

## Ole Graumann

Associate Professor, MD, PhD Chief consultant, Radiology Department, Odense University Hospital (OUH), Denmark  
Head Research- & Innovation Unit of Radiology, University of Southern Denmark (SDU)

### Education and employment

2019-	Head of Research- & Innovation Unit of Radiology, SDU
2017 - 2019	Head of Innovation Unit of Radiology, OUH
2016 - 2019	Head of Uroradiology Section, Dep. of Radiology, OUH
2016 -	Senior Consultant – Dep. of Radiology, OUH
2014 - 2016	Senior Consultant – Dep. of Radiology, Aarhus University Hospital
2016 -	Associate Professor – SDU
2014 - 2018	Associate Professor – Aarhus University (AU), Denmark
2014 - 2016	Adjunct Associate Professor – SDU
2014 - 2016	Director - Radiology Research Center, AU
2012 - 2014	Associate Professor, SDU
2009 - 2013	PhD degree from SDU
2006 - 2014	Radiology trainee
2004 - 2005	Medical trainee
1997 - 2004	Medical approval and MD from AU
1996 - 1997	International scholarship, County College of Morris, NJ, USA

### Publications (exclusive submitted, in-press, etc)

>75 publications in Web of Science (all databases) and >65 registered numbers in PubMed  
Citations: >380 (Web of Science) and >630 (Scholar.google)  
Scholar H-index is 11 and Web of Science H-index is 10  
> 130 peer-reviewed abstracts and proceedings at international conferences

### Books

Editor and book chapter author:

Basal Klinisk Ultralydsdiagnostik, Munksgaard 2017, ISBN: 9788762816961

Book chapter author:

Thoracic Ultrasound, ERS monograph, European Respiratory Society, 2018 “Physics and basic principle” and “The upper abdomen”, ISBN: 978-1-84984-093-4,

Basal Radiologi, ”Urinveje og mandlige genitalia”, FaDL 2017, ISBN: 9788777497322

Medicinske og kirurgiske cases, Radiologiske cases, FaDL 2017, ISBN: 9788777498435

Den akutte Patient, ”Akut billeddiagnostisk”, Munksgaard 2019, ISBN: 9788762818941

### Board, Council, and Committee membership

- 1: Member, Dansk Radiologisk Selskab (DRS)
- 2: Past-Board member, Dansk Ultralyddiagnostisk selskab (DUDS)
- 3: Past-Board member, Dansk Forening for Interventionel Radiologi (DFIR)
- 4: Board member, Dansk Ultralyddiagnostisk Selskab (DUDS)
- 5: Member, Dansk Forening for Onkoradiologi (DFOR)
- 6: Member, Dansk Akut Medicinsk Selskab (DASEM)
- 7: Board member, Dansk Uroradiologisk selskab (DURS)
- 8: Fellow, European Society of Urogenital Radiology
- 9: Board member, Dansk Urologisk Cancer Gruppe (DaProCa) (Prostate cancer)
- 10: European Society of Urogenital Radiology (Renal Cancer Group)
11. European Society of Urogenital Radiology (Prostate Cancer Group)

### Supervisor

Mentor for 2 Post doc and supervisor for 13 PhD students, 6 master undergraduate research students and > 25 other students (MD students etc).

2020-	Mainsupervisor for PhD student, MD, Jonas Asgaard Bojsen
2020 -	Mainsupervisor for PhD student, cand. scient. anth., Henriette List
2020 -	Mainsupervisor for PhD student, MD, Mohammad Talal Elhakim
2020-	Supervisor for PhD student, MD, Rasmus Tyrsted Mikkelsen
2020-	Supervisor for PhD student, MD, Morten Hjarnø Lorentzen

