Co-funded by the European Union

ERASMUS+ Project LEANBODY - 2021-1-HU01-KA220-HED-000027542

Anatomy teaching in Cambridge

Cecilia Brassett & Jane Dutton

Human Anatomy Centre

Department of Physiology, Development and Neuroscience

1. What is different about a collegiate university?
2. When is anatomy taught in the medical course?
3. How are the following emphases achieved?

Clinical relevance

Professionalism

Anatomical research

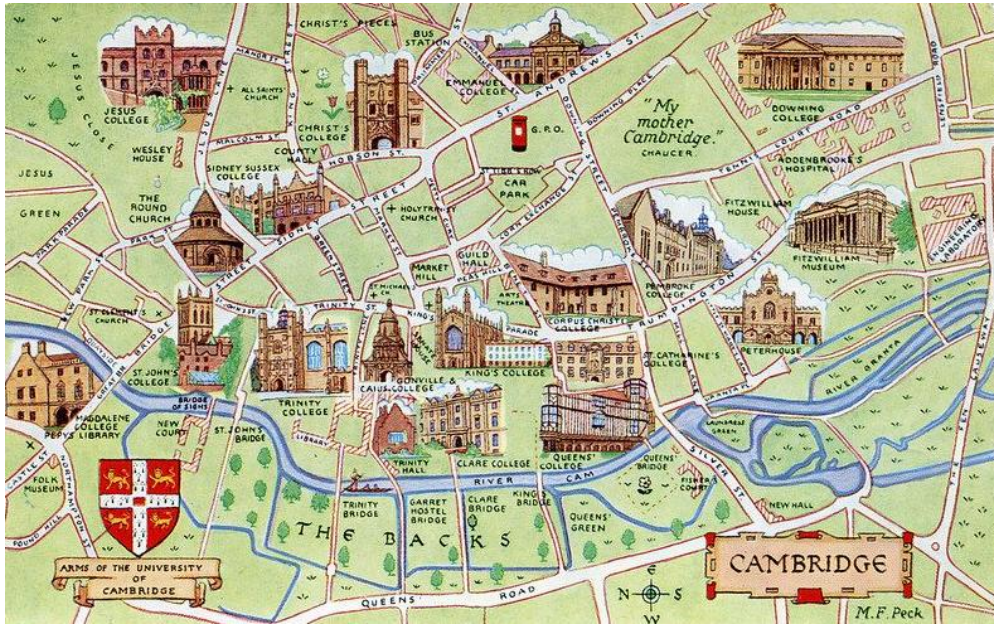
What is different about a collegiate university?

No “university campus”
Colleges are autonomous (31 in total)

