Virtual Microscopy and e-Learning at the Medical Faculty of Aachen: two years of experience

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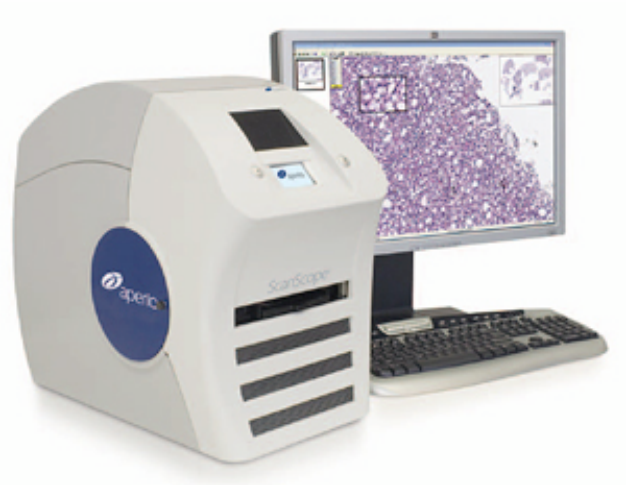
Institute of Pathology,
RWTH-Aachen University Hospital

First European Workshop on Tissue Imaging and Analysis
February 13 - 14, 20092008

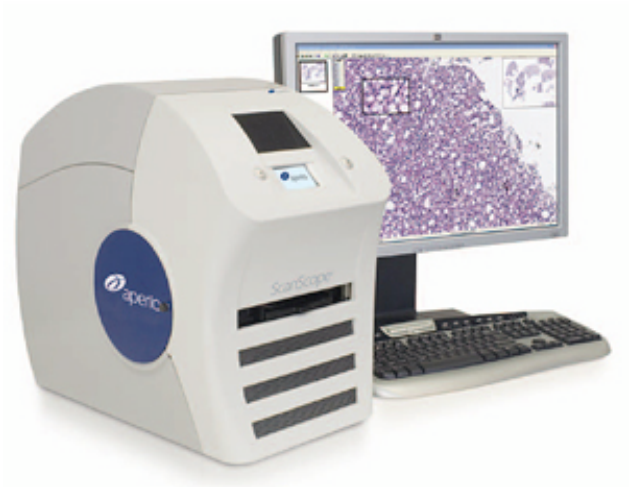
Web-based microscopy



www.aperio.com

Scanscope CS

Spectrum Webviewer



Scan:
JPEG2000
JPEG
TIFF

volume

speed

annotations

upload to server
www.vm-aachen.de

Different ports, different needs

Education pregraduates

Examination pregraduates

Education postgraduates

Clinical conferences outside the hospital

Consultation (second opinion)

RWTH
UNIVERSITÄTSKLINIKUM
AACHEN
XML
RSS
thumbnails
Alter & Tumor
Anatomisches Institut
Atmungsorgane
Bewegungsapparat
Blut und Abwehr
Endokrinologie
Gastro
Geschlechtsorgane
Harnorgane
Haut
Herz-Kreislauf
Kinderheilkunde