2020- Supervisor for PhD student, MD, Anne Heltborg Kristensen  
 2020 - 2021 Mainsupervisor for undergraduate research student, Nanna Lind Andersen  
 2019 - 2020 Mainsupervisor for undergraduate research student, Maria Tækker  
 2019 - 2020 Mainsupervisor for undergraduate research student, Björg Kristjansdottir  
 2018 - Main supervisor for PhD student, RN, Theresa Junker  
 2018 - Mainsupervisor for PhD student, MD, Louise Aarup Duus  
 2018 - Supervisor for PhD student, MD, Niels Jacobsen  
 2018 - 2021 Mentor for Post doc, PhD, radiographer, Bo Mussmann  
 2017 - 2018 Mainsupervisor for undergraduate research student, Janni Madsen  
 2017 - Mentor for Post doc, MD and PhD, Benjamin Rasmussen  
 2017 - 2021 Mainsupervisor for PhD student, radiographer, Janni Jensen  
 2017 - Supervisor for PhD student, MD, Torben Brøncher Petersen  
 2016 - 2020 Supervisor for PhD student, MD, Pia Iben Pietersen  
 2016 - 2020 Supervisor for PhD student, MD, Camilla Aakjær (Aalborg University)  
 2015 - 2016 Mainsupervisor for undergraduate research student, Stine Catharina Primdahl (AU)  
 2015 - 2016 Mainsupervisor for undergraduate research student, Camilla Bak-Ipsen (AU)  
 2015 - 2018 Mainsupervisor for PhD student, MD, Anuj Pareek (AU)  
 2014 - 2020 Supervisor for PhD student, MD, Søren Skaarup, (AU)

## Awards, prizes

2020: Award for best teacher at SDU  
 2018: Honorary lecture: Minimal invasive treatment of small renal masses, ESUR Congress  
 2017: ESUR Congress: Best Scientific presentation  
 2016: Carl Krebs honorary scholarship

## Teaching portfolio

Has formal educational training: Visual communication and presentation techniques, SDU (2011)

Administrative tasks relating to education including Examinations

- Member of the Regional Board for Education in Radiology, Region of Southern Denmark (2006-2013)
- Examiner in Radiology (melle-OSCE), SDU (2009-)
- Course director and responsible for e-learn program in clinical ultrasound, USabcd (2011-2015)
- Course organizer and director of Course in Clinical Ultrasound for Surgeons, SDU (2013-2014)
- Course organizer and director of Course in Basic Ultrasound Guided Interventions, SDU (2014)
- Course organizer and director of Education in Emergency Medicine Ultrasound, SDU (2013-2015)
- Competency assessment in Thoracic Ultrasound for the European Respiratory Society practical skills course in thoracic ultrasound, (2016 -)
- Masterclass Course organizer and director of Northern Europe renal Cryo ablation center of excellence (2018-)

Has conducted over 1500 lectures for various medical staff and students (e.g. MDs, medical students, radiographers and prehospital staff). Has major practical experience with the use of various educational methods, materials and tools including: Lectures, group work, team-based training, practical skill training and simulation training. Has experience with development of learning material (e.g., books, monographs and chapters), e-learn material (e.g., e-learn platforms and e-portals), multiple choice questions (incl. scientific validation), Objective Structured Assessment of Ultrasound Skills (OSAUS) (incl. scientific validation), VodCasts, training videos, App's, iBooks and Simulators (incl. scientific validation).

## Referee/editorial

Scandinavian Journal of Urology  
 Acta Radiologica  
 Insights Imaging  
 Ugeskr Læger.

## Major grants

Søster og Verner Lipperts Fond – IT (2015: 95.000 kr.)  
 Aase og Ejnar Danielsens Fond (2015: 75.000 kr.)  
 Toyotafonden (2015: 200.000 kr.)  
 Aase og Ejnar Danielsens Fond (2015: 100.000 kr.)  
 Lipperts Fond (2016: 95.000 kr.)  
 Gross. L. F. Foghts Fond (2016: 31.744,50 kr.)  
 Danske Lægers Forsikring under SEB Pension (2017: 34.767 kr.)  
 Jorcks Fond Rejsestipendium (2017: 200.000kr.)  
 SDU E-læringspuljen (2017: 110.900 kr.)  
 OUH Innovationspuljen (2018: 500.000kr.)  
 Frontlinje puljen – MANTRA ansøgning (2018: 3.700.000 kr.)

Sundhedsstyrelsen – Smerteprojekt (2018: 3.600.000 kr.)  
Boston Scientific Funding (2019: 750.000 kr.)  
Region Syddanmarks Innovationspulje (2019: 1.500.000 kr.)  
Region Syddanmarks Innovationspulje (2019: 4.700.000 kr.)  
OUH Innovationspuljen (2020: 261.500kr)  
Boston Scientific Funding (2020: 750.000 kr.)  
Boston Scientific Funding (2021: 750.000 kr.)  
Novo Nordisk (2021: 120.000kr).

