

Personal data

Born July 24th, 1980 in Vienna, Austria

Married to Marie Helene Schernthaner-Reiter, MD, PhD

One son Emil Constantin (born 2016)

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Main research focus

Cardiovascular Radiology and Interventional Oncology

Education & professional experience

1990-1998 Highschool "Schottengymnasium", Vienna

1998 – 2003 Medical School (N201), University of Vienna

04/2004 - 09/2004 resident at the internal department of the hospital "Barmherzige Brüder", Vienna

10/2004 – 03/2007 research fellow at the Division of Cardiovascular and Interventional Radiology, Department of Radiology, Medical University of Vienna

04/2006 – 03/2007 research fellow in the interdisciplinary AngioVis II project (www.angiovis.org)

12/2006 research visit of the Stanford Medical Center, California for 1 month

04/2007 – 03/2012 resident at the Department of Radiology, Medical University of Vienna

09/2010 – 09/2013 board member of the Austrian Roentgen Society (www.oerg.at)

10/2010 - 09/2013 national delegate of the ESR Radiology Trainees Forum (<http://www.myesr.org/rtf>)

04/2012 – 06/2012 resident at the Department of Surgery, Division of Vascular Surgery, Medical University of Vienna

07/2012 -10/2012 resident at the Department of Radiology, Division of Cardiovascular and Interventional Radiology, Department of Radiology, Medical University of Vienna

Since 10/2012 board certified radiologist

Since 01/2013 Assistant Professor and attending radiologist at the Division of Cardiovascular and Interventional Radiology, Department of Radiology, Medical University of Vienna

Since 2013 member of the Control Committee of the medical specialist examination for radiology in Austria

10/2013 – 04/2015 Visiting Scientist at the Russell H. Morgan Department of Radiology and Radiological Science, Section of Vascular and Interventional Radiology, The Johns Hopkins Hospital, Baltimore, Maryland

05/2014 – 09/2015 Co-Principal Investigator of the AngioVis III project (www.angiovis.org)

05/2017 habilitation

Publications

1. Sohn JH, Duran R, Zhao Y, Fleckenstein F, Chapiro J, Sahu S, **Schernthaner RE**, Qian T, Lee H, Zhao L, Hamilton J, Frangakis C, Lin M, Salem R, Geschwind JF. Validation of the Hong Kong Liver Cancer Staging System in Determining Prognosis of the North American Patients Following Intra-arterial Therapy. *Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association*. 2017;15(5):746-55 e4.
2. Schreiner MM, Platzgummer H, Unterhumer S, Weber M, Mistelbauer G, Loewe C, **Schernthaner RE**. A BMI-adjusted ultra-low-dose CT angiography protocol for the peripheral arteries-Image quality, diagnostic accuracy and radiation exposure. *Eur J Radiol*. 2017;93:149-56.
3. Sahu S, **Schernthaner R**, Ardon R, Chapiro J, Zhao Y, Sohn JH, Fleckenstein F, Lin M, Geschwind JF, Duran R. Imaging Biomarkers of Tumor Response in Neuroendocrine Liver Metastases Treated with Transarterial Chemoembolization: Can Enhancing Tumor Burden of the Whole Liver Help Predict Patient Survival? *Radiology*. 2017;283(3):883-94.
4. Gorodetski B, Chapiro J, **Schernthaner R**, Duran R, Lin M, Lee H, Lenis D, Stuart EA, Nonyane BA, Pekurovsky V, Tamrazi A, Gebauer B, Schlachter T, Pawlik TM, Geschwind JF. Advanced-stage hepatocellular carcinoma with portal vein thrombosis: conventional versus drug-eluting beads transcatheter arterial chemoembolization. *Eur Radiol*. 2017;27(2):526-35.
5. Duran R, Mirpour S, Pekurovsky V, Ganapathy-Kanniappan S, Brayton CF, Cornish TC, Gorodetski B, Reyes J, Chapiro J, **Schernthaner RE**, Frangakis C, Lin M, Sun JD, Hart CP, Geschwind JF. Preclinical Benefit of Hypoxia-Activated Intra-arterial Therapy with Evofosfamide in Liver Cancer. *Clinical cancer research : an official journal of the American Association for Cancer Research*. 2017;23(2):536-48.
6. Zhao Y, Duran R, Chapiro J, Sohn JH, Sahu S, Fleckenstein F, Smolka S, Pawlik TM, **Schernthaner R**, Zhao L, Lee H, He S, Lin M, Geschwind JF. Transarterial Chemoembolization for the Treatment of Advanced-Stage Hepatocellular Carcinoma. *Journal of gastrointestinal surgery : official journal of the Society for Surgery of the Alimentary Tract*. 2016;20(12):2002-9.
7. Wielandner A, Beitzke D, **Schernthaner R**, Wolf F, Langenberger C, Stadler A, Loewe C. Is ECG triggering for motion artefact reduction in dual-source CT angiography of the ascending aorta still required with high-pitch scanning? The role of ECG-gating in high-pitch dual-source CT of the ascending aorta. *The British journal of radiology*. 2016:20160174.
8. **Schernthaner RE**, Haroun RR, Duran R, Lee H, Sahu S, Sohn JH, Chapiro J, Zhao Y, Gorodetski B, Fleckenstein F, Smolka S, Radaelli A, van der Bom IM, Lin M, Geschwind JF. Improved Visibility of Metastatic Disease in the Liver During Intra-Arterial Therapy Using Delayed Arterial Phase Cone-Beam CT. *Cardiovasc Intervent Radiol*. 2016;39(10):1429-37.
9. Fleckenstein FN, **Schernthaner RE**, Duran R, Sohn JH, Sahu S, Zhao Y, Hamm B, Gebauer B, Lin M, Geschwind JF, Chapiro J. 3D Quantitative tumour burden analysis in patients with hepatocellular carcinoma

