

SYMPOSIUM

SURGERY IN LOW RESOURCE SETTINGS

NOVEMBER 14TH–16TH 2014

WHAT
IS YOUR
ROLE?

Integrated surgical training
web-based e-learning
3D visualization

THIS
IS OUR
ROLE!

Theo Wiggers

November 15th 2014

Amsterdam, the Netherlands

Times are Changing in Surgical Training

MORE LEARNED IN LESS TIME

MORE RESIDENTS

LESS TRAINING ON THE JOB

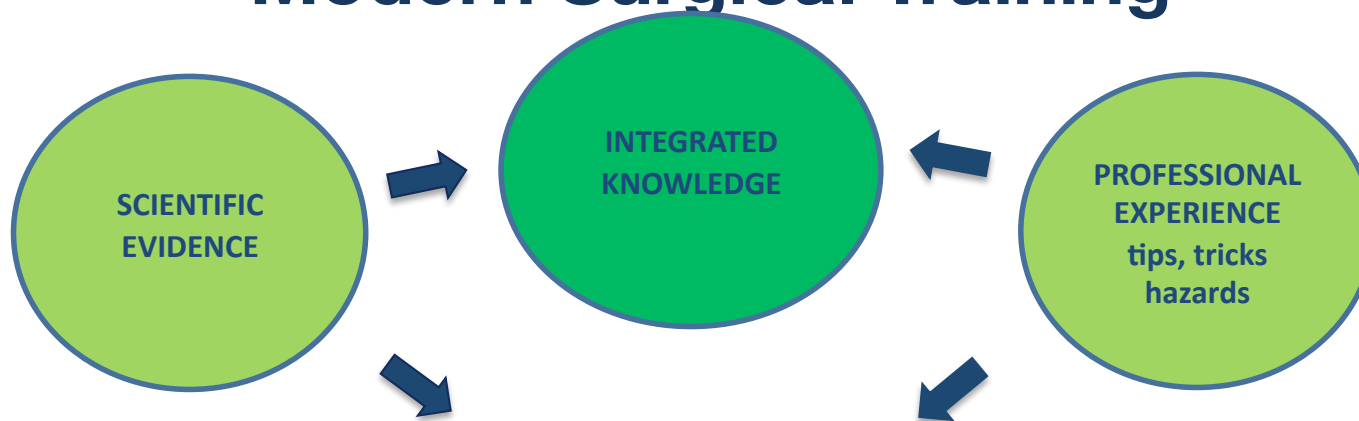


shift from clinical experience to skills lab training