## Publication list

### Publications

#### **Diagnostic accuracy of ultra-low-dose chest computed tomography in an emergency department**

Tækker, M., Kristjánsdóttir, B., Andersen, M. B., Fransen, M. L., Greisen, P. W., Laursen, C. B., Mussmann, B., Posth, S. & Graumann, O., mar. 2022, I: Acta Radiologica. 63, 3, s. 336-344

#### **Development of and Gathering Validity Evidence for a Theoretical Test in Contrast-Enhanced Ultrasound**

Jacobsen, N., Nolsøe, C. P., Konge, L., Graumann, O., Dietrich, C. F., Sidhu, P. S., Gilja, O. H., Meloni, M. F., Berzigotti, A., Harvey, C. J., Deganello, A., Prada, F., Lerchbaumer, M. H. & Laursen, C. B., feb. 2022, I: Ultrasound in Medicine & Biology. 48, 2, s. 248-256

#### **Quality of life and complications after nephron-sparing treatment of renal cell carcinoma stage T1-a systematic review**

Junker, T., Duus, L., Rasmussen, B. S. B., Azawi, N., Lund, L., Graumann, O. & Nørgaard, B., 4. jan. 2022, I: Systematic Reviews. 11, 1, s. 4

#### **Metastatic atypical renal tumour with metanephric characteristics treated with Sunitinib**

Mohammad, H., Madsen, K., Graumann, O., Loya, A. C., Jensen, N. V. & Dahlrot, R. H., jan. 2022, I: Urology Case Reports. 40, 4 s., 101880.

#### **MR arthrography of the shoulder; correlation with arthroscopy**

Jensen, J., Kristensen, M. T., Bak, L., Kristensen, S. S. & Graumann, O., 1. dec. 2021, I: Acta Radiologica Open. 10, 12, s. 1-5

#### **Virtual Reality - The future of ultrasound training, or just a gimmick?**

Larsen, J. D., Graumann, O. & Jensen, R., 1. dec. 2021, I: Ultraschall in der Medizin. 42, 6, s. 664-665

#### **Renal stone detection using a low kilo-voltage paediatric CT protocol - a porcine phantom study**

Mussmann, B., Hardy, M., Jung, H., Ding, M., Osther, P. J., Fransen, M. L., Greisen, P. W. & Graumann, O., dec. 2021, I: Journal of Medical Radiation Sciences. 68, 4, s. 342-348

#### **Improved diagnostics of infectious diseases in emergency departments: a protocol of a multifaceted multicentre diagnostic study**

Skjøt-Arkil, H., Heltborg, A., Lorentzen, M. H., Cartuliales, M. B., Hertz, M. A., Graumann, O., Rosenvinge, F. S., Petersen, E. R. B., Østergaard, C., Laursen, C. B., Skovsted, T. A., Posth, S., Chen, M. & Mogensen, C. B., 30. sep. 2021, I: BMJ Open. 11, 9, 10 s., e049606.

#### **Clinical Ultrasound Education for Medical Students: Virtual Reality Versus e-Learning, a Randomized Controlled Pilot Trial**

Rosenfeldt Nielsen, M., Qvist, E., Jensen, R. O., Møllerup, A. M., Pfeiffer, T. & Graumann, O., 1. sep. 2021, I: Ultrasound Quarterly. 37, 3, s. 292-296

#### **Is CEUS the future for imaging complex renal cysts? Are we on the threshold of a change?**

Sidhu, P. S., Graumann, O. & Webb, J., aug. 2021, I: Ultraschall in der Medizin (Stuttgart, Germany : 1980). 42, 4, s. 344-346

#### **Teaching ultrasound-guided peripheral venous catheter placement through immersive virtual reality: An explorative pilot study**

Andersen, N. L., Jensen, R. O., Posth, S., Laursen, C. B., Jørgensen, R. & Graumann, O., 9. jul. 2021, I: *Medicine*. 100, 27, e26394.