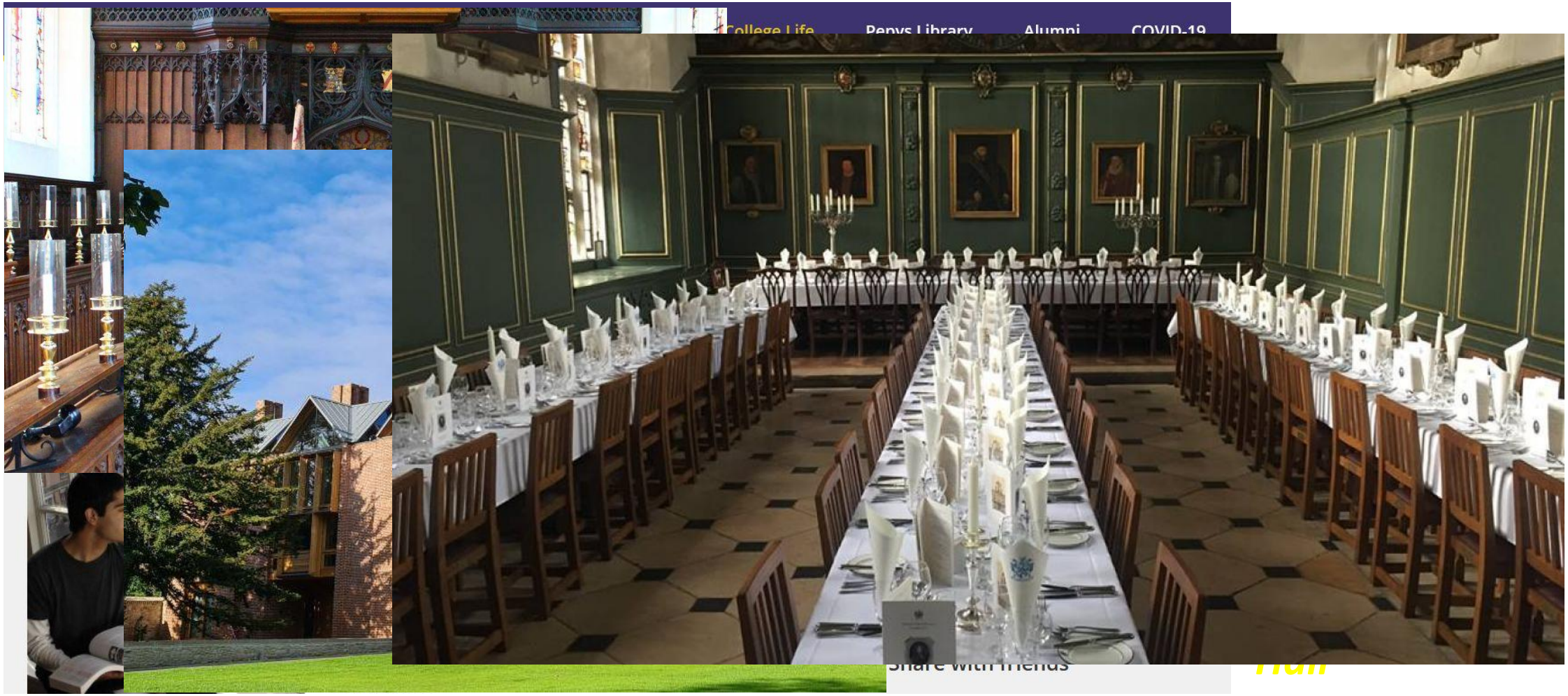
Admissions interviews
College supervisions (small group tutorials)

Each student has access to:

- Director of Studies (academic progress)
- Tutor (general wellbeing)
- College nurse, wellbeing officer, chaplain



College life



Anatomy Teaching

Central delivery

- Anatomy School established in 1
- Lectures and practical sessions
- Human Anatomy Centre, Anato
- *c.*320 students per year

College provision

- First dissections in Colleges in 15
- Small groups in college rooms
- Resources vary between college
- Supervisors: anatomists, clinicians

When is anatomy taught in the medical course?

Preclinical years: The Medical Sciences Tripos

Year 1 (Part IA)	**FAB (Functional Architecture of the Body)** *cadaveric dissection*
Year 2 (Part IB)	**HNA (Head and Neck Anatomy)** *prosected specimens*
Year 3 (Part II)	**Experimental Project** **SaRA (Surgical and Radiological Anatomy)**

Clinical years: School of Clinical Medicine and Regional Hospitals

Years 4-6	**Anatomy Revision** **Student Selected Components** **Medical Electives**

The Cambridge Academic Year

Michaelmas Term

8 weeks of teaching from in October and November

Lent Term

8 weeks of teaching from mid-January to mid-March

Easter Term

4 weeks of teaching from mid-April to mid-May

4 weeks of revision and examinations

Contact hours for Anatomy: 4 hours Practicals + 2 hours Applied Anatomy

1-2 hours Lectures + 1-2 hours College Supervisions

= *c.*10 hours/week

Format of Assessment (online, invigilated)

Single Best Answer Questions (80 questions in 90 minutes)

Images (bones, prosections, clinical), single best answer questions

Concerning the bone which is indicated by X:

A. It forms a secondary cartilaginous joint with another bone.

B. It gives attachment to flexor carpi radialis.

C. It has a feature that forms the ulnar border of the carpal tunnel.

D. It is classified as a sesamoid bone.

E. It is closely related to the deep branch of the median nerve.

Essays (2x 1-hour essays: 1 Functional, 1 Applied)

Of the three main peripheral nerves of the upper limb whose terminal branches supply the hand which, in your opinion, would cause most functional loss in the activities of daily living if it were to be totally severed at its origin? Explain in detail the reasons for your choice.