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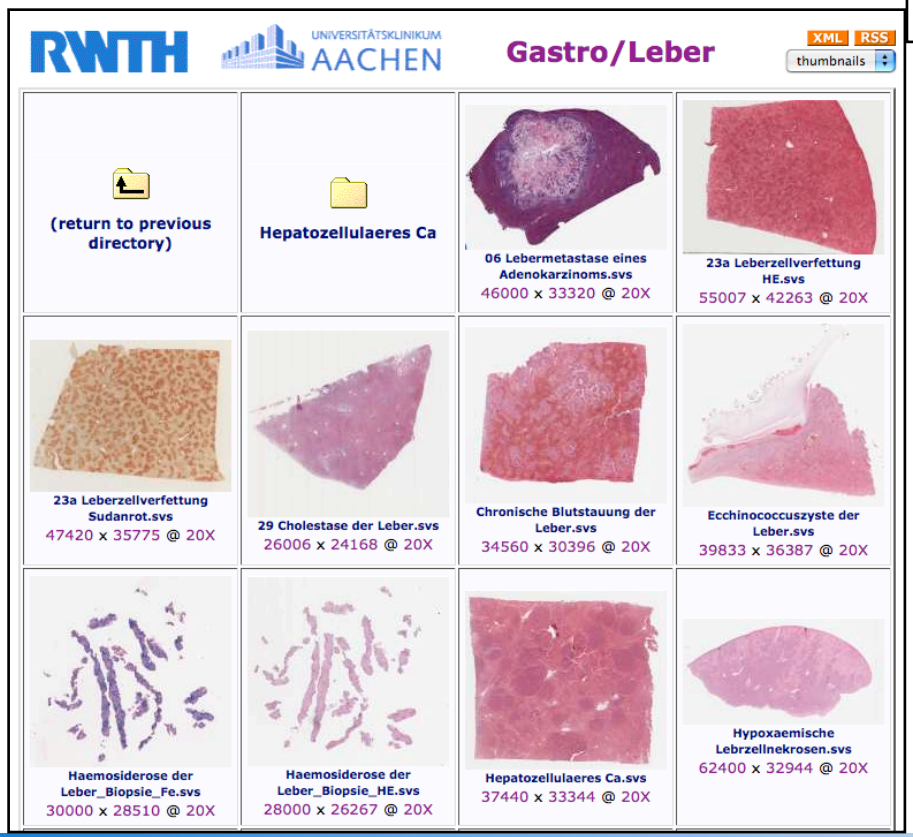
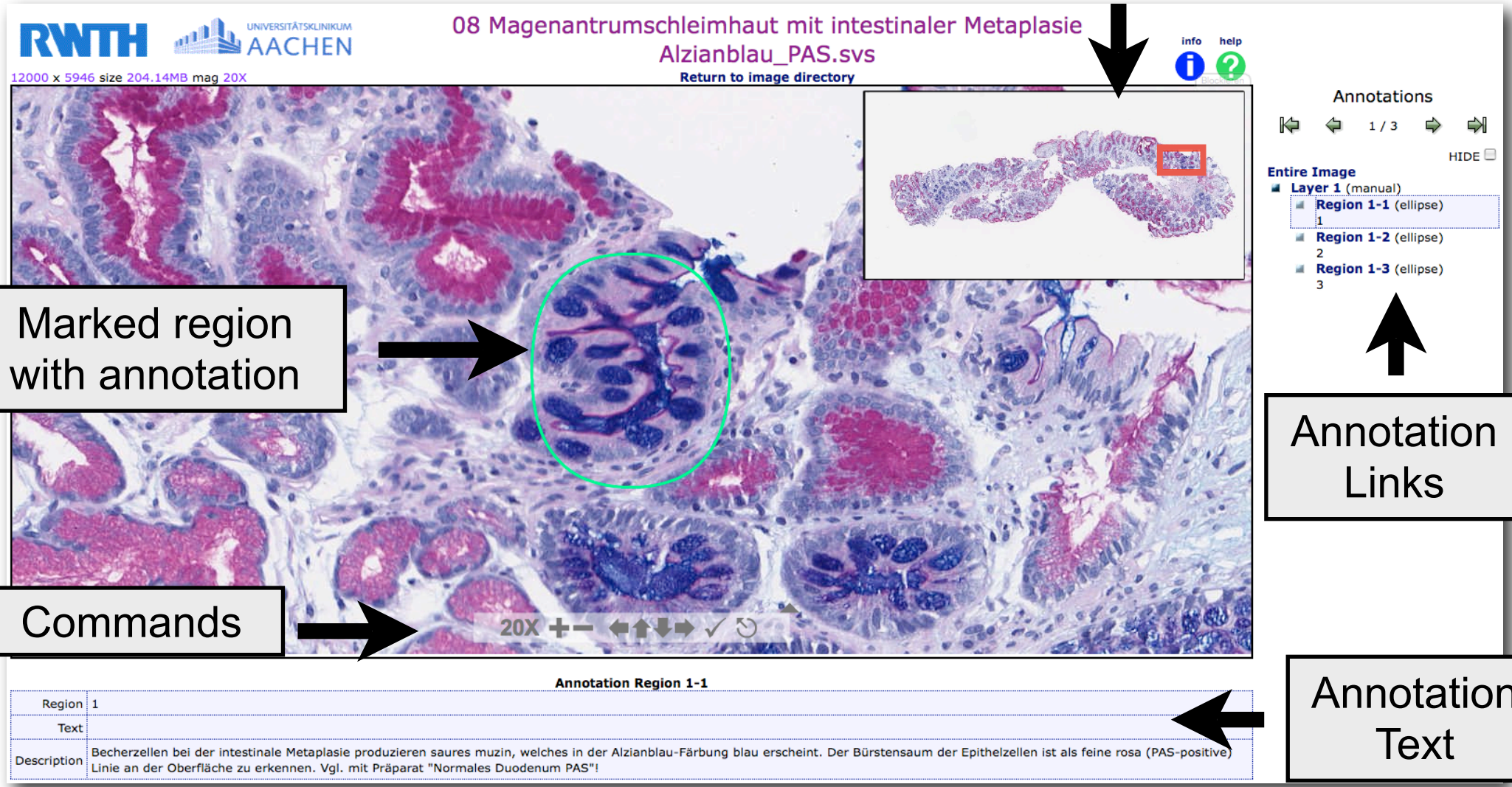