**Dorsal Tilt of the Distal Radius Fracture Changes With Forearm Rotation When Measured on Radiographs**

Jensen, J., Tromborg, H. B., Rasmussen, B. S. B., Gerke, O., Torfing, T., Precht, H. & Graumann, O., jul. 2021, I: *Journal of Hand Surgery Global Online*. 3, 4, s. 182-189

**Diagnostic accuracy of low-dose and ultra-low-dose CT in detection of chest pathology: a systematic review**

Tækker, M., Kristjansdottir, B., Graumann, O., Laursen, C. B. & I. Pietersen, P., jun. 2021, I: *Clinical Imaging*. 74, s. 139-148

**The number of successful injections associates with improved clinical effect in intralymphatic immunotherapy**

Skaarup, S. H., Graumann, O., Schmid, J., Bjerrum, A. S., Skjold, T. & Hoffmann, H. J., jun. 2021, I: *Allergy: European Journal of Allergy and Clinical Immunology*. 76, 6, s. 1859-1861

**Point of care-UL-skanning i danske akutafdelinger**

Arvig, M. D., Laursen, C. B., Weile, J. B., Tiwald, G., Graumann, O. & Posth, S., 19. apr. 2021, I: *Ugeskrift for Læger*. 183, 16, V12200906.

**The effect of forearm rotation on radiographic measurements of the wrist: an experimental study using radiostereometric analyses on cadavers**

Jensen, J., Tromborg, H. B., Rasmussen, B. S. B., Gerke, O., Torfing, T., Precht, H. & Graumann, O., 2. apr. 2021, I: *European Radiology Experimental*. 5, 10 s., 15.

**Point-of-care ultrasound to reveal hydronephrosis in the emergency department: an observational, prospective, semi-blinded single-center study**

Borggaard, P. G., Graumann, O., Laursen, C. B., Lassen, A. T. & Posth, S., 1. apr. 2021, I: *European journal of emergency medicine : official journal of the European Society for Emergency Medicine*. 28, 2, s. 147-148

**Thoracic ultrasound - New challenges, new horizons**

Laursen, C. B., Graumann, O. & Rahman, N. M., 1. apr. 2021, I: *Ultraschall in der Medizin*. 42, 2, s. 226-227

**EFSUMB 2020 Proposal for a Contrast-Enhanced Ultrasound-Adapted Bosniak Cyst Categorization - Position Statement**

Cantisani, V., Bertolotto, M., Clevert, D-A., Correias, J-M., Drudi, F. M., Fischer, T., Gilja, O. H., Granata, A., Graumann, O., Harvey, C. J., Ignee, A., Jenssen, C., Lerchbaumer, M. H., Ragel, M., Saftoiu, A., Serra, A. L., Stock, K. F., Webb, J. & Sidhu, P. S., apr. 2021, I: *Ultraschall in der Medizin (Stuttgart, Germany : 1980)*. 42, 2, s. 154-166

**Patient-controlled breath-hold during Cardiac MRI**

Mussmann, B. R., Find, D., Søndergaard, E., Gerke, O. & Graumann, O., 3. mar. 2021.

**Can Dual Energy CT with Fast kV-Switching Determine Renal Stone Composition Accurately?**

Mussmann, B. R., Hardy, M., Jung, H., Ding, M., Osther, P. J. S. & Graumann, O., 1. mar. 2021, I: *Academic Radiology*. 28, 3, s. 333-338

**Intralymphatic immunotherapy improves grass pollen allergic rhinoconjunctivitis: A 3-year randomized placebo-controlled trial**

Skaarup, S. H., Schmid, J. M., Skjold, T., Graumann, O. & Hoffmann, H. J., mar. 2021, I: *Journal of Allergy and Clinical Immunology*. 147, 3, s. 1011-1019

**Training Thoracic Ultrasound Skills: A Randomized Controlled Trial of Simulation-Based Training versus Training on Healthy Volunteers**

Pietersen, P. I., Jørgensen, R., Graumann, O., Konge, L., Skaarup, S. H., Lawaetz Schultz, H. H. & Laursen, C. B., feb. 2021, I: *Respiration*. 100, 1, s. 34-43

### **Thermoablation af hjernetumorer**

Jankovic, I., Bartek, J., Jensdottir, M., Rom Poulsen, F., Pedersen, C. B., Kristensen, B. W., Schytte, T., Andersen, T. L., Langhorn, L., Graumann, O., Krone, W. & Halle, B., jan. 2021, I: Ugeskrift for Laeger. 183, 1, V12190734.