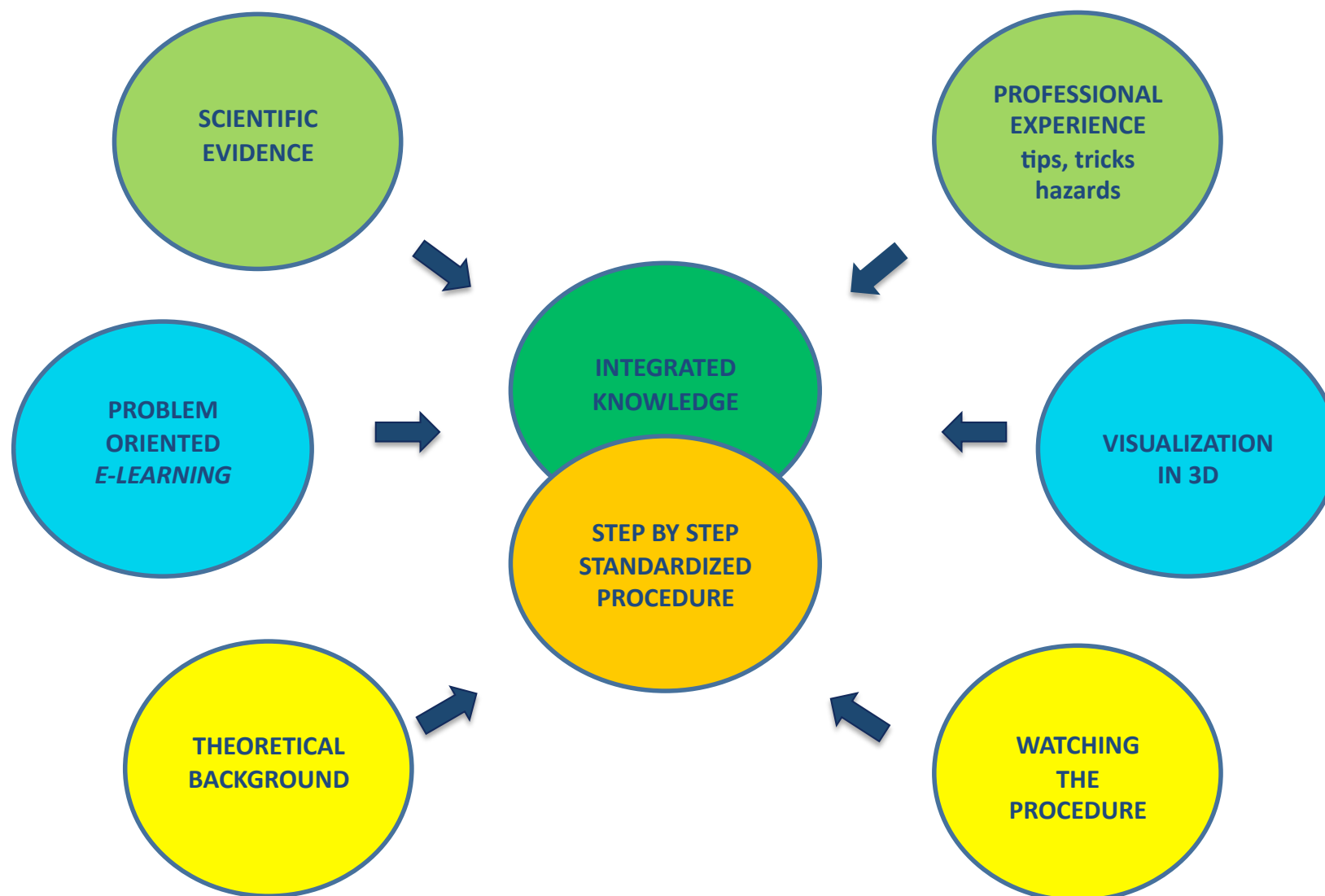
Modern Surgical Training



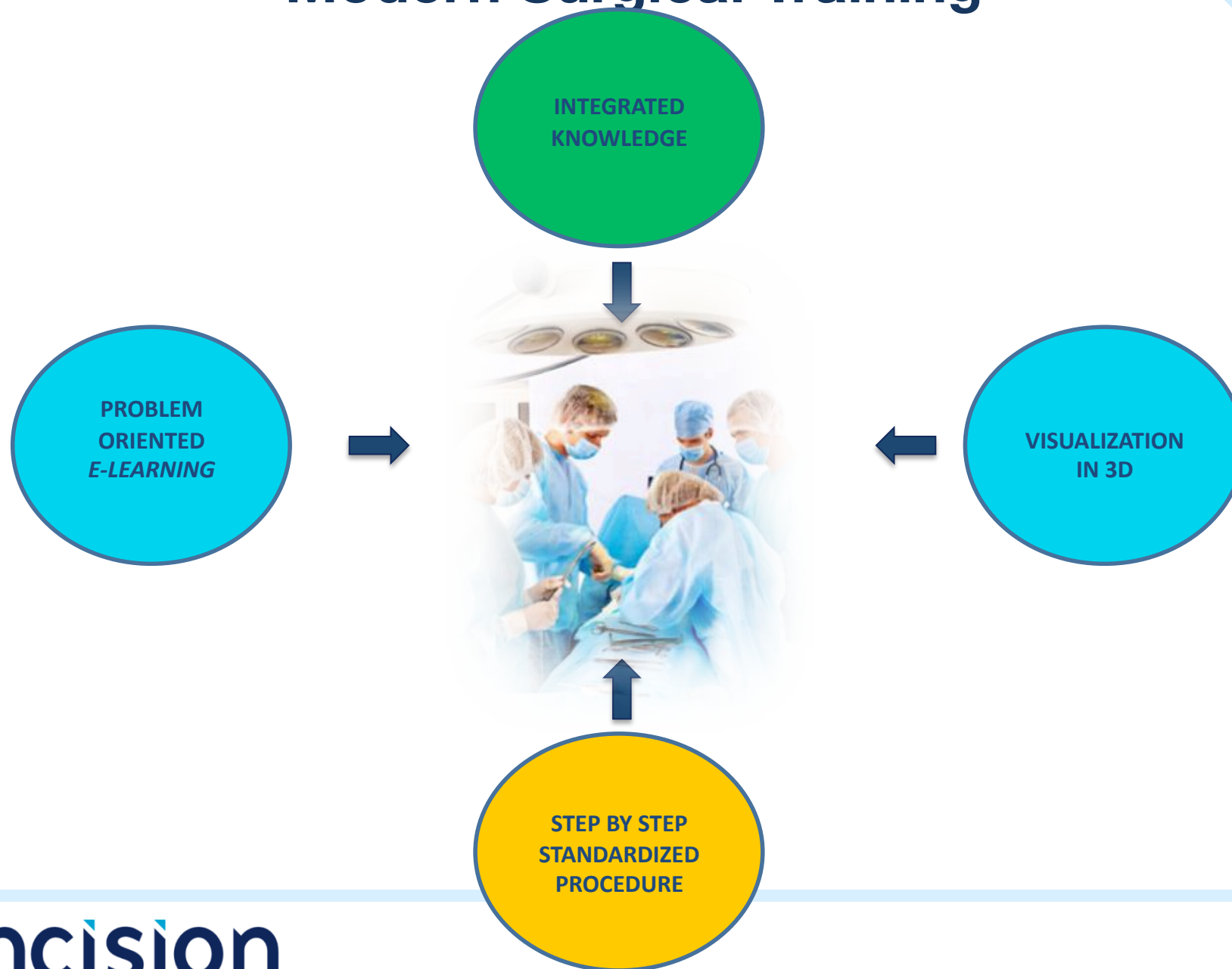
Modern Surgical Training



Modern Surgical Training

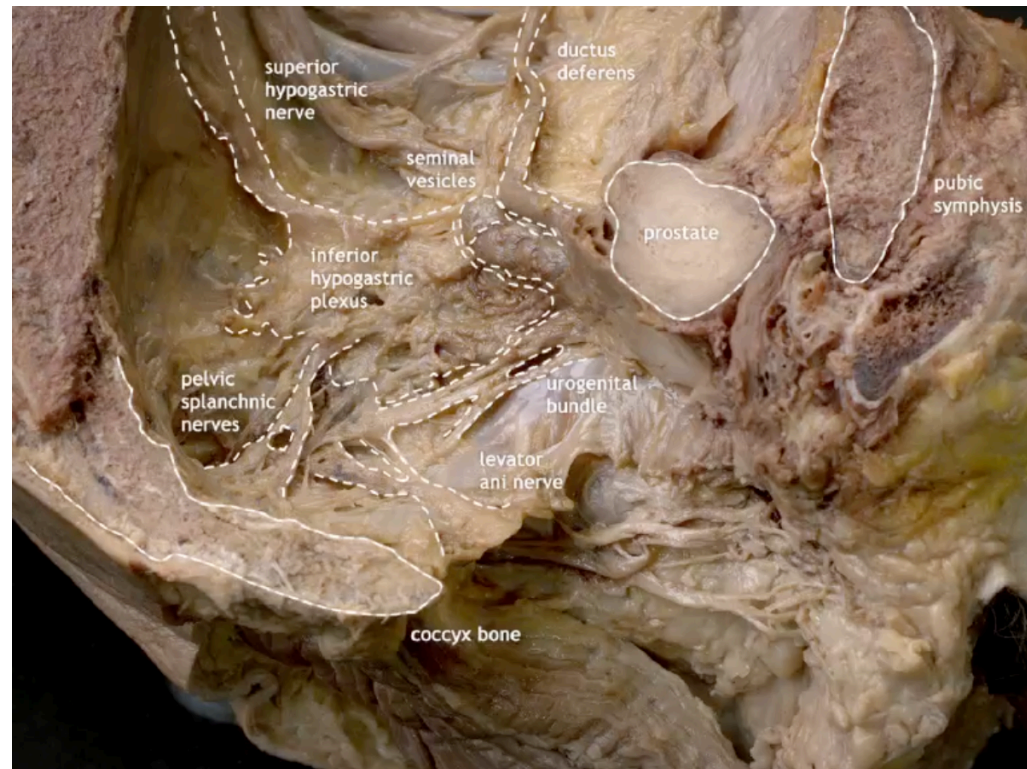
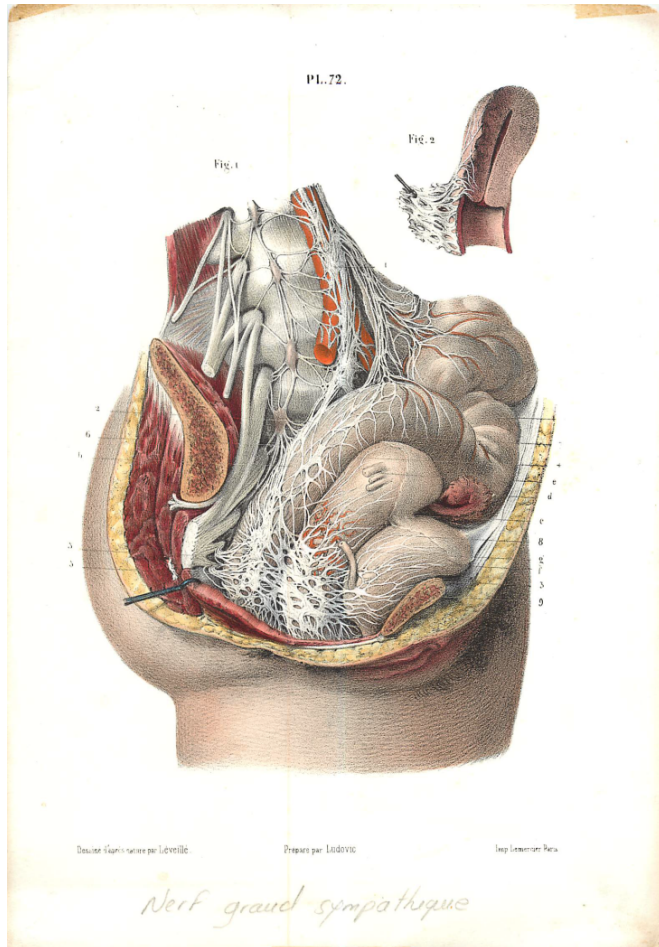


