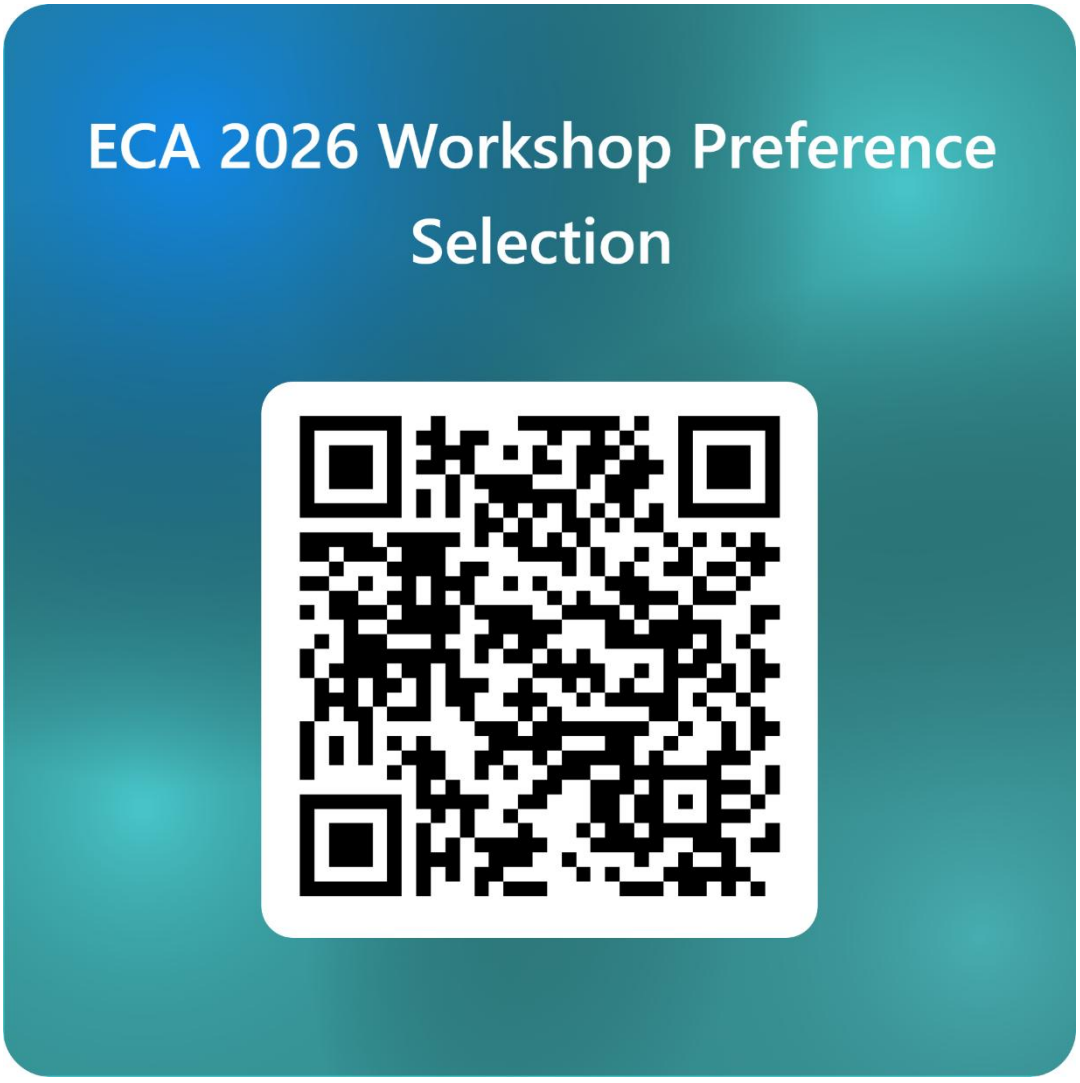
Workshop Preferences

Before the workshop takes place please complete the following form to highlight your preference on which workshop you would like to attend.

Please note that there are limits on the capacity for each and we cannot guarantee you will be allocated to the workshop you prefer.

Please fill in the form using the link or QR code here:

ECA 2026 Workshop Preference Selection - Fill in form



Workshop 1

Anatomy Careers: Looking Beyond the Ladder

Workshop leads:

Leia Boote (she/her)
University of Leeds

Dr Jo Tomlinson (she/her)
University of Bristol

Workshop Description:

This workshop brings together two anatomists: **Leia Boote** and **Dr Joanna Tomlinson**, with similar beginnings who have taken two different pathways in the field. The workshop will explore the variety of careers in anatomy that you have not considered beforehand, share advice on choosing the path that is right for you.