RWTH
UNIVERSITÄTSKLINIKUM AACHEN
Gastro/Leber
XML RSS
thumbnails
(return to previous directory)
Hepatozellulaeres Ca
06 Lebermetastase eines Adenokarzinoms.svs
46000 x 33320 @ 20X
23a Leberzellverfettung HE.svs
55007 x 42263 @ 20X
23a Leberzellverfettung Sudanrot.svs
47420 x 35775 @ 20X
29 Cholestase der Leber.svs
26006 x 24168 @ 20X
Chronische Blutstauung der Leber.svs
34560 x 30396 @ 20X
Ecchinococcuszyste der Leber.svs
39833 x 36387 @ 20X
Haemosiderose der Leber_Biopsie_Fe.svs
30000 x 28510 @ 20X
Haemosiderose der Leber_Biopsie_HE.svs
28000 x 26267 @ 20X
Hepatozellulaeres Ca.svs
37440 x 33344 @ 20X
Hypoxaemische Lebrzellnekrosen.svs
62400 x 32944 @ 20X

Navigation window



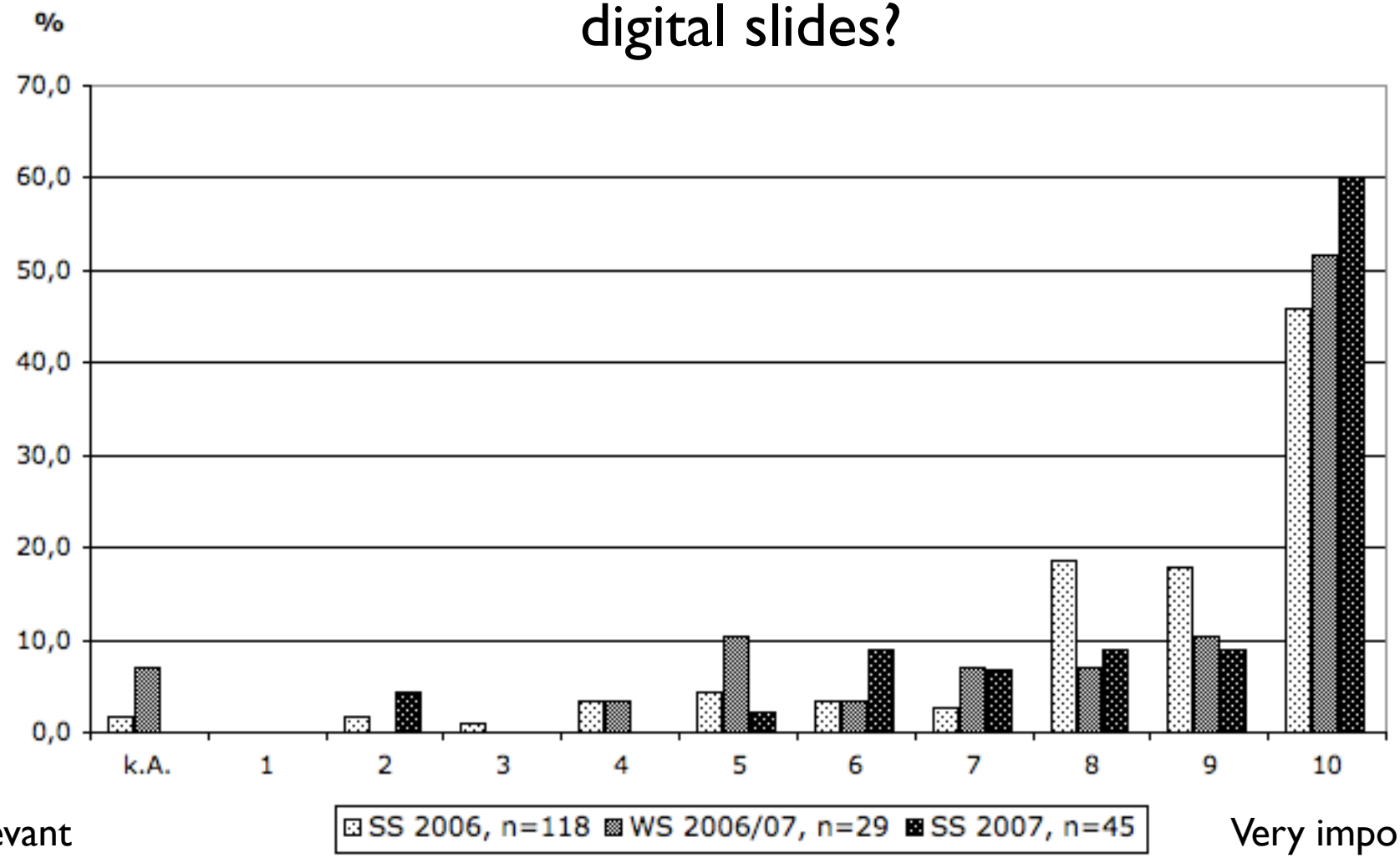
Marked region with annotation

Commands

Annotation Links

Annotation Text

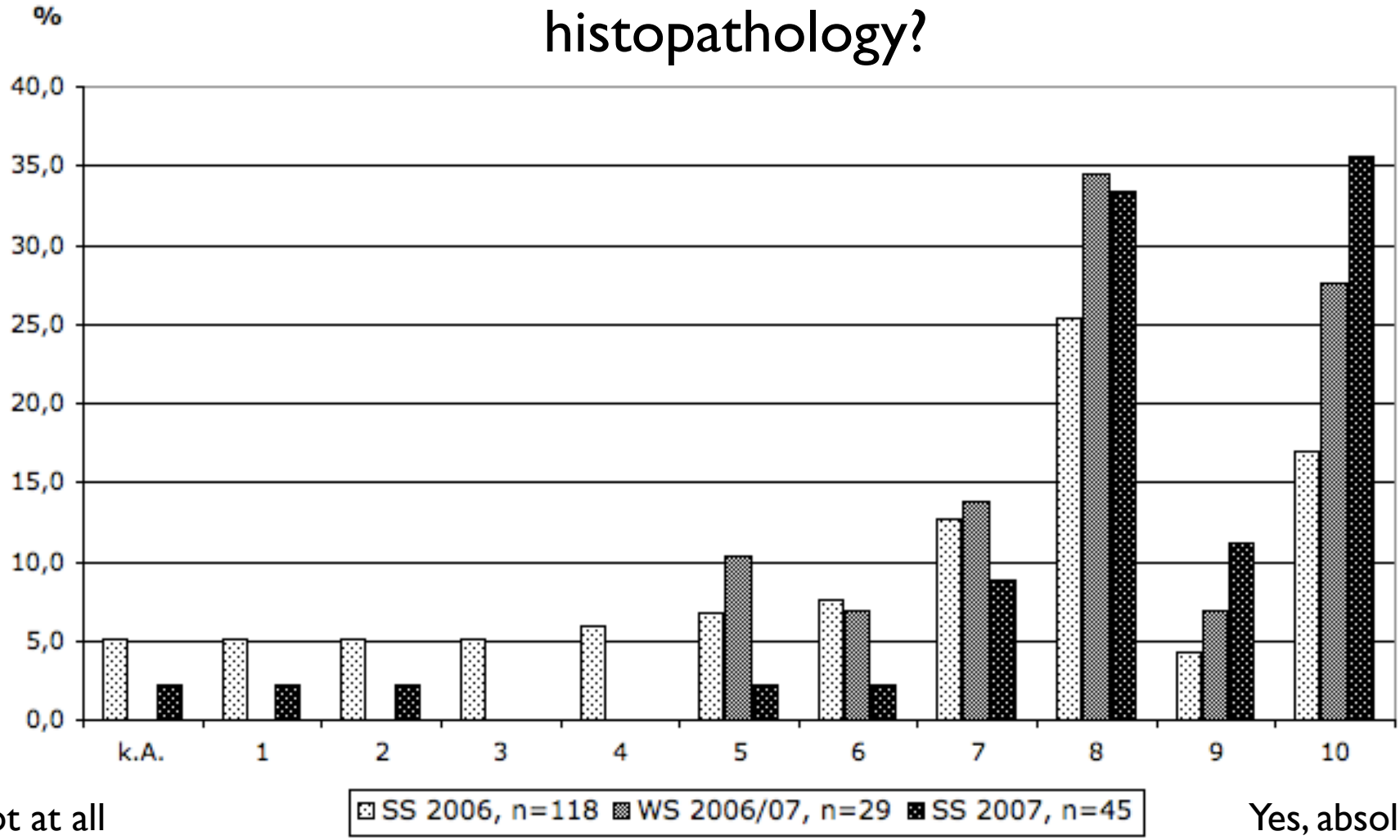
How important is for you to have access to digital slides?