Modern Surgical Training



Surgical Anatomy

NO CHANGE



NO DIFFERENCE AMONG RACES

Common practice vs local preferences

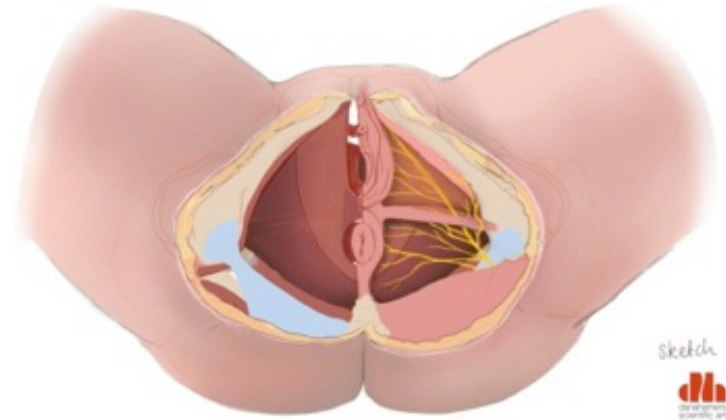
	Common Practice	Local Preference
Surgical Anatomy	+++++	
Procedure (steps)	+++	+
Surgical technique	++	++
Guideline	+	+++
Protocol		+++++

Our approach

- E learning based on the latest **scientific and empirical** ‘**state of the art**’ insights focusing on the procedure
- Accessible through web-based customized **e-learning and visualization in 3D**
- Integration in **local curriculum with local adjustments**
- **Train the trainers course** (how to achieve standardization and how to give feedback)
- **Local trainers** will have a session with the residents and a **3D film** before guiding them through the operation procedure

E-learning

- Focus on surgical anatomy and procedures
- Systematic, step-by-step description
- Stills, film fragments, drawings
- Background information
- Tricks, tips and hazards
- Literature
- Question and answers (not yet available)





Continue course

In development

In development

In development



Open inguinal
hernia repair

Start course



Pfannenstiel
incision

Start course



Rectum resection

Continue course



Right colectomy

In development

Back to my courses



Rectum resection

Search

Introduction



Pre-Operative



Procedure



Incision



Inspection

Exposure

Lateral mobilisation
sigmoid (line of Toldt)



