



MPE06 – The development of advanced QA protocols for testing radiological devices: **PROGRAM**

Monday, November 18, 2019

09.00 – 09.30	Welcome & participants introduce themselves – R. Oyen, H. Bosmans	L
09.30 – 10.30	Set the scene: Quality Assurance, an important task of the MPE – H. Bosmans	L
10.30 – 10.50	Coffee break	L
10.50 – 11.30	Radiological reading of images: quality required! – J. Coolen (MD), C. Van Ongeval (MD), M. Smet (MD)	L
11.30 – 13.00	Typical QA protocols following IPEM 32, RP91 & RP162: the theoretical basis, practical implementation, shortcomings and perspectives – N. Marshall	L
13.00 – 14.00	Lunch break	S
14.00 – 15.30	See QA at work in the University Hospital of Leuven (demonstrations): <ul style="list-style-type: none"> ▪ Well organized QA, sharing our input files – A. Jacobs, M. Dehairs ▪ The development of phantoms for performance testing: a practical example for breast tomosynthesis – L. Cockmartin 	D + S
15.30 – 16.00	Coffee break	S
16.00 – 17.30	See QA at work in the University Hospital of Leuven (demonstrations): <ul style="list-style-type: none"> ▪ Patient Dose Monitoring & DRLs. Remote QC of mammography systems and monitors – J. Binst ▪ QA of digital mammography: well standardized... and what you always wanted to ask (in the mammography room) – K. Lemmens, N. Marshall 	S + M
17.30 – 18.00	Tour of the radiology department – R. Oyen (head of the radiology department)	
18.00 - ...	Dinner in the hospital, then guided walk of the city and ... a drink on the 'Oude Markt'. We end with a (Belgian) beer ☺	S

Tuesday, November 19, 2019

09.00 – 10.00	Designing quality into X-ray systems from the beginning – J. Horrocks	L
10.00 – 11.00	QA and Acceptability Criteria: the perspective of the device manufacturers – R. Klausz	L
11.00 – 11.20	Coffee break	L
11.20 – 12.20	From basic QC to advanced QA by the MPE: a worked-out example – H. Bosmans	L
12.20 – 13.00	Practical demonstration. Our tools (downloadable from the website tried) 4squares, mammo & tomo testing and ATIA. Bring and present your own protocols – J. Binst, L. Vancoillie, H. Bosmans, N. Marshall, G. Zhang	L
13.00 – 14.00	Lunch break	S
14.00 – 15.00	Detector tests vs system tests: including grid & automatic exposure controller – N. Marshall	L
15.00 – 15.20	Coffee break	S
15.20 – 18.00	Practical of choice: <ul style="list-style-type: none"> ▪ Option 1: MTF&DQE measurements, calculations and the use of software packages – N. Marshall ▪ Option 2: Contrast-detail testing: 4 AFC versus 'free-response' test objects – D. Petrov, M. Dehairs 	S + L
18.00 – 21.00	Dinner in the hospital and a visit to the brewery of AB InBev (Stella Artois).	S

Wednesday, November 20, 2019

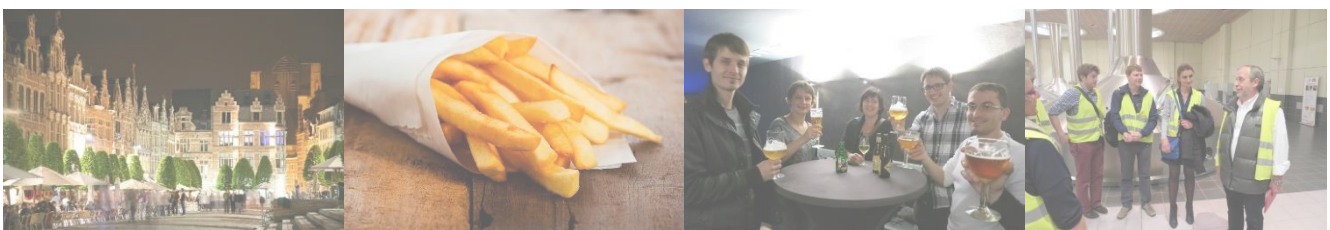
09.00 – 09.45	Review of patient dose metrics and new dose metrics, such as exposure index, SSDE, CTDI in CBCT, and life attributable risk (LAR) – H. Bosmans	L
09.45 – 10.30	Dosimetry in our QA report: DAP and DAK explored and XR27 – H. Bosmans / N. Marshall	L
10.30 – 10.50	Coffee break	S
10.50 – 11.20	Demonstration. Let's design an anthropomorphic phantom and use it for QA. – D. Petrov, K. Houben, K. Merken,	S
11.20 – 12.00	Demonstration. Creating and using voxel models – A. Dedulle	S
12.00 – 13.00	Introduction to model observers. Setting the dose levels – D. Petrov, N. Marshall	S
13.00 – 14.00	Lunch break	S
14.00 – 14.45	Measuring the performance of the entire imaging chain, possibly with AI investigations, by including the radiologist: observer performance methods explained – F. Zanca	B
14.45 – 15.00	Coffee break	S
15.00 – 18.00	Workshops in two groups: 'Compilation of a QA protocol beyond the basics' <ul style="list-style-type: none"> ▪ Group 1: a digital mammography system with new 'top secret' AEC module (tbd) – N. Marshall ▪ Group 2: dual energy CT or dental CBCT (tbd) – H. Bosmans 	S + B
19.15 – 22.00	Social activity: Group dinner	