Irrelevant

Very important

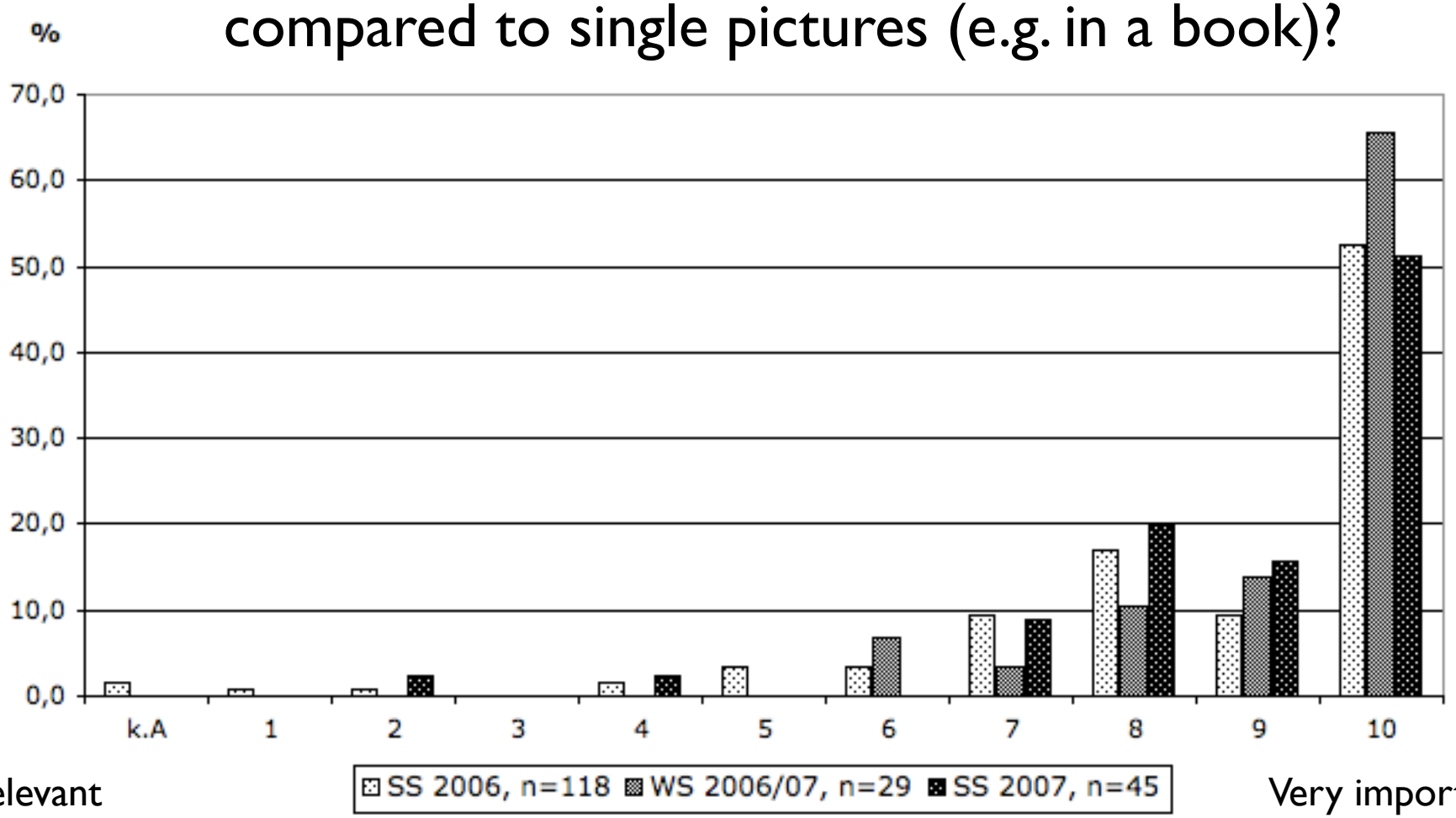
Did the virtual microscopy make easier to learn histopathology?