before TACE: comparing single-lesion vs. multi-lesion imaging biomarkers as predictors of patient survival. *Eur Radiol.* 2016;26(9):3243-52.

10. Fleckenstein FN, **Schernthaner RE**, Duran R, Sohn JH, Sahu S, Marshall K, Lin M, Gebauer B, Chapiro J, Salem R, Geschwind JF. Renal Cell Carcinoma Metastatic to the Liver: Early Response Assessment after Intraarterial Therapy Using 3D Quantitative Tumor Enhancement Analysis. *Translational oncology.* 2016;9(5):377-83.
11. Duran R, Sharma K, Dreher MR, Ashrafi K, Mirpour S, Lin M, **Schernthaner RE**, Schlachter TR, Tacher V, Lewis AL, Willis S, den Hartog M, Radaelli A, Negussie AH, Wood BJ, Geschwind JF. A Novel Inherently Radiopaque Bead for Transarterial Embolization to Treat Liver Cancer - A Pre-clinical Study. *Theranostics.* 2016;6(1):28-39.
12. Chockalingam A, Duran R, Sohn JH, **Schernthaner R**, Chapiro J, Lee H, Sahu S, Nguyen S, Geschwind JF, Lin M. Radiologic-pathologic analysis of quantitative 3D tumour enhancement on contrast-enhanced MR imaging: a study of ROI placement. *Eur Radiol.* 2016;26(1):103-13.
13. Wang Z, Chen R, Duran R, Zhao Y, Yenokyan G, Chapiro J, **Schernthaner R**, Radaelli A, Lin M, Geschwind JF. Intraprocedural 3D Quantification of Lipiodol Deposition on Cone-Beam CT Predicts Tumor Response After Transarterial Chemoembolization in Patients with Hepatocellular Carcinoma. *Cardiovasc Intervent Radiol.* 2015;38(6):1548-56.
14. Wang Z, Chapiro J, **Schernthaner R**, Duran R, Chen R, Geschwind JF, Lin M. Multimodality 3D Tumor Segmentation in HCC Patients Treated with TACE. *Acad Radiol.* 2015;22(7):840-5.
15. **Schernthaner RE**, Wolf F, Mistelbauer G, Weber M, Sramek M, Groeller E, Loewe C. New hybrid reformations of peripheral CT angiography: do we still need axial images? *Clin Imaging.* 2015;39(4):603-7.
16. **Schernthaner RE**, Lin M, Duran R, Chapiro J, Wang Z, Geschwind JF. Delayed-Phase Cone-Beam CT Improves Detectability of Intrahepatic Cholangiocarcinoma During Conventional Transarterial Chemoembolization. *Cardiovasc Intervent Radiol.* 2015;38(4):929-36.
17. **Schernthaner RE**, Duran R, Chapiro J, Wang Z, Geschwind JF, Lin M. A new angiographic imaging platform reduces radiation exposure for patients with liver cancer treated with transarterial chemoembolization. *Eur Radiol.* 2015;25(11):3255-62.
18. **Schernthaner RE**, Chapiro J, Sahu S, Withagen P, Duran R, Sohn JH, Radaelli A, van der Bom IM, Geschwind JF, Lin M. Feasibility of a Modified Cone-Beam CT Rotation Trajectory to Improve Liver Periphery Visualization during Transarterial Chemoembolization. *Radiology.* 2015;277(3):833-41.
19. Savic LJ, Lin MD, Duran R, **Schernthaner RE**, Hamm B, Geschwind JF, Hong K, Chapiro J. Three-dimensional quantitative assessment of lesion response to MR-guided high-intensity focused ultrasound treatment of uterine fibroids. *Acad Radiol.* 2015;22(9):1199-205.
20. Lee H, Chapiro J, **Schernthaner R**, Duran R, Wang Z, Gorodetski B, Geschwind JF, Lin M. How I do it: a practical database management system to assist clinical research teams with data collection, organization, and reporting. *Acad Radiol.* 2015;22(4):527-33.