Workshop 2

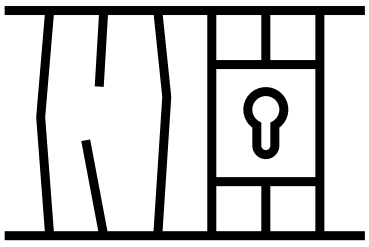
Unlocking Anatomy: Designing Education Escape Rooms for Engaging Learning

Workshop lead:

Olivia France (she/her)
Kent and Medway Medical School

Workshop Description:

This interactive workshop will introduce you to the principles of educational escape room design and showcase examples of anatomy-themed escape room activities.
Following a brief overview of the educational rationale and key design considerations, participants will work collaboratively to create their own anatomy-based escape room puzzles and challenges. This workshop will be run by **Dr Olivia France.**



Keynote Speakers

Victoria McCulloch (she/her)

Lecturer in Anatomy

University of Edinburgh

The Future of Medical Art in Anatomy Education

Victoria McCulloch has been a Lecturer in Anatomy at the University of Edinburgh for the last 9 years, alongside working as a Freelance Medical Illustrator for over 13 years. Victoria undertook her undergraduate degree in Anatomical and Physiological Sciences, followed by an MSc in Medical Art, both at the University of Dundee. To help further her passion for communicating anatomy through art, Victoria graduated with an MSc in Medical Visualisation from Glasgow School of Art in 2016.

Alongside teaching, Victoria's research interests are focused on arts-based learning and the integration of technology; 3D printing, 3D scanning and augmented reality, into anatomy education. Victoria uses her research to understand how technology and medical art can be utilised to create more accessible teaching resources, particularly for visually impaired individuals.

Dr Ourania Varsou (she/her)

Senior Lecturer

University of Glasgow

From Anatomical Atlases to Generative AI: Innovating Sustainable Futures in Anatomy Education

Dr Ourania Varsou is a medically-qualified Senior Lecturer in Anatomy at the University of Glasgow, where she leads curriculum innovation across bioscience, medical and dental programmes. She is the POCUS and Anatomy Director at Ballater Medical and serves as the MVLS College Ethics Committee Vice Chair at her home institution. She also holds leadership roles within the Royal Society of Edinburgh's Young Academy of Scotland as Exchange Grant Challenge Lead and Advisory Group Chair. Her research focuses on generative AI in higher education, ultrasound imaging and humanities in healthcare/biosciences. A strong advocate for inclusive, creative and active technology-informed pedagogies, Dr Varsou promotes interdisciplinary and transdisciplinary teaching approaches across sectors.

Oral & Bite-size Presentation Abstracts

1. Jelly Phantom Use in the Development of Spatial Skills and Confidence in Ultrasound Teaching

Thaarabi Tharmapathy, Ky-Leigh Ang, Tamra Nathan, Geetika Ail, Paula Vickerton
Queen Mary University London, United Kingdom

Background
Point-of-care ultrasound (POCUS) is an increasingly important component of undergraduate anatomy teaching; however, novice learners often struggle to translate two-dimensional ultrasound images into accurate three-dimensional mental models. This study evaluates whether use of a low-cost abstract jelly phantom improves spatial reasoning and confidence during introductory ultrasound teaching, helping students better contextualise the interpretation of cross-sectional imaging.

Methods
A service evaluation was conducted during a Year 1 MBBS anatomy revision session. Students were randomly allocated to either a phantom or control group. Both groups received faculty-led ultrasound teaching and scanned upper or lower limb structures of volunteer participants using handheld ultrasound devices. The intervention group additionally utilised a jelly phantom containing concealed dried pasta shapes designed to encourage interpretation of depth, density, and orientation on ultrasound imaging.

Pre- and post-session questionnaires assessed confidence and spatial reasoning using Likert-scale and image-based questions. Quantitative data will be analysed using Wilcoxon signed rank test and descriptive statistics, while qualitative responses will undergo thematic analysis using the Braun and Clarke framework.

Results
Data collection is ongoing. We hypothesise that students using the phantom will demonstrate greater improvement in spatial reasoning scores, while both groups will report increased confidence with ultrasound interpretation following the session.

Conclusions
This study explores a novel, low-cost educational intervention to support early ultrasound interpretation skills in anatomy teaching. Abstract jelly phantoms may provide an accessible method for helping early growth of anatomical knowledge cross-sectional imaging, supporting future clinical application and informing integration of evidence-based POCUS teaching within undergraduate medical curricula.