Not at all

Yes, absolutely

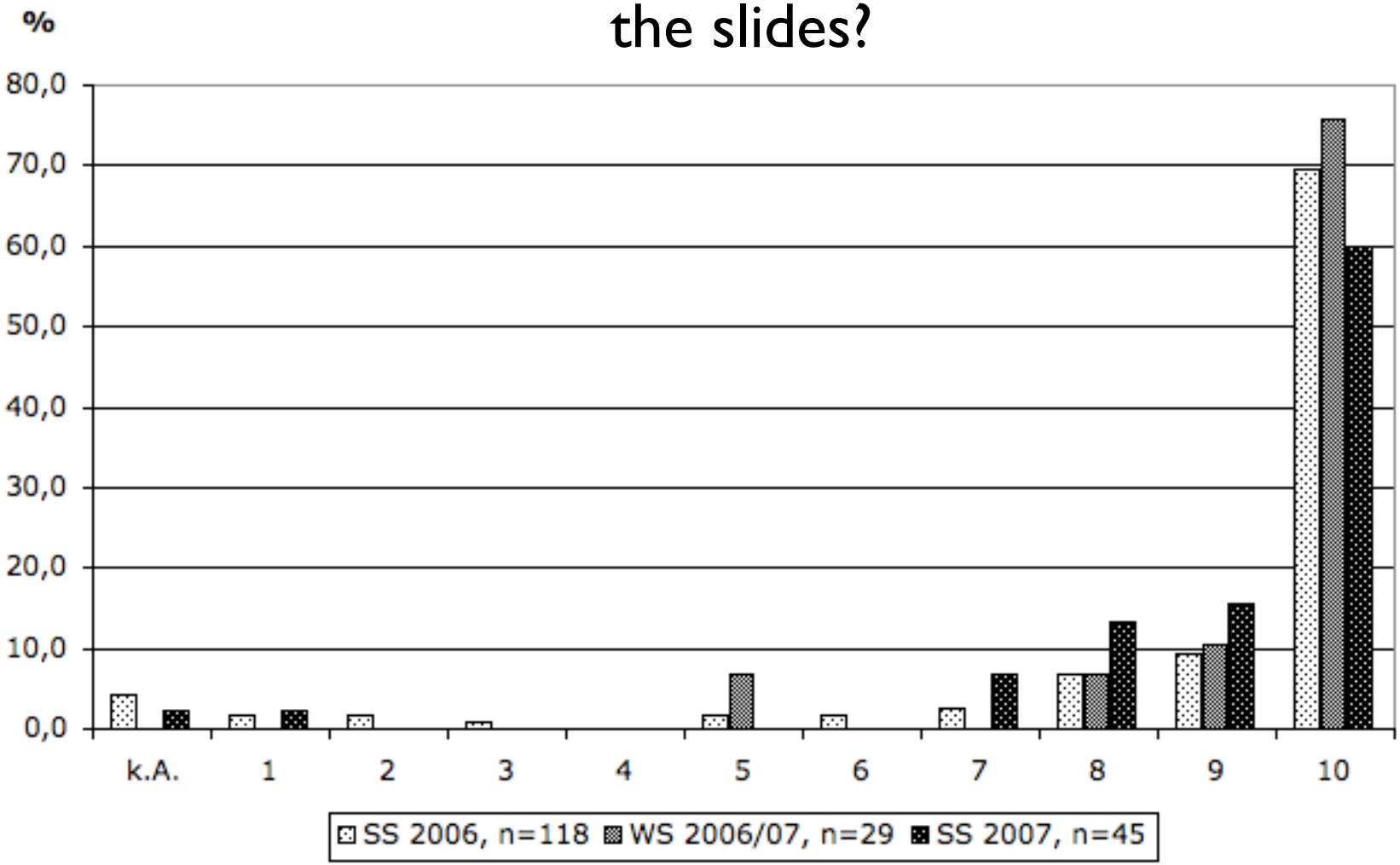
How important is it to have access to whole slides compared to single pictures (e.g. in a book)?



Irrelevant

Very important

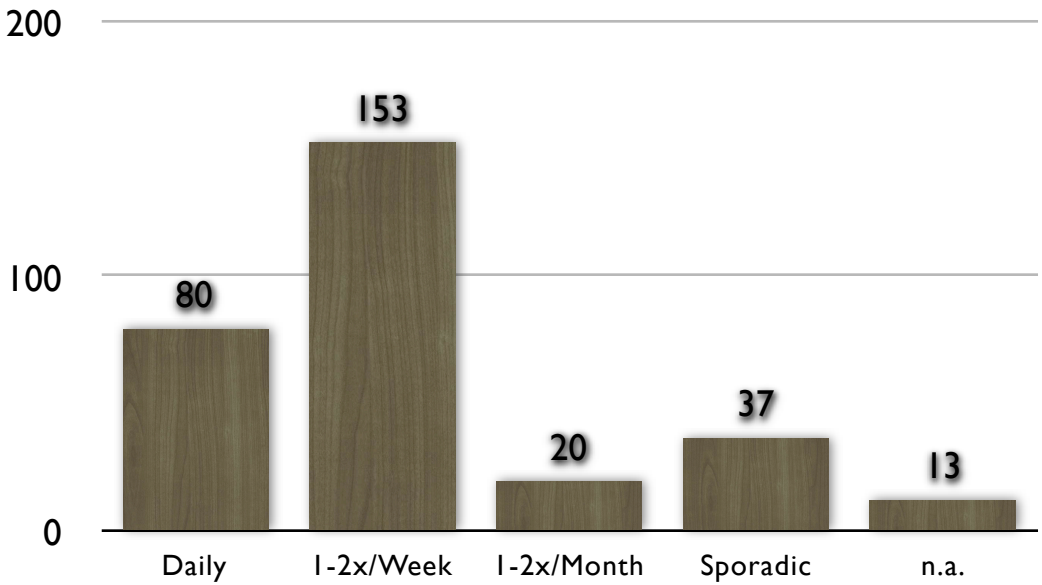
How important is it to have annotations on the slides?