21. Duran R, Chapiro J, **Schernthaner RE**, Geschwind JF. Systematic review of catheter-based intra-arterial therapies in hepatocellular carcinoma: state of the art and future directions. *The British journal of radiology*. 2015;88(1052):20140564.
22. Chapiro J, Lin M, Duran R, **Schernthaner RE**, Geschwind JF. Assessing tumor response after loco-regional liver cancer therapies: the role of 3D MRI. *Expert review of anticancer therapy*. 2015;15(2):199-205.
23. Chapiro J, Duran R, Lin M, Werner JD, Wang Z, **Schernthaner R**, Savic LJ, Lessne ML, Geschwind JF, Hong K. Three-Dimensional Quantitative Assessment of Uterine Fibroid Response after Uterine Artery Embolization Using Contrast-Enhanced MR Imaging. *J Vasc Interv Radiol*. 2015;26(5):670-8 e2.
24. Chapiro J, Duran R, Lin M, **Schernthaner RE**, Wang Z, Gorodetski B, Geschwind JF. Identifying Staging Markers for Hepatocellular Carcinoma before Transarterial Chemoembolization: Comparison of Three-dimensional Quantitative versus Non-three-dimensional Imaging Markers. *Radiology*. 2015;275(2):438-47.
25. Chapiro J, Duran R, Lin M, **Schernthaner R**, Lesage D, Wang Z, Savic LJ, Geschwind JF. Early survival prediction after intra-arterial therapies: a 3D quantitative MRI assessment of tumour response after TACE or radioembolization of colorectal cancer metastases to the liver. *Eur Radiol*. 2015;25(7):1993-2003.
26. Chapiro J, Duran R, Lin M, Mungo B, Schlachter T, **Schernthaner R**, Gorodetski B, Wang Z, Geschwind JF. Transarterial chemoembolization in soft-tissue sarcoma metastases to the liver - the use of imaging biomarkers as predictors of patient survival. *Eur J Radiol*. 2015;84(3):424-30.
27. Adekanmi AJ, **Schernthaner RE**, Lammer J. PARKES WEBER SYNDROME: A Rare Vascular Malformation-Imaging And The Usefulness Of Intravascular Intervention. *The Internet Journal of Radiology*. 2015;18(1):1-5.
28. Duran R, Chapiro J, Frangakis C, Lin M, Schlachter TR, **Schernthaner RE**, Wang Z, Savic LJ, Tacher V, Kamel IR, Geschwind JF. Uveal Melanoma Metastatic to the Liver: The Role of Quantitative Volumetric Contrast-Enhanced MR Imaging in the Assessment of Early Tumor Response after Transarterial Chemoembolization. *Translational oncology*. 2014;7(4):447-55.
29. Chapiro J, Wood LD, Lin M, Duran R, Cornish T, Lesage D, Charu V, **Schernthaner R**, Wang Z, Tacher V, Savic LJ, Kamel IR, Geschwind JF. Radiologic-pathologic analysis of contrast-enhanced and diffusion-weighted MR imaging in patients with HCC after TACE: diagnostic accuracy of 3D quantitative image analysis. *Radiology*. 2014;273(3):746-58.
30. Beitzke D, Nolz R, Unterhumer S, Plank C, Weber M, **Schernthaner R**, Schopf V, Wolf F, Loewe C. Low-dose high-pitch CT angiography of the supraaortic arteries using sinogram-affirmed iterative reconstruction. *PloS one*. 2014;9(6):e99832.
31. Mistelbauer G, Morar A, Varchola A, **Schernthaner R**, Bacliija I, Kochl A, Kanitsar A, Bruckner S, Groller E. Vessel Visualization using Curvicircular Feature Aggregation. *Comput Graph Forum*. 2013;32(3):231-40.