2. Clinical Implications of Coeliac Trunk and Hepatic Artery Variants in Orthotopic Liver Transplantation: Systematic Review with a Morphometric Cadaver Study

Asma Fatima, Dr Sadia Wazir Khan
University of Nottingham, United Kingdom

The anatomical variations of the coeliac trunk (CT) and hepatic arterial system are of clinical relevance in orthotopic liver transplantation (OLT). Whilst vascular variation has been extensively described, evidence relating the impact of variation on OLT outcomes is more limited. A systematic review was carried out to examine the relationship between the CT and hepatic arterial systems and their relationship to postoperative outcomes following OLT. A qualitative synthesis of the selected studies was carried out along with a morphometric data collection from 16 donor specimens (n=9 males and n=7 females) to investigate the relationship between the CT and hepatic vessels. Donor hepatic arterial variation was not found to be an independent risk factor for hepatic artery thrombosis, graft loss or mortality. However, when variation necessitated complex arterial reconstruction such as multiple anastomoses, long graft arteries, bench reconstruction and alternative inflows, variation was found to be consistently associated with early arterial complications. The cadaveric study showed that classical arterial formations (Uflacker's Type I) were found in 62.5% of cadavers, and Type II in 12.5%. Other unclassified variants included a dorsal pancreatic artery arising from the CT. Mean CT length was 21.0 ± 5.8 mm, mean CT diameter 17.3 ± 4.9 mm, and mean CHA diameter 16.5 ± 3.7 mm. A significant positive correlation was identified between CT and CHA diameters ($r = 0.59$, $p = 0.017$). These findings highlight the importance of preoperative vascular assessment and surgical planning in OLT.

This work was undertaken at a Human Tissue Authority (HTA) maintained facility at the University of Nottingham (License Number: 12085). All donor material and associated data were managed in compliance with HTA standards, including appropriate consent, confidentiality, and data protection procedures.

3. Medical Students' Perceptions on the Use of Anatomage Table in Anatomy Education: A Large Cross-Sectional Study Highlighting Domain-Dependent Effectiveness

Ramada Khasawneh, Ejlal Abu-El-Rub, Fatimah A. Almahasneh, Ayman G. Mustafa
Yarmouk University, Irbid, Jordan
QU Health, Qatar University, Doha, Qatar

The Anatomage Table is an advanced life-sized three-dimensional virtual dissection platform increasingly integrated into anatomy education; however, large-scale evidence regarding student perceptions remains limited. This analytical cross-sectional study evaluated medical students' perceptions of the educational effectiveness, usability, and applicability of the Anatomage Table across anatomical disciplines and body systems. A validated 19-item questionnaire was completed by 3,758 medical students from Jordanian medical schools with prior exposure to the Anatomage Table. Overall perceptions were highly positive, with 72.6% reporting ease of use, 86.3% indicating improved understanding of anatomical concepts, 77.8% reporting enhanced memorization, and 96.8% describing a more enjoyable learning environment. Most participants supported integration of the Anatomage Table into anatomy practical sessions and preferred a blended approach combining virtual and traditional teaching methods. Acceptance varied substantially across anatomical domains. Gross anatomy demonstrated the highest perceived suitability (87.1%), followed by neuroanatomy (63.7%), whereas histology (38.1%) and embryology (27.5%) received considerably lower ratings. Among body systems, gastrointestinal anatomy showed the highest perceived suitability (96.0%), while endocrine anatomy showed the lowest (21.7%). Students generally viewed the Anatomage Table as a complementary educational tool rather than a replacement for conventional anatomy teaching. These findings suggest that the educational value of the Anatomage

Table is domain-dependent and greatest when implemented within a blended learning framework. Ethics approval was obtained from the Institutional Review Board of Yarmouk University (IRB/125/2025)

4. An Accessible Low-Cost Visual Pathway Model to Enhance Spatial Understanding in Early Medical Education

Caitlynn Hudlow and Lois Jane Holt
University of Lancashire, United Kingdom

Anatomy students frequently struggle with the three-dimensional spatial organisation of the visual pathway, particularly in relation to visual field representation. Traditional lecture-based approaches relying on two-dimensional diagrams may increase cognitive load and limit integration of anatomical knowledge within clinical contexts, contributing to difficulty interpreting visual field deficits. This project aimed to develop and implement an interactive low-cost learning activity to enhance student engagement with and understanding of visual pathway anatomy. A hands-on model was developed using paper templates and colour-coded pipe cleaners to represent retinal fibres. Students first mapped visual field information onto retinal quadrants to reinforce understanding of light refraction before tracing fibres through the optic nerve, optic chiasm, optic tract, lateral geniculate nucleus of the thalamus and occipital cortex. The activity was delivered to second-year MBBS students during an in-person anatomy laboratory session with staff support. Initial informal feedback suggested increased student confidence in describing the visual pathway and improved understanding of lesion-related visual field deficits. High levels of student engagement were observed. Formal evaluation is planned, pending ethical approval. This accessible, low-cost approach supports active learning of a complex neuroanatomical concept and may improve integration into clinical practice. The model is scalable and transferable across anatomy education settings.

5. Hands-on versus passive learning in anatomical visualisation: a comparative study across osteology, histology, and embryology in first-year medical students

Jitendra Singh Yadav
University of Birmingham, United Kingdom

Anatomical education depends heavily on the development of visualisation skills, yet teaching remains largely text and image based. This study evaluated the effect of hands-on learning compared with passive study methods on anatomical visualisation across osteology, histology and embryology.