Medial dissection
peritoneum

IMA isolation and
transection



Mobilization splenic
flexure

Transection sigmoid

Dissection pelvic
rectum dorsal

incision
SHARING SURGICAL SKILLS

Positioning of patient and team

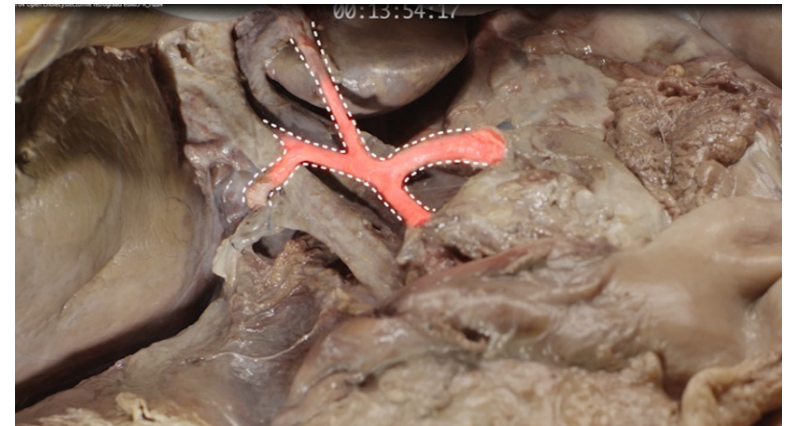
There is an on going debate concerning positioning of the patient for the perineal phase of ELAPE (prone or supine) and even some discussion as to whether to commence with the perineal or abdominal phase. Currently there is no evidence supporting either a prone or supine position for the perineal phase as being superior with regard to outcome; what is crucial is that a skilled surgeon performs the ELAPE technique.  Additionally there is no evidence as to whether starting with the abdominal or perineal phase is superior, provided that the surgeon does not dissect the mesorectal planes too far caudally during the abdominal phase .

Prone position perineal phase

Advantages of a prone position for the perineal phase are the excellent exposure of the operative fields including good access to the *coccyx* and lower sacrum. This is an advantage for teaching purposes as the operating views are better, in particular to the audience if live demonstration is being performed. Furthermore a prone position is associated with a lower hydrostatic pressure during the perineal phase.

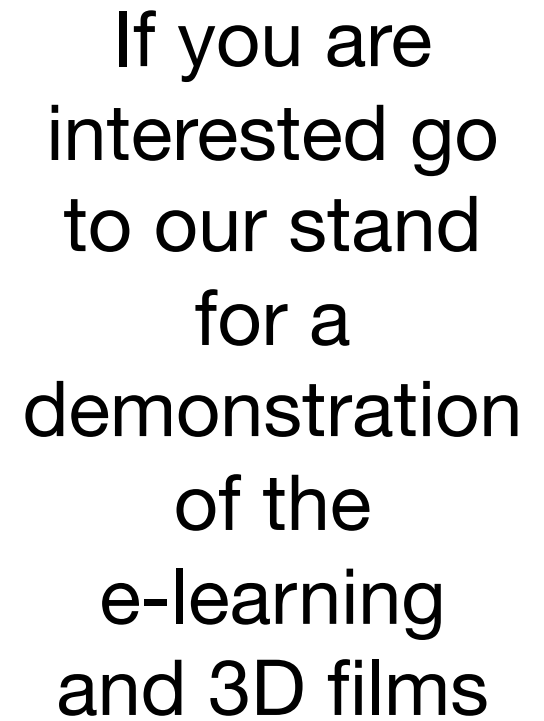
Visualization in 3D: films and stills

- Filmed from the 'view point' of the surgeon
- Surgical procedures in the anatomical planes
- Animation overlay to emphasize anatomical structures
- Dissection extra-anatomical
- At this moment 13 films
- Next year 50 films