A 25-year-old man is brought into the Accident Department with a knife embedded in his anterior chest wall. Based on your anatomical knowledge, discuss the structures that may be affected and the consequences of such injuries.

Emphasis on Clinical Relevance

➢ DR Sessions: ultrasound, radiology, clinical examination

Annexe

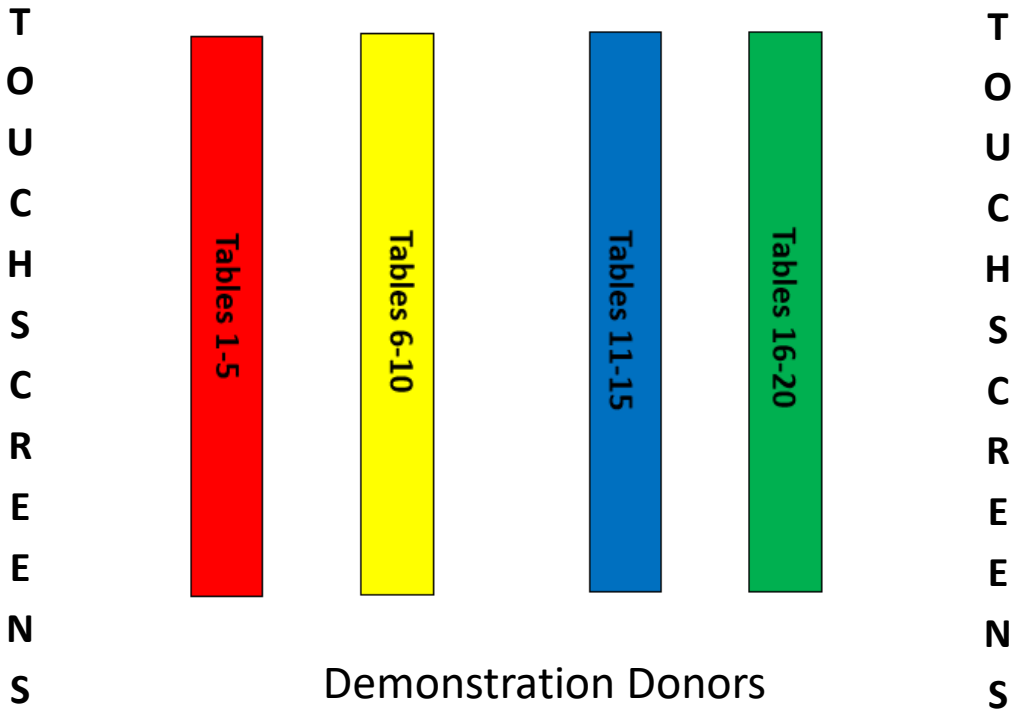
"Live" demonstration
Rotating between Stations

- Osteology and radiology
- Prosections
- Virtual dissector (Touchscreens)
- Ultrasound or clinical examination

Change over and Handover

Dissection Room
Demonstration of variations/procedures

Dissecting Room



Emphasis on Clinical Relevance

➢ Applied Anatomy seminars: clinical case scenarios

Flipped classroom approach with students preparing cases in advance
College groups allocated for presentations & additional interactive quizzes
4 cases per week to complement dissection of specific regions

During a College rugby match, a 19-year-old left-handed fly-half who was preparing to pass the ball was tackled from behind by an opponent. As he was being tackled, his abducted right arm was driven into the ground. He was in severe pain and unable to move his right arm at the shoulder joint. On examination, his right arm was slightly abducted and externally rotated.