This study was conducted at Dr BSA. Medical College, New Delhi, India, during the author's tenure at the institution. A total of 100 first-year MBBS students were divided into two groups: Group A (passive learning, n=50) and Group B (hands-on learning, n=50), further organised into five subgroups of ten students each to encourage peer discussion. Three structured one-hour learning sessions were conducted on separate days covering osteology (humerus and lumbar vertebrae with nerve relations), histology (epithelium identification using microscope-based slides), and embryology (midgut development using clay modelling and 3D models).

Group A used textbooks and labelled images, while Group B engaged in direct manipulation of bones, active slide examination, and model construction. Following each session, students completed a ten-item MCQ test and a structured feedback questionnaire assessing perceived visualisation ability.

Group B consistently demonstrated higher MCQ scores across all three domains, with the greatest improvement observed in embryology. Students in the hands-on group also reported improved spatial understanding and greater confidence in visualising anatomical structures in three dimensions.

The findings suggest that hands-on learning significantly enhances anatomical visualisation compared with passive methods. Integration of tactile and interactive approaches into small group teaching and self-directed learning may strengthen spatial understanding in undergraduate anatomy education.

Ethical approval – This study utilized dry human bones, microscopes, histology slides and embryology models from the existing institutional teaching collection. No new human remains were obtained. In accordance with institutional guidelines, formal ethical approval was not required for research conducted on these existing teaching specimens.

6. Anatomy in Sports Science: Increasing 3D spatial awareness through tactile bespoke models

Anthony Bright, Natasha Noel-Barker, Rudolf Billiter-Clark
University of Nottingham Medical School at Derby, Nottingham, United Kingdom

Traditional anatomy education often relies on passive learning and rote memorisation, which may limit students' ability to apply anatomical knowledge to dynamic, functional contexts. The approach implemented at the University of Nottingham's undergraduate Sports and Exercise Science programme involves an active, model-based approach to anatomy teaching designed to aid spatial learning. Over 18 months, students participated in fortnightly two-hour workshops in which small groups (2–4 students) constructed bespoke joint models, simulating musculature with wax, velcro elastics and rubber bands onto modified skeletons. Human cadaveric prosections and a 3D digital atlas served as reference materials. Instruction emphasised guided inquiry over didactic content delivery allowed students to understand and be assessed using cross-sectional imaging, testing high levels of understanding. Every third session was led by a sports medicine clinician, integrating clinical cases and ultrasound imaging. Qualitative feedback and consistent high attendance indicated that active model construction facilitated incidental acquisition of anatomical terminology, reducing reliance on rote memorisation. Positive feedback extended to graduates entering postgraduate programmes in physiotherapy and medicine, as well as their subsequent anatomy educators. Despite open-book and AI-permitted conditions, summative assessments effectively differentiated students by engagement level, likely due to the synthesis demands of examination questions which tested understanding over pure memory. An inquiry-based, model-construction approach fosters deep functional understanding of musculoskeletal anatomy and prepares students for clinical and applied contexts. This method may offer a transferable framework for anatomy education in allied health and exercise science programmes.

This study’s methods were ethically approved by the University of Nottingham HTA licence.

7. Visualising Engagement Through Multi-Rotation Anatomy Teaching in Graduate Entry Medicine

Dr Karpagam Krishnamoorthy, Dr Marcela Bezdickova, Dr Samuel Webster, Dr Chris Summers
Swansea Medical School, United Kingdom

Maintaining student engagement during anatomy teaching within intensive Graduate Entry Medicine (GEM) programmes can be challenging, particularly during prolonged large-group sessions. There is increasing interest in sustainable and student-centred teaching approaches that enhance visualisation, interaction, and clinical integration within anatomy education. A multi-rotation anatomy teaching approach was introduced for Year 1 and 2 GEM students at Swansea University Medical School. Instead of a single extended teaching format, students rotated through multiple anatomy learning stations focused on the same anatomical region. The stations incorporated cadaveric and prosection-based learning, gross anatomy, radiology integration, clinical application, and self-directed learning. This approach aimed to promote active participation, improve attention span, and encourage students to visualise anatomical concepts through varied educational modalities. Informal educator observations and student interactions suggested increased engagement, discussion, collaborative learning, and improved appreciation of clinical relevance during the sessions. The multi-rotation structure also provided a practical model for delivering integrated anatomy teaching within large student cohorts while encouraging sustainable and adaptable educational practice. Future directions include formal evaluation through structured student feedback and exploration of the impact of this teaching strategy on student engagement and perceived learning outcomes within anatomy education.

Acknowledgements: No external funding was received for this work. The author declares no conflict of interest.