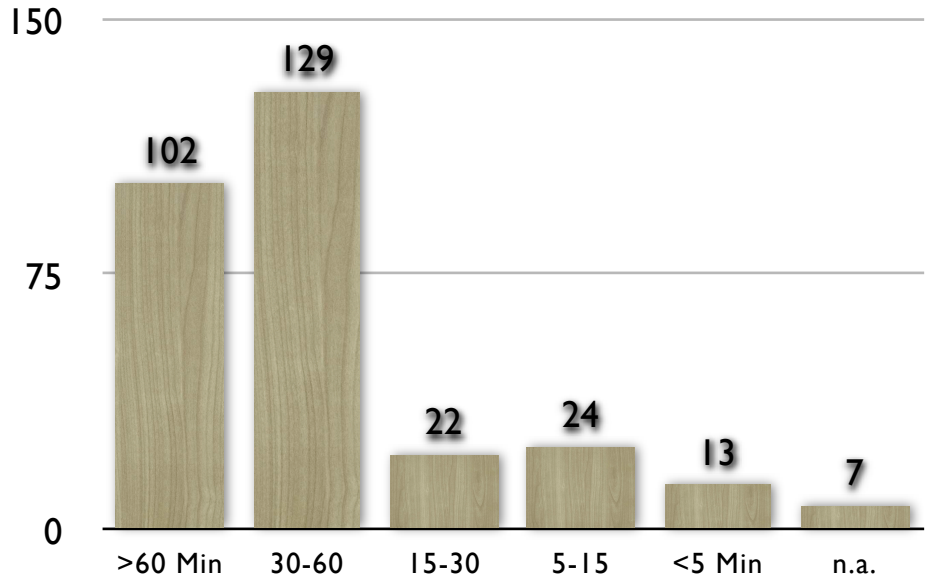
Irrelevant

Very important

How often do you use the system?



How long per session?



Google Analytics

Keep an eye on your students.....

Google Analytics

Keep an eye on your students.....

.... and improve your proyect all time

RWTH AACHEN UNIVERSITY

RWTH Aachen University is one of Europe's leading technology institutions renowned for its high standards in education and research. Its high-level academic approach to teaching focuses on acquiring expert knowledge in the basic sciences, complemented by application-oriented education and training.

Students, in particular in Engineering, benefit from engagement in research, applying and developing their knowledge in existing projects undertaken by research groups, thus gaining excellent professional competence.

As a result, RWTH Aachen University is ranked consistently as one of Germany's top institutions, and our graduates are highly sought after in industry and academia. International surveys underline the reputation of our graduates to be able to tackle highly complex challenges, work successfully in problem-solving teams, and display leadership qualities.

TOP-DOWNLOADS

- Photoshop CS Basics
- Programmierung (Java): Organisatorisches & Einführung
- Einführung/Grundlagen 1
- AJAX
- 01. Progra4All – Einführung

LINKS

- RWTH Aachen University
- RWTH Aachen University – Faculties
- International Researchers
- Prospective Students