32. Ba-Ssalamah A, Muin D, **Schernthaner R**, Kulinna-Cosentini C, Bastati N, Stift J, Gore R, Mayerhoefer ME. Texture-based classification of different gastric tumors at contrast-enhanced CT. *Eur J Radiol*. 2013;82(10):e537-43.
33. Auzinger T, Mistelbauer G, Baclija I, **Schernthaner R**, Kochl A, Wimmer M, Groller ME, Bruckner S. Vessel visualization using curved surface reformation. *IEEE transactions on visualization and computer graphics*. 2013;19(12):2858-67.
34. **Schernthaner RE**, Stadler A, Beitzke D, Homolka P, Weber M, Lammer J, Czerny M, Loewe C. Dose modulated retrospective ECG-gated versus non-gated 64-row CT angiography of the aorta at the same radiation dose: comparison of motion artifacts, diagnostic confidence and signal-to-noise-ratios. *Eur J Radiol*. 2012;81(4):e585-90.
35. Mistelbauer G, Varchola A, Bouzari H, Starinsky J, Kochl A, **Schernthaner R**, Fleischmann D, Groller ME, Sramek M. Centerline Reformations of Complex Vascular Structures. *Ieee Pacific Visualization Symposium 2012*. 2012:233-40.
36. Mistelbauer G, Bouzari H, **Schernthaner R**, Baclija I, Kochl A, Bruckner S, Sramek M, Groller ME. Smart Super Views - A Knowledge-Assisted Interface for Medical Visualization. *Ieee Conf Vis Anal*. 2012:163-72.
37. Beitzke D, Wolf F, Edelhauser G, Plank C, **Schernthaner R**, Weber M, Nolz R, Lammer J, Loewe C. Computed tomography angiography of the carotid arteries at low kV settings: a prospective randomised trial assessing radiation dose and diagnostic confidence. *Eur Radiol*. 2011;21(11):2434-44.
38. Wolf F, Ourednicek P, Loewe C, Richter B, Gossinger HD, Gwechenberger M, Plank C, **Schernthaner RE**, Toepker M, Lammer J, Feuchtner GM. Evaluation of left atrial function by multidetector computed tomography before left atrial radiofrequency-catheter ablation: comparison of a manual and automated 3D volume segmentation method. *Eur J Radiol*. 2010;75(2):e141-6.
39. Wolf F, Leschka S, Loewe C, Homolka P, Plank C, **Schernthaner R**, Bercaczy D, Goetti R, Lammer J, Friedrich G, Marincek B, Alkadhi H, Feuchtner G. Coronary artery stent imaging with 128-slice dual-source CT using high-pitch spiral acquisition in a cardiac phantom: comparison with the sequential and low-pitch spiral mode. *Eur Radiol*. 2010;20(9):2084-91.
40. Schernthaner MB, Edelhauser G, Bercaczy D, **Schernthaner R**, Wolf F, Lammer J, Funovics MA. Perceptibility and quantification of in-stent stenosis with six peripheral arterial stent types in vitro: comparison of 16-MDCT angiography, 64-MDCT angiography, and MR angiography. *AJR Am J Roentgenol*. 2010;194(5):1346-51.
41. Ringl H, **Schernthaner RE**, Schueller G, Balassy C, Kienzl D, Botosaneanu A, Weber M, Czerny C, Hajdu S, Mang T, Herold CJ, Schima W. The skull unfolded: a cranial CT visualization algorithm for fast and easy detection of skull fractures. *Radiology*. 2010;255(2):553-62.
42. Nolz R, **Schernthaner RE**, Cejna M, Schernthaner M, Lammer J, Schoder M. Carotid artery stenting: single-center experience over 11 years. *Cardiovasc Intervent Radiol*. 2010;33(2):251-9.

