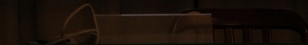
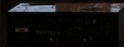


Colour-Holographic Recordings of Potted Anatomical
Human Specimens
In
Medical Education

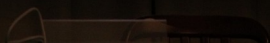
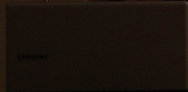
Dr Rostam Osanlou



Contents

- Current anatomy teaching approaches
- The Hologram
- Discussion & Conclusions
- Further work

The Anatomy Lab



Dissection

- Human being that formally lived a life
- Traditional teaching method
- Rapid rise in number of medical students
- Shortage in availability for dissection

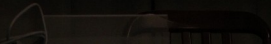
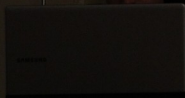


Anatomy & Dissection

- Important to understand not only the organ, but also the surrounding structures







Limitations

- Maintained in toxic fluid
- Supply dependant upon donation
- Legalities of storage and transport

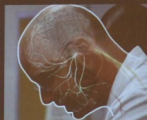
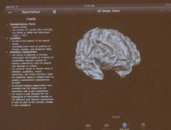
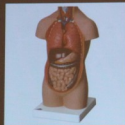


Human Tissue Act 2005

- UK Legal framework for *"the removal, storage, use and disposal of material that contains any human cells"*
- Does not restrict the making and displaying of images
- Provides guidance on making/ using recordings
- *"maintaining the dignity"* of the deceased highlighted

Modern approaches

- Plastic models
- Computer assisted
- Touch screen interactive



Can Holography be used effectively?



Anatomical specimens

- Bangor University - Library of rare, historical / modern anatomical specimens
- Kept in perspex glass containing a preserving fluid
- Main uses - Historical library & Anatomical/ Medical Education



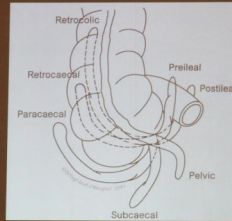
Tissue Specimen

- Vermiform Appendix
- Sample size 3 x 1.5 inch
- Plate size 4 x 5 inch

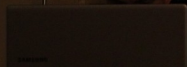


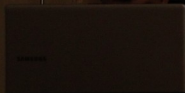
Anatomic variations

- Numerous anatomical variations relative to other structures
- Variation of anatomy effects clinical management of disease









Is this useful for teaching? Yes

- Perfect detail - Can appreciate very fine structures
- No complex legal issues of storage - It can be permanently displayed in any classroom
- One image can be distributed to many anatomy centres
- Easy to store to create a library

Issues to address

- Surrounding structures need to be included in order for appreciation of function and significance
- Image needs to be put in context with a lesson plan
- Ethic and moral issues
- Impact on medical education needs to be investigated
- Incorporation of movement