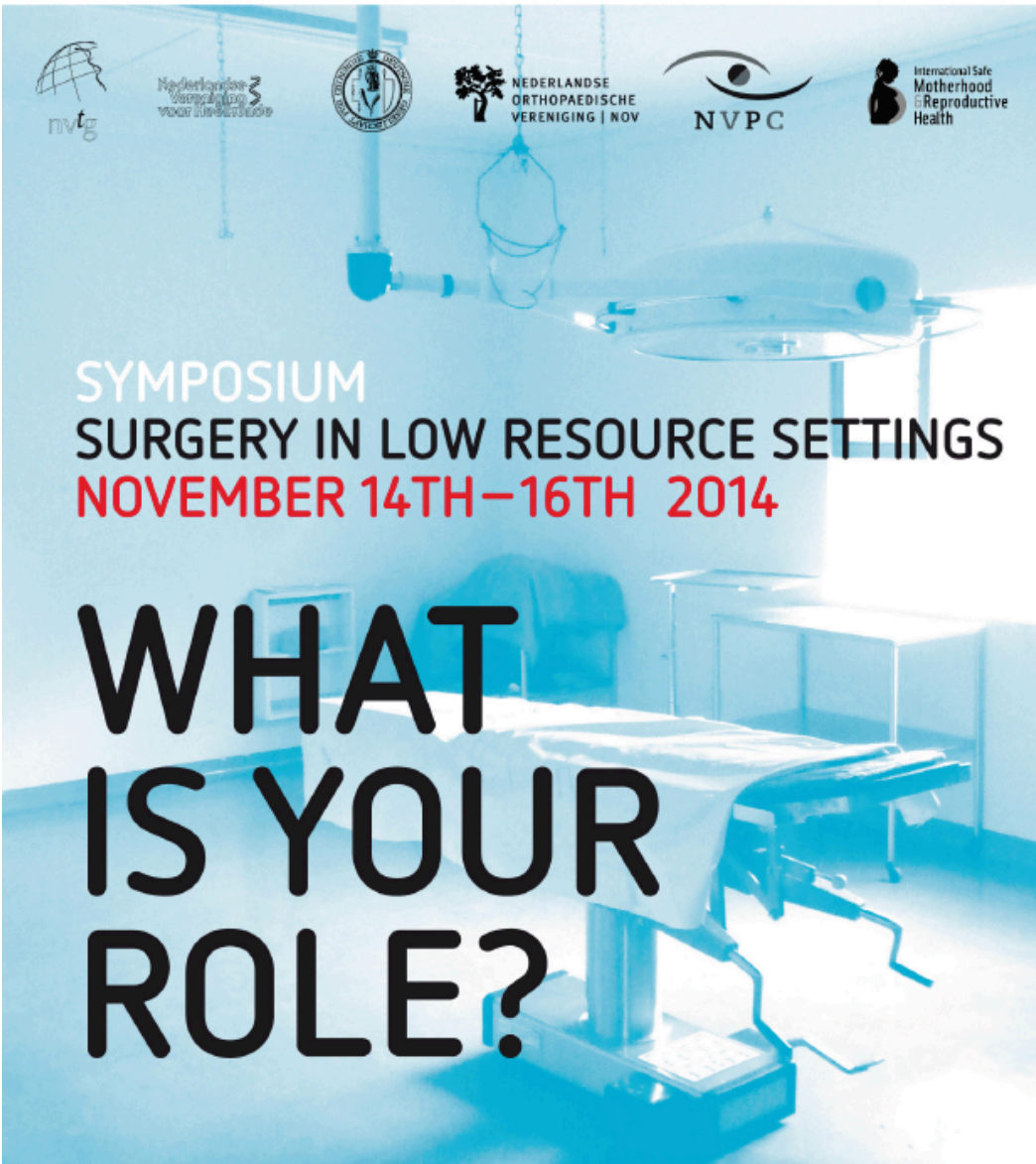







Our experience

- Introduction visits to Ghana, Kenya, Indonesia
- Evaluation of showing the film in Indonesia
 - 75 potential users
 - Rating 3D video 8.8(scale 1-10)
 - Most benefit for residents 8.8
- Pilots (aim integration in curriculum)
 - Indonesia:
 - Gynecology 4 centres :hysterectomy, Pfannenstiel incision and midline incision
 - General surgery 1 centre : inguinal hernia
 - Ghana
 - General surgery in combination with Operation Hernia: inguinal hernia
 - The Netherlands
 - Colorectal module incorporated in national training of residents
- Interest from Afghanistan, Georgia, Azerbaijan, Kazakhstan



Questions?



   NEDERLANDSE
ORTHOPAEDISCHE
VERENIGING | NOV  NVPC  International Safe
Motherhood &
Reproductive
Health

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WHAT IS YOUR ROLE?

LAB111 Amsterdam - www.surgicalneed.nl



AHP

AFRICA HEALTH
PLACEMENTS

WWW.AHP.ORG.ZA



NYIP

NYENBURGH INVESTMENT PARTNERS

va. communication by design



ThesisApps

VERSPREID JE PROEFSCHRIFT ALS MOBIELE APP

 **REDERIJ DE NEDERLANDEN**
BELEEF AMSTERDAM