ABOUT RWTH

RWTH transparent
Zuletzt geändert: 11. Feb 2009
Tracks insgesamt: 8

Events
Zuletzt geändert: 10. Feb 2009
Tracks insgesamt: 10

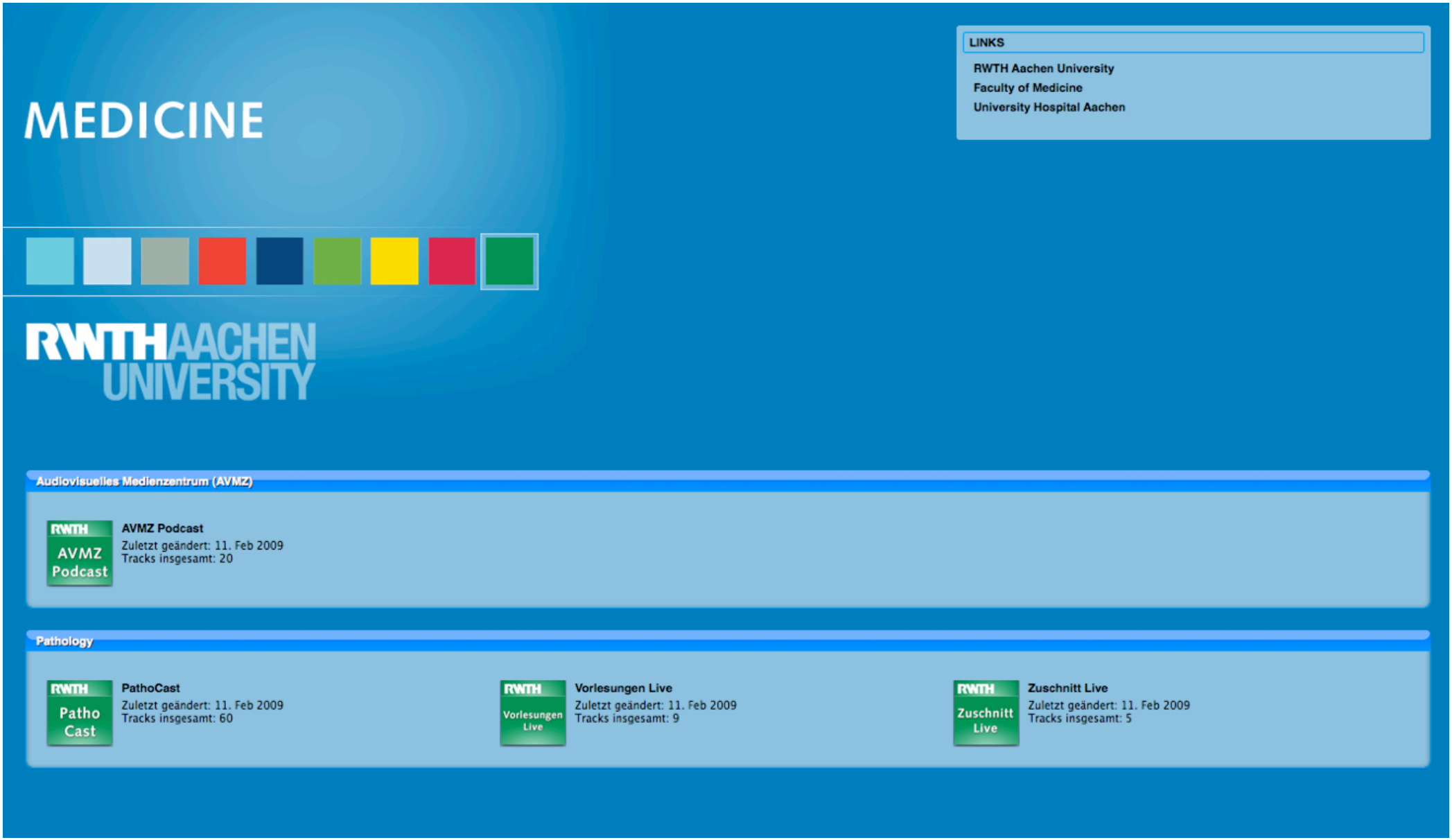
FACULTIES & COURSES

Architecture
Zuletzt geändert: 11. Feb 2009
Tracks insgesamt: 26

Civil Engineering
Zuletzt geändert: 11. Feb 2009
Tracks insgesamt: 8

Computer Science
Zuletzt geändert: 11. Feb 2009
Tracks insgesamt: 102

Medicine
Zuletzt geändert: 11. Feb 2009
Tracks insgesamt: 94



Google: „PathoCast“

Web-based microscopy:

...can be easy for user and administrator

...is wide accepted and appreciated by students

... always there in high quality

... the analysis of the visits help improving the technique

... combination of virtual microcopy, macroscopy and pathophysiology in form of movies: Integration of many aspects of the organpathology

Thanks to

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Deanery of the Medical Faculty: Fr. Dipl.-Ing. S. Sudmann

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Andreas Donner & Kolleginnen / Kollegen
Prof. Knüchel-Clarke

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Andreas Donner & Kolleginnen / Kollegen
Prof. Knüchel-Clarke

Students

Andreas Kneist,
Fabian Bärtling,
Milena Merk

Isabel Rieck
Lili Masuhr
Roman Freiherr

virtual microscopy RWTH Aachen:
www.vm-aachen.de

Videopodcast PathoCast:

www.pathocast.blip.tv

Google-Search:
„videos pathologie“
„virtuelle Mikroskopie“