### **Incidental finding of a right-sided supernumerary kidney**

Andersen, N. L., Jensen, R. & Graumann, O., 17. dec. 2020, I: BMJ Case Reports. 13, 12, 2 s., e239968.

### **Use and impact of point-of-care ultrasonography in general practice: A prospective observational study**

Aakjær Andersen, C., Brodersen, J., Davidsen, A. S., Graumann, O. & Jensen, M. B. B., 17. sep. 2020, I: BMJ Open. 10, 9, 9 s., e037664.

### **Contrast-Enhanced Ultrasound: Development of Syllabus for Core Theoretical and Practical Competencies**

Jacobsen, N., Nolsøe, C. P., Konge, L., Graumann, O., Dietrich, C. F., Sidhu, P. S., Piscaglia, F., Gilja, O. H. & Laursen, C. B., sep. 2020, I: Ultrasound in Medicine & Biology. 46, 9, s. 2287-2292

### **Segmental Testicular Infarction - Is Conservative Management Feasible?**

Bak-Ipsen, C. B., Degn, S., Blichert-Refsgaard, L. S., Nielsen, T. K., List, H. & Graumann, O., sep. 2020, I: Ultrasound International Open. 6, 2, s. E50-E52

### **Kunstig intelligens til cancerdiagnostik i brystkræftscreening**

Talal Elhakim, M., Graumann, O., Larsen, L. B., Nielsen, M. & Rasmussen, B. S., 17. aug. 2020, I: Ugeskrift for Laeger. 182, 16, s. 1488-1492 V06200423.

### **Are radiographic measurements of distal radius fractures evidence based?**

Jensen, J., Rasmussen, B. S., Aarup Duus, L., Torfing, T., Precht, H., Tromborg, H. B. & Graumann, O., 15. jul. 2020.

### **Distal radius fractures – radiographic measurements and patient reported outcome**

Jensen, J., B J Løndal, I., M Sudmann, T. & Graumann, O., 15. jul. 2020.

### **Ultrasound-Guided Cryoablation of Renal Grafts Tumors**

Bo Madsen, J. L., Bak-Ipsen, C. B., Nielsen, T. K., Solvig, J. & Graumann, O., 22. jun. 2020, I: Ultrasound International Open. 6, 1, s. E4-E6

### **Accuracy of lung ultrasonography in the hands of non-imaging specialists to diagnose and assess the severity of community-acquired pneumonia in adults: a systematic review**

Strøm, J. J., Haugen, P. S., Hansen, M. P., Graumann, O., Jensen, M. B. B. & Aakjær Andersen, C., 17. jun. 2020, I: BMJ Open. 10, 6, 8 s., e036067.

### **Point-of-care ultrasound induced changes in management of unselected patients in the emergency department - a prospective single-blinded observational trial**

Weile, J., Frederiksen, C. A., Laursen, C. B., Graumann, O., Sloth, E. & Kirkegaard, H., 29. maj 2020, I: Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine. 28, 9 s., 47.

### **Clinical Applications of Contrast-Enhanced Thoracic Ultrasound (CETUS) Compared to Standard Reference Tests: A Systematic Review**

Jacobsen, N., Pietersen, P. I., Nolsoe, C., Konge, L., Graumann, O. & Laursen, C. B., 7. apr. 2020, (E-pub ahead of print) I: Ultraschall in der Medizin (Stuttgart, Germany : 1980).

### **Lung Ultrasound in the Assessment of Pulmonary Complications After Lung Transplantation**

Davidsen, J. R., Schultz, H. H. L., Henriksen, D. P., Iversen, M., Kalhauge, A., Carlsen, J., Perch, M., Graumann, O. & Laursen, C. B., apr. 2020, I: Ultraschall in der Medizin (Stuttgart, Germany : 1980). 41, 2, s. 148-156

### **Kunstig intelligens - trussel eller tjener?**

Rasmussen, B. S., Boesen, M. & Graumann, O., feb. 2020, I: Medicoteknik. 7, 1, s. 6-8