8. Choosing the right 3D printing method for anatomical education: A reflective comparison of FDM and resin printing

Vanessa Nhara
Kent and Medway Medical School, United Kingdom

Three-dimensional (3D) printing is increasingly used within anatomical education to support spatial understanding, tactile exploration, and student-focused learning of complex structures. Within a student selected component at Kent and Medway Medical School, FDM printing was used as a practical introduction to designing and producing anatomical models for teaching and revision. The process worked well for introducing students to digital model preparation, printing and the potential of 3D printed resources. However, reflections also identified limitations in the anatomical accuracy and general detail achievable with FDM when exploring intricate structures. These reflections raised an important practical question: how do we choose the right printing method for the anatomical detail we are trying to teach?

FDM remains valuable for its low-cost and ease of accessibility, but high-resolution resin printing may offer advantages where FDM lacks. This presentation aims to explore and compare FDM and resin printing for anatomical education by considering where each method may be best matched to different anatomical learning objectives. Rather than positioning resin as a replacement for FDM, this presentation suggests a complementary approach: FDM is useful for larger, accessible teaching models, while resin may be better suited to smaller anatomical structures where fine detail matters.

Ethics statement: This presentation does not report formal educational research data, identifiable student information, direct student quotations or student outcome data. The SSC is discussed as reflective teaching practice to inform future teaching development.

9. Medical students' beliefs about whole body donation after engaging with cadaveric material: A scoping review

Oliver Sweeney, Lucy Easton, Oliver Burton, Aqua Asif and Steven Jacques
University of Leicester, United Kingdom
University of Plymouth, United Kingdom
University Hospitals Plymouth NHS Trust, United Kingdom
University College London, United Kingdom

Despite advances in anatomical education, many schools continue to use body donors as the principal resource. Medical students exposed to cadaveric material have insight into the treatment and importance of donors. Applying the Theory of Planned Behaviour, students' attitudes, subjective norms and perceived behavioural control are likely to shape their future discussions about body donation, making this an important population to study. This study aimed to map beliefs of medical students, exposed to cadaveric material, about voluntary body donation for medical education. Originally registered as a systematic review, full text screening revealed data better suited to a scoping review, with varying study designs and result formatting. Two independent reviewers conducted the screening, with conflicts resolved via discussion including a third reviewer. A taxonomy of themes was developed iteratively alongside a custom data extraction tool. Following the removal of duplicates, 927 citations were identified for screening using title and abstracts only, with 126 being reviewed using full texts. From the 41 included publications, 18 themes were identified, along with willingness to donate one's own body or support the donation of family members or strangers. The findings map an international landscape of medical students' beliefs. Most significantly, no study included student preparedness or willingness to converse with patients about body donation. By exploring this further, medical schools have the opportunity to equip students with the confidence and knowledge needed to converse with patients, a step paramount for securing the future of whole body donation for medical education.

Poster Presentation Abstracts

P1. A Module Based Annotated Cadaveric Image Bank Supporting Self-Directed Anatomy Learning in Year 1 and 2 of Undergraduate Medical Education.

Annie Mettle
Kent and Medway Medical School, United Kingdom

Anatomy teaching around Thiel-embalmed cadaveric dissection can be constrained by limited lecture time and difficulty visualising structures during dissection, particularly for novice learners. To address this, an annotated cadaveric image bank was developed as a self-study resource for Year 1 and Year 2 medical students, structured by module and delivered via PowerPoint on a SharePoint platform accessible to all students. Each image was labelled and cross-referenced with question and answer documents, allowing independent revision outside timetabled sessions. Every anatomy lecture across the curriculum is represented, with additional focus on structures students most frequently found difficult to identify. Following peer review, the resource was revised to include schematic annotations and orientation abbreviations (for example anterior, lateral), improving clarity for students less familiar with cadaveric anatomy. A colleague has since joined the project as an ongoing reviewer and contributor, supporting quality assurance and content development. Informal feedback, gathered during dissection, lectures, and standard end-of-module evaluation, has been positive, with students reporting improved confidence in structure identification. Planned development includes a QR-code-linked version incorporating clinical vignettes, requiring engagement with a broader range of stakeholders. This project demonstrates a sustainable, low-cost model for embedding cadaveric self-study resources within a medical curriculum.
All cadaveric images were obtained and stored under Canterbury Christ Church University's Human Tissue Authority licence (12706) and institutional imaging consent processes; a rights form was completed for each photograph against existing consent records, and images were held on a restricted-access drive available only to the anatomy team prior to inclusion.

P2. Association Between Polycystic Ovary Syndrome and Musculoskeletal Complications in Nigerian Women: A Systematic Review

Benedict Abiola Falana and Opeyemi Samson Adeleke
Brighton and Sussex Medical School, United Kingdom
Osun State University, Osogbo Osun State, Nigeria

Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age and is increasingly recognised as a multisystem condition with reproductive, metabolic, and musculoskeletal consequences. In Nigeria, the burden of PCOS appears to be rising alongside urbanisation, obesity, sedentary lifestyles, and other metabolic risk factors. This systematic review examined the association between PCOS and musculoskeletal complications among Nigerian women. Relevant studies published between 2000 and 2025 were identified through electronic databases, including PubMed, Scopus, African Journals Online (AJOL), Google Scholar, and Web of Science. Eligible studies included observational studies, hospital-based studies, clinical trials, and systematic reviews that explored musculoskeletal manifestations in women with PCOS in Nigeria or related African populations.