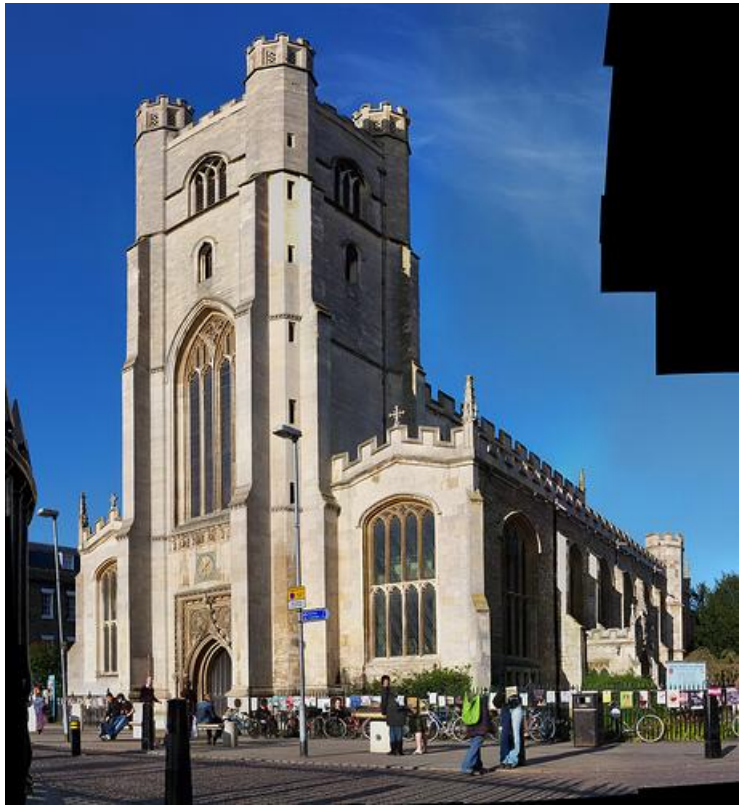
Emphasis on Professionalism

3 Key Outcomes: *General Medical Council*

Professional values and behaviours

- "Meet the donor" introductory session
- Tributes for committal & memorial services
- Effective teamwork in practical sessions

"Our donors sparked enthusiasm and demanded respect. They were our first patient and forgave us any mistake we made, only wanting to teach us more. They made us consider the reverence of human life and through their donation taught us of the trust all patients will give us. They gave us confidence and awareness, all without uttering a word."