**Renal cryoablation - does deep endophytic ablation affect the renal collecting system?**

Makki, A., Aastrup, M. B., Vinter, H., Ginnerup, B., Graumann, O., Borre, M. & Nielsen, T. K., feb. 2020, I: Scandinavian Journal of Urology. 54, 1, s. 33-39

**Can the examination time in CT and conventional x-ray be reduced in an emergency department with integrated radiology unit? A retrospective study**

Blessing, K. F., Brabrand, M., Graumann, O., Foldrup, A. & Mussmann, B., 1. jan. 2020, I: Acute Medicine. 19, 1, s. 21-25

**Clinical applications of contrast-enhanced thoracic ultrasound (CETUS) compared to standard reference tests: a systematic review**

Jacobsen, N., Konge, L., Pietersen, P. I., Nolsøe, C. P., Graumann, O. & Laursen, C. B., 2020, I: European Respiratory Journal. 56, suppl. 64, 2785.

**CT Thermometry in Cryoablation**

Graumann, O., Skov-Madsen, P., Cukrowski, A., Keane, G., Faby, S. & Mussmann, B. R., 2020.

**Patient involvement in designing a research project at the Department of Radiology – NEPHSPARE PRO: Patient reported outcome after nephron sparing treatment of small renal tumors**

Junker, T., Lund, L., Rasmussen, B. S., Azawi, N. H., Nørgaard, B. & Graumann, O., 2020.

**Distal radius fractures and radiographic assessment: a systematic review of measurement accuracy.**

Jensen, J., Rasmussen, B. S., Aarup Duus, L., Torfing, T., Precht, H., Tromborg, H. B. & Graumann, O., nov. 2019, I: Acta Radiologica. 60, 11, s. 1482-1489

**Percutaneous ultrasound-guided cryoablation of renal grafts tumours**

Lynggård Bo Madsen, J., Nielsen, T. K., Solvig, J. & Graumann, O., 10. okt. 2019.

**Late Breaking Abstract - Training thoracic ultrasound skills: a multicentre, blinded, randomized controlled trial of simulation-based training versus training on healthy figurants**

Iben Pietersen, P., Jørgensen, R., Graumann, O., Konge, L., Helbo Skaarup, S., Lawaetz Schultz, H. H. & Laursen, C. B., 28. sep. 2019, I: European Respiratory Journal. 54, suppl 63, s. OA5341

**Conservative treatment of rectosigmoid endometriosis: A prospective study**

Egekvist, A. G., Marinovskij, E., Forman, A., Kesmodel, U. S., Graumann, O. & Seyer-Hansen, M., sep. 2019, I: Acta Obstetrica et Gynecologica Scandinavica. 98, 9, s. 1139-1147

**Development of and Gathering Validity Evidence for a Theoretical Test in Thoracic Ultrasound**

Pietersen, P. I., Konge, L., Madsen, K. R., Bendixen, M., Maskell, N. A., Rahman, N., Graumann, O. & Laursen, C. B., sep. 2019, I: Respiration. 98, 3, s. 221-229

**CT-guidet cryoablation af nyrecancer: et retrospektivet studie af klinisk og onkologisk outcome**

Aarup Duus, L., Rasmussen, B. S., Lund, L., Pedersen, M. & Graumann, O., 29. aug. 2019, s. 125. 1 s.

**Complication Incidences and Treatment Outcomes of Endovascular Aneurysm Repair-A Single-Center Long-Time Follow-Up Study**

Andersen, R. M., Rasmussen, B. S. B., Halekoh, U., Langfeldt, S., Mafi, H. M. & Graumann, O., aug. 2019, I: Vascular and Endovascular Surgery. 53, 6, s. 458-463

**Danish general practitioners have found their own way of using point-of-care ultrasonography in primary care: A qualitative study**

Andersen, C. V. A., Davidsen, A. S., Brodersen, J., Graumann, O. & Jensen, M. B., 28. jun. 2019, I: BMC Family Practice. 20, 11 s., 89.

**Diagnostic value of whole-body-focused ultrasonography in high-acuity patients in the emergency department: a prospective single-center cross-sectional study**

Riishede, M., Laursen, C. B., Teglbjærg, L. S., Rancinger, E., Pedersen, P. B., Luef, S. M., Clausen, J. H., Graumann, O., Lassen, A. T. & Bastrup, G., 27. maj 2019, I: *Ultrasound Journal*. 11, 11 s., 11.