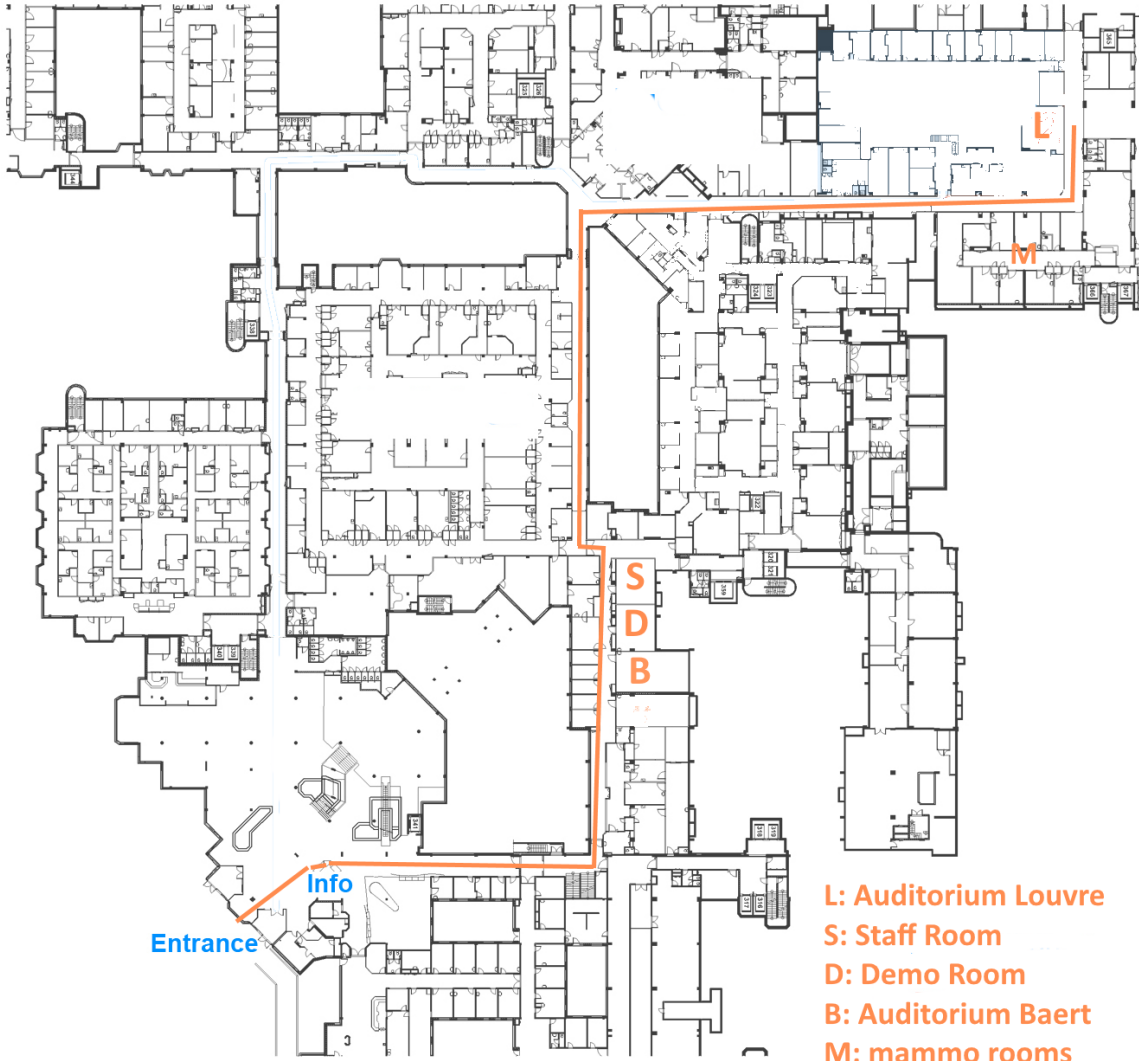
Thursday, November 21, 2019

09.00 – 10.30	Complete your QA protocol (group tasks)	S+L
10.30 – 11.00	Present your new protocol to the other group (group 1)	L
11.00 – 11.20	Coffee break	L
11.20 – 11.50	Present your new protocol to the other group (group 2)	L
11.50 – 12.30	Competition: find the best 'hint and trick' for QA – Moderator: H. Bosmans	L
12.30 – 13.30	Lunch break	S
13.30 – 14.00	Patient dosimetry packages for daily use in QA – A. Dedulle	L
14.00 – 14.30	Current one-stop-shop dosimeters (in mammography) – H. Bosmans	L
14.30 – 15.00	Digital mammography data processing – K. Triwigati	L
15.00 – 15.40	Get organized: set up databases in QC – J. Vignero	L
15.40 – 16.10	How to organize ROC reading, visual grading & clinical image quality evaluation with radiologists – L. Cockmartin	L
16.10 – 16.30	Coffee break	S
16.30 – 17.30	Workshop: QA in practice. The never ending challenges <ul style="list-style-type: none"> ▪ Practical examples, encountered difficulties, (local) solutions ▪ Benchmarking ▪ Mean Values, Outliers and Questions trigger new initiatives in QA ▪ Last chance for your cases and questions ▪ What is still missing? Not tested? J. Binst and the complete Leuven QA team	S
17.30 – 18.00	Preparing the examination and conclusion – H. Bosmans	S

Friday, November 22, 2019

09.00 – 13.00	Free to prepare for the examination	
13.00 – 17.00	Examination	B





- L:** Auditorium Louvre
- S:** Staff Room
- D:** Demo Room
- B:** Auditorium Baert
- M:** mammo rooms