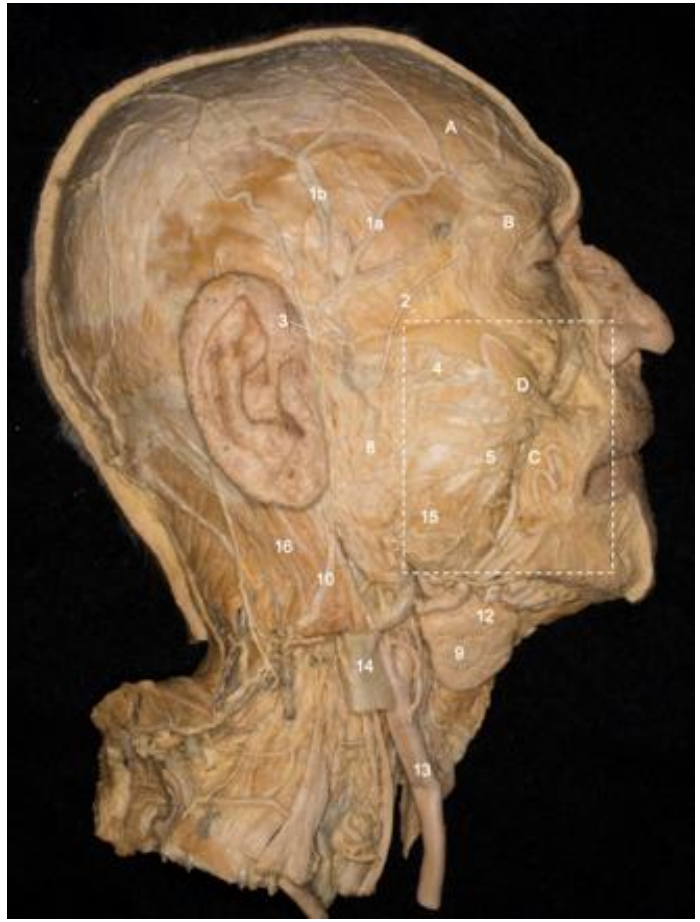
Emphasis on Professionalism

3 Key Outcomes: *General Medical Council*

Professional skills

- Communication in handovers
- Presentations in applied anatomy seminars
- Manual dexterity and haptic ability

"Prosecting gives you the time to tease out finer structures and finer anatomical details than you could ever hope to in the DR. Opening your toolbox on day one is enough to make any aspiring surgeon giddy. You will develop a feel for which instrument is best suited to each task – the satisfaction this gives is hard to put into words."



Emphasis on Professionalism

3 Key Outcomes: *General Medical Council*

Professional knowledge

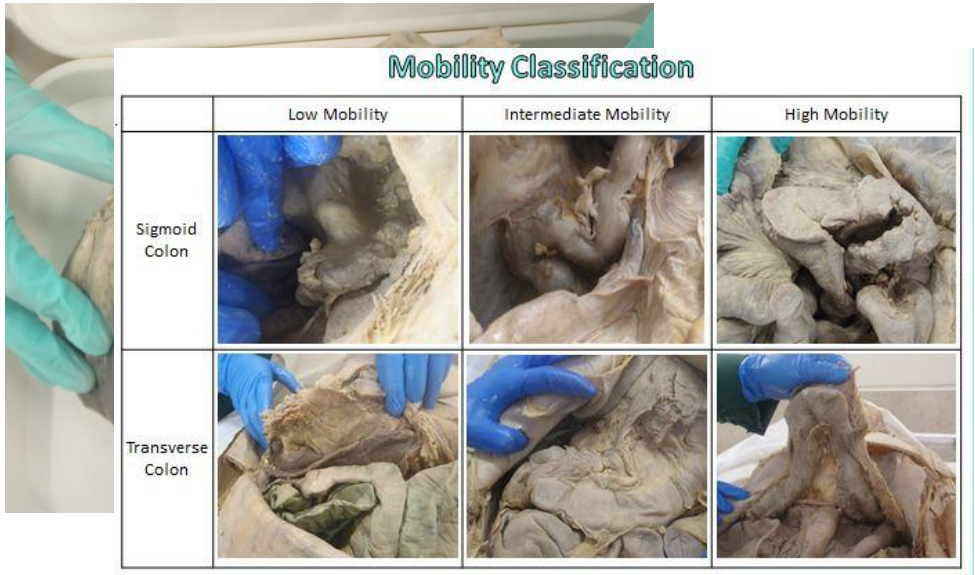
- Cause of death and end-of-life trajectory
- Awareness of anatomical variations
- Surgical and radiological anatomy module

"The Surgical and Radiological Anatomy course has been the best choice I could have made. It has provided me with the foundations of surgical & radiological approaches, as well as the desire to pursue surgery as a career. The lecturers always referred back to the clinical importance of appreciating normal anatomy and variations in order to recognise pathology, which gave clinical context to the content."