**Economic evaluation of percutaneous cryoablation versus partial nephrectomy of small renal masses. A systematic review**

Aarup Duus, L., Gulden, T., Che, C. & Graumann, O., 22. maj 2019.

**Developing and Gathering Validity Evidence for a Simulation-Based Test of Competencies in Lung Ultrasound**

Pietersen, P. I., Konge, L., Graumann, O., Nielsen, B. U. & Laursen, C. B., 1. apr. 2019, I: *Respiration*. 97, 4, s. 329-336

**Percutaneous cryoablation of a solitary, soft-tissue metastasis from renal cell carcinoma: a new local minimal invasive curative treatment**

Junker, T., Rasmussen, B. S., Toft, A. & Graumann, O., 23. mar. 2019, I: *BMJ Case Reports*. 12, 3, 4 s., 227129.

**Nephspare PRO - Patientrapporteret livskvalitet efter nyrebevarende behandling af lokaliseret nyrekæft - Patientinvolvering i forskningsprocessen**

Junker, T., Graumann, O., Nørgaard, B., Rasmussen, B. S., Lund, L. & Azawi, N. H., 2019.

**Preliminary results of multiparametric magnetic resonance scan in combination with liquid biopsies performed on men suspected of prostate cancer.**

Brøchner Pedersen, T., Poulsen, M. H., Graumann, O., Asmussen, J. T. & Lund, L., 2019.

**Point-of-care ultrasound findings in unselected patients in an emergency department -results from a prospective observational trial**

Weile, J., Laursen, C. B., Frederiksen, C. A., Graumann, O., Sloth, E. & Kirkegaard, H., 27. dec. 2018, I: *BMC Emergency Medicine*. 18, 8 s., 60.

**Teaching for active learning**

Graumann, O., Jensen, R., Andreasen, E., Mejlvang, B., Nørgaard, C. & Rasmussen, B. S., 6. nov. 2018.

**Cryoablation: a potential treatment option for renal metastasis from lung cancer?**

Degn, S., Davidsen, J. R. & Graumann, O., 1. nov. 2018, I: *BMJ Case Reports*. 2018, 225841.

**A Long-Time Follow-Up Study of a Single-Center Endovascular Aneurysm Repair (Evar) Endoleak Outcomes**

Andersen, R. M., Henriksen, D. P., Mafi, H. M., Langfeldt, S., Budtz-Lilly, J. & Graumann, O., okt. 2018, I: *Vascular and Endovascular Surgery*. 52, 7, s. 505-511

**Lung ultrasound training: a systematic review of published literature in clinical lung ultrasound training**

Pietersen, P. I., Madsen, K. R., Graumann, O., Konge, L., Nielsen, B. U. & Laursen, C. B., 3. sep. 2018, I: *Critical Ultrasound Journal*. 10, 15 s., 23.

**medical treatment of rectal endometriosis: symptoms and quality of life**

Graumann, O., Gisselmann Egekvist, A., Marinovskij, E. (red.), Forman, A. (red.), kesmodel, U. S. (red.) & Seyer-Hansen, M., 10. jun. 2018.

**Short-term complications for percutaneous ultrasound-guided biopsy of renal masses in adult outpatients**

Rasmussen, L. R., Loft, M., Nielsen, T. K., Bjødstrup Jensen, M., Høyer, S., Hørlyck, A. & Graumann, O., apr. 2018, I: *Acta Radiologica*. 59, 4, s. 491-496

**Validation of the Peripheral Ultrasound-guided Vascular Access Rating Scale**

Primdahl, S. C., Weile, J., Clemmesen, L., Madsen, K. R., Subhi, Y., Petersen, P. & Graumann, O., jan. 2018, I: *Medicine (United States)*. 97, 2, 7 s., 9576.

### **Education and training in lung ultrasound: a systematic review**

Pietersen, P. I., Madsen, K. R., Graumann, O., Konge, L., Nielsen, B. U. & Laursen, C. B., 2018, I: European Respiratory Journal. 52, Suppl. 62, 1 s., OA1639.

### **Physics and basic principles**

Alerhand, S., Graumann, O. & Nelson, B. P., 2018, I: ERS Monograph. 2018, 9781849840941, s. 1-13

### **The upper abdomen**

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