The evidence reviewed suggests that Nigerian women with PCOS may be at increased risk of several musculoskeletal complications, including altered bone mineral density, chronic musculoskeletal pain, obesity-related joint disorders, skeletal muscle dysfunction, reduced physical activity, and vitamin D deficiency. Although hyperandrogenism in PCOS may have some anabolic effects on bone and muscle, these potential benefits are often outweighed by insulin resistance, obesity, chronic low-grade inflammation, and hormonal imbalance, all of which contribute to musculoskeletal morbidity. Sedentary behaviour and poor nutrition may further worsen these outcomes.

Overall, this review underscores the need for earlier diagnosis and more comprehensive management of PCOS to reduce long-term musculoskeletal complications. Multidisciplinary care involving endocrinologists, gynaecologists, physiotherapists, nutritionists, and other healthcare professionals is essential to improving the health and quality of life of Nigerian women living with PCOS.

Keywords: Polycystic ovary syndrome, Nigerian women, musculoskeletal complications.

P3. Beyond Traditional Teaching Method: Evaluating a 3D Printed Extraocular Muscle Teaching Tool

Sofia Christodoulou, Ammarah Akram and Vanessa Nhara
Kent and Medway Medical School (KMMS), United Kingdom

Understanding the extraocular muscles of the eye without an interactive model can make anatomy learning challenging for students. Few commercially available anatomical models allow learners to actively demonstrate the actions of the extraocular muscles. 3D printing allowed us to fill this gap and make a customised, upgraded eye model with accurate functional abilities that allow multi-modal learning. This process began with selecting a commercially available extraocular muscle model file. Print settings, including layer height and infill density, were adjusted to improve the model's durability, stability and functional movement during demonstration. We used polylactic acid (PLA) to print our model as it is environmentally friendly and cost-effective. The model was successfully printed and assembled; however, we encounter some constraints. These included vertical movement constriction due to an oversized pupil, difficulties with slicing software and differences in file scaling and print dimensions. We managed to overcome these issues through iterative refinement and problem-solving. Overall, the model is functionally accurate to the anatomical movements of the extraocular muscles, however prosections are more aesthetically precise. 2D diagrams lack depth and visualisation and plastic models are static and expensive. The model enables learners to visualise the relationship between extraocular muscle contraction and eye movement through active manipulation allowing for kinaesthetic and tactile capabilities. Our model has the potential to serve as an adjunct to anatomy teaching to visualise the complex spatial relationships and muscle actions. However, there has been no measured educational outcome and so this is a potential future direction for our project.

P4. Bridging High-Fidelity 3D Workflows and Sustainable Modular Design: A Translational Gynaecological Simulation Ecosystem for Surgical Training

Laura Aracelly Bonilla Rivera
Universidad del Valle, Cali, Colombia

Traditional anatomical education and gynaecological surgical training often face significant trade-offs between tactile physical fidelity, accessibility, and economic sustainability. To address this clinical need, this work presents an interdisciplinary methodology integrating high-fidelity digital 3D workflows with modular industrial design to create an accessible, tactile gynaecological simulation ecosystem for higher education and training. Grounded in clinical requirements and iterative feedback from surgical professionals and medical trainees, complex female pelvic and soft-tissue anatomy was modelled using parametric digital sculpting tools and structured into a high-precision digital asset hierarchy. The virtual models were translated into physical training tools using a hybrid manufacturing strategy—combining FDM/SLA 3D printing for structural scaffolding with modular, reusable silicone molding for soft-tissue replication. The resulting modular assembly enables accurate spatial, tactile, and visual representation of gynaecological clinical anatomy while offering a modular architecture where worn or damaged components can be individually replaced. This approach significantly lowers production and maintenance costs compared to traditional commercial simulators, promoting a sustainable management model for educational technical resources. Furthermore, these high-fidelity 3D assets serve a dual purpose: providing photorealistic visual aids for immersive digital learning environments and physical, hands-on platforms for procedural training. By bridging the gap between digital modelling, translational anatomy, and sustainable product design, this framework demonstrates how user-centered industrial design can democratize access to advanced gynaecological simulation, enhancing clinical visualization and procedural confidence for future healthcare professionals.