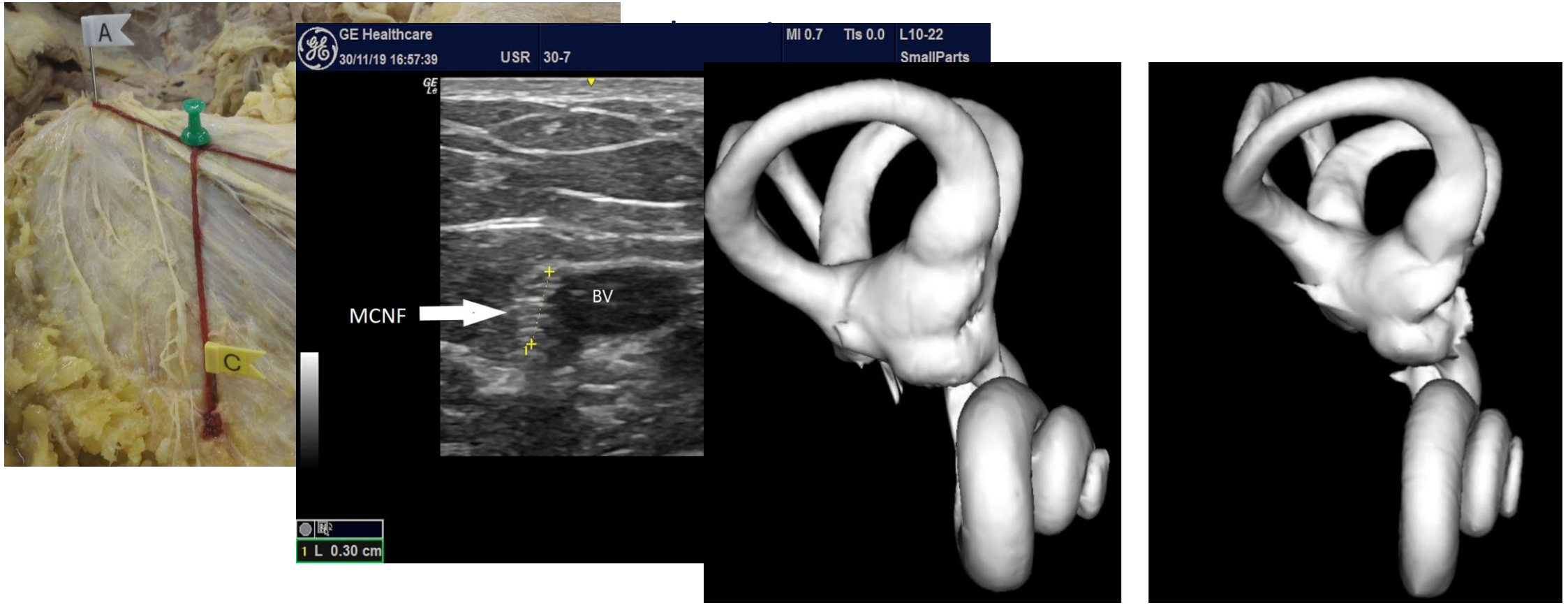
Emphasis on Anatomical Research

"It is argued that all teaching (including that of clinical anatomy) should be research-informed and that the discipline of clinical anatomy should have at its base a vigorous research ethos driven by clinically related problems. In interacting with physicians, the role of the clinical anatomist should be to promulgate a questioning scientific spirit, with its willingness to test and challenge accepted anatomic dicta." ***Jones DG et al.* (2002) *Clinical Anatomy*, 3:228-232.**

- Students participate in data collection
  e.g. lung fissures, colonic configuration, *etc.*
- Publications arising from work in department available on virtual learning environment



Emphasis on Anatomical Research



In Summary

1. **Distinctive features of the collegiate system**
   - *Small group tutorials*
   - *Welfare support*

2. **Spiral curriculum with reinforcement of anatomy teaching**
   - *Dissection and prosections in preclinical years*
   - *Revision and research in clinical years*

3. **Particular emphasis placed on three areas**
   - *Clinical relevance: ultrasound, applied anatomy seminars*
   - *Professionalism: behaviour & values, skills, knowledge*
   - *Anatomical research: asking the right questions*

Erasmus+

LEANbody

Köszönöm!

UNIVERSITAS QUINQUEECCLESIENSIS 13 67

KAROLINSKA INSTITUTET ANNO 1810 Karolinska Institutet

UNIVERSITY OF CAMBRIDGE

UNIVERSITAS STUDIORUM ZAGRABIENSIS MDCLXIX

MUNI