P5. Digital anatomy Tables vs Cadaveric Dissection: A Comparative Review of Visualisation, Learning Outcomes, and Pedagogical Value in Higher Education

Ziggy Sumner Ajibode and Holly Swales
University of Leeds, United Kingdom

Visualisation is at the heart of anatomy education, from the classroom to the operating theatre, owing to what it provides for the foundations of spatial reasoning and clinical understanding. Over the past decade, digital anatomy tables such as Anatomage have emerged as an alternative way to teach anatomy compared to cadaveric dissection, offering interactive 3D models and imaging-integrated visualisation. This review's aim is to evaluate recent evidence whether virtual dissection tables can supplement or replace cadaver-based teaching. A comparative PubMed search identified 26 studies with an inclusion of English studies published within the last 10 years, focusing specifically on Anatomage. This left only 12 papers to be included. These papers were compared using reported learning outcomes, usability metrics, and pedagogical frameworks relating to Anatomage and cadaveric dissection. Across multiple studies, students consistently had positive attitudes towards Anatomage, with a combined mean of 72.6% of students reporting beneficial or improved learning experiences when using the digital anatomy table. Ease of use was frequently highlighted, with one study reporting 68% of students found using the Anatomage table was simpler than using traditional cadaveric dissections. However, other studies noted accessibility and operational skill gaps. Most studies suggested that the two methods yielded similar attainment among students. Importantly, multiple studies emphasised that digital tools are not a 1:1 replacement for cadavers and require unique pedagogical frameworks for effective integration. Evidence strongly supports blended learning, with digital tables enhancing academic performance when used alongside cadaveric dissection.

P6. Evaluating 3D Imaging Approaches for Characterising Mental Foramen Morphology: A Comparison of Surface Scanning and Micro-CT

Emily Budden, Jemima Chukwu Shaibu, Dr Sriambika Antonieo Jude Rada and Dr Taqwa Abusalem
University of Birmingham, United Kingdom

The mental foramen is a clinically important anatomical landmark through which the mental nerve exits the mandible 1,2. Injury to this nerve during procedures such as implant placement, mandibular osteotomy, or other interventions involving the premolar region may result in sensory disturbances and functional impairment 3,4. Accurate knowledge of mental foramen morphology is therefore essential for safe surgical planning 5. Although previous studies have predominantly relied on manual osteometric measurements or clinical imaging modalities such as cone-beam computed tomography (CBCT), the application of advanced three-dimensional (3D) techniques for comparative anatomical assessment remains limited 6,7. This study aimed to compare conventional osteometry, 3D surface scanning, and micro-computed tomography (micro-CT) for the assessment of mental foramen morphology. 30 Adult dry human mandibles were assessed using conventional osteometric measurements, 3D surface scanning, and micro-CT imaging. Standardised anatomical measurements of the mental foramen were obtained using each method and compared to evaluate agreement and measurement reliability across techniques. Surface scanning demonstrated the strongest agreement with conventional osteometric measurements, indicating high reliability for quantitative assessment of mental foramen morphology. Micro-CT provided superior anatomical detail and high-resolution visualisation of the mental foramen; however, agreement with conventional measurements was influenced by differences inherent to image reconstruction, segmentation, and digital measurement rather than image resolution alone. Overall, both 3D techniques enabled reproducible assessment of mental foramen morphology, with surface scanning offering the most favourable balance between measurement agreement and practical accessibility. This study provides, to our knowledge, the first comparative evaluation of 3D surface scanning and micro-CT for the assessment of mental foramen morphology using conventional osteometry as a reference. The findings demonstrate that 3D imaging techniques provide reliable alternatives to traditional manual measurements, with surface scanning representing a practical and accurate approach for morphological analysis. These results have implications for anatomical research and may contribute to improved understanding of mental foramen variation, supporting safer surgical planning and reducing the risk of mental nerve injury.

P7. Keeping it alive till next year - reflections on adapting a student anatomy society to changing university anatomy curriculums

Adam Rajubally and Alexander Williams
University of Sheffield, United Kingdom

The University of Sheffield Anatomy Society was founded in 2017 with the aim of stimulating. Anatomy Education, Student Engagement, Curriculum Adaptation interest in human and comparative anatomy. In recent years the anatomy curriculum has changed at the University of Sheffield across all disciplines, with the discontinuation of cadaveric dissection and spotter examinations, and a reduction in the usage of prosected and potted wet specimens. In their place are digital and radiological resources such as Anatomage tables, as well as von Hagen plastinated specimens, with anatomical knowledge largely being assessed by written examination. As a result, when the authors took over the running of the Sheffield Anatomy Society, the Society was undergoing a challenging transitional phase. Membership and conference ticket sales were decreasing, attendance at teaching events was negligible, and a flagship event, the mock spotter examination, had been rendered redundant.

The challenges identified were existential - the authors had to reverse the decline in membership, engage our existing and potential members, and boost engagement at Society events. By collaborating with academic staff at the university and beyond, and through an overhaul of digital advertising tactics, the Society was able to reach a wider audience and increase attendance. Society events and offerings were expanded to meet the needs of the membership and other interested students, and fill gaps identified in the offerings of the university curriculum. Following the success of the Society in the 25/26 academic year, the authors are planning a continuation of their strategy to maintain growth and adaptation to the new university curriculum.

P8. Learning through experience: a medical student's perspective of facilitating an improved anatomy curriculum in higher education

Anna Wallace
University of Sheffield, United Kingdom

In my fourth year of medical school, I undertook a student selected component in Anatomy and Medical Education. During this time, I worked alongside academic staff in the university and supported in the delivery of the anatomy curriculum and integrated learning activities (ILAs) to the pre-clinical students.

My aims for this project were to gain experience handling and operating the different equipment (i.e. prosections, Anatomage tables) used in the Medical Teaching Unit, whilst developing my teaching skills through both observational and facilitating sessions. I also drew a focus on how anatomical education at the University of Sheffield has changed between my first year, full-body facilitated dissection, and my fourth year, the move to Anatomage and student led sessions.

I gained insight into the work done to enable sessions to run smoothly and efficiently, whilst maximising content coverage per session. I also learnt about the methods of creating useful study resources, what makes a "good" lecture and how to provide meaningful and applicable feedback, of which I will take into my further practice. I found during this project, my knowledge of the various methods used to teach anatomy to students in higher education grew greatly, thus allowing me to build on the foundations of my own learning and to further implement new systems of peer teaching within the medical school.

P9. Morphometric analysis of the human distal femur: Implications for total knee arthroplasty and orthopaedic trauma surgery

Nicole Walters
University of Nottingham Medical School at Derby, Nottingham, United Kingdom

Abstract

Total knee arthroplasty (TKA) is an established treatment for advanced knee osteoarthritis, yet postoperative dissatisfaction and complications remain common. Accurate assessment of distal femoral morphology is important for optimising prosthetic design, alignment, implant fit, and functional outcomes.

This study evaluated distal femoral morphology and its relevance to orthopaedic trauma management and TKA planning.

Methodology: A morphometric analysis was conducted on 79 adult dry femora from the University of Nottingham Medical School Anatomy Department (40 left, 39 right). Eight distal femoral parameters were measured using a digital sliding calliper. Measurements were recorded twice. Statistical analysis using SPSS version 22 included descriptive statistics, tests for normality, Pearson's and Spearman's correlation analyses, and independent t-tests comparing left and right femora.

Results: Considerable variability was observed across all measurements, demonstrating morphological heterogeneity. Significant positive correlations were identified between mediolateral and anteroposterior dimensions. Bicondylar width showed strong positive correlations with all other parameters. No significant differences were found between left and right femora, supporting bilateral symmetry. The lateral condyle consistently demonstrated greater transverse and anteroposterior dimensions than the medial condyle, highlighting asymmetry relevant to prosthetic design.

Conclusion: These findings emphasise the importance of morphometric assessment in TKA planning and implant development. Anatomical variation may contribute to prosthetic mismatch and altered biomechanics. The results support patient-specific prosthetic approaches and highlight the potential of advanced imaging and artificial intelligence-assisted surgical planning in orthopaedic practice.

Key words: Total knee arthroplasty, Distal Femur Morphology, Morphometric Analysis

P10. Seeing Every Skin Tone: Improving Representation in Anatomy and Dermatology Teaching

Anabelle Nartey
Kent and Medway Medical School, United Kingdom

Medical education in the UK and Europe has historically relied on anatomical references, textbooks and dermatological atlases built almost exclusively around white European bodies. This bias traces back to the sixteenth century, when Andreas Vesalius produced the first anatomy textbook using only white cadavers and continued through the racial classification systems of Linnaeus and Blumenbach, which embedded hierarchical thinking into scientific study. By the nineteenth century, dermatology atlases such as Hebra's Atlas der Hautkrankheiten reinforced white skin as the clinical default, a standard many UK medical schools still teach today. The consequences are measurable. Melanoma is currently misdiagnosed in around 50% of Black patients in the UK compared to 20% of white patients, and inflammation, jaundice and cyanosis all present differently on darker skin yet are rarely taught this way. Despite growing recognition since the mid twentieth century, including the Fitzpatrick scale. This abstract argues that inclusive anatomy visualisation, spanning textbooks, digital platforms and AI diagnostic tools, is essential to closing this gap. AI generated dermatological images continue to show poor skin tone diversity and diagnostic accuracy, showing that digital reform must be paired with genuine curriculum change. Achieving equity requires representative research, updated teaching materials and accountability from professional bodies, ensuring that anatomical and dermatological education reflects the full diversity of patients rather than a single historical standard.

With thanks to our sponsors:

Feedback

We value your feedback and want to know what you loved, what you want to see more/less of next year and anything else you'd like to share

Please use the following link or QR code to complete the feedback at the end of the conference:

5th Early Career Anatomists Conference 2026 Feedback Form – Fill in form