43. Herneth AM, Mayerhoefer M, **Schernthaner R**, Ba-Ssalamah A, Czerny C, Fruehwald-Pallamar J. Diffusion weighted imaging: lymph nodes. *Eur J Radiol.* 2010;76(3):398-406.
44. **Schernthaner R**, Fleischmann D, Stadler A, Schernthaner M, Lammer J, Loewe C. Value of MDCT angiography in developing treatment strategies for critical limb ischemia. *AJR Am J Roentgenol.* 2009;192(5):1416-24.
45. Ringl H, **Schernthaner R**, Philipp MO, Metz-Schimmerl S, Czerny C, Weber M, Gabler C, Steiner-Ringl A, Peloschek P, Herold CJ, Schima W. Three-dimensional fracture visualisation of multidetector CT of the skull base in trauma patients: comparison of three reconstruction algorithms. *Eur Radiol.* 2009;19(10):2416-24.
46. Wolf F, **Schernthaner RE**, Dirisamer A, Schoder M, Funovics M, Kettenbach J, Langenberger H, Stadler A, Loewe C, Lammer J, Cejna M. Endovascular management of lost or misplaced intravascular objects: experiences of 12 years. *Cardiovasc Intervent Radiol.* 2008;31(3):563-8.
47. **Schernthaner R**, Stadler A, Lomoschitz F, Weber M, Fleischmann D, Lammer J, Loewe C. Multidetector CT angiography in the assessment of peripheral arterial occlusive disease: accuracy in detecting the severity, number, and length of stenoses. *Eur Radiol.* 2008;18(4):665-71.
48. Ringl H, **Schernthaner R**, Sala E, El-Rabadi K, Weber M, Schima W, Herold CJ, Dixon AK. Lossy 3D JPEG2000 compression of abdominal CT images in patients with acute abdominal complaints: effect of compression ratio on diagnostic confidence and accuracy. *Radiology.* 2008;248(2):476-84.
49. Muller C, Schoniger-Hekele M, **Schernthaner R**, Renner B, Peck-Radosavljevic M, Brichta A, Wrba F, Posch M, Bauer P, Ferenci P, Gangl A. Percutaneous ethanol instillation therapy for hepatocellular carcinoma - a randomized controlled trial. *Wiener klinische Wochenschrift.* 2008;120(19-20):608-18.
50. Kettenbach J, Stadler A, Katzler IV, **Schernthaner R**, Blum M, Lammer J, Rand T. Drug-loaded microspheres for the treatment of liver cancer: review of current results. *Cardiovasc Intervent Radiol.* 2008;31(3):468-76.
51. **Schernthaner R**, Fleischmann D, Lomoschitz F, Stadler A, Lammer J, Loewe C. Effect of MDCT angiographic findings on the management of intermittent claudication. *AJR Am J Roentgenol.* 2007;189(5):1215-22.
52. Ringl H, **Schernthaner RE**, Kulinna-Cosentini C, Weber M, Schaefer-Prokop C, Herold CJ, Schima W. Lossy three-dimensional JPEG2000 compression of abdominal CT images: assessment of the visually lossless threshold and effect of compression ratio on image quality. *Radiology.* 2007;245(2):467-74.
53. Blum MB, Schmook M, **Schernthaner R**, Edelhauser G, Puchner S, Lammer J, Funovics MA. Quantification and detectability of in-stent stenosis with CT angiography and MR angiography in arterial stents in vitro. *AJR Am J Roentgenol.* 2007;189(5):1238-42.
54. Birkfellner W, Figl M, Kettenbach J, Hummel J, Homolka P, **Schernthaner R**, Nau T, Bergmann H. Rigid 2D/3D slice-to-volume registration and its application on fluoroscopic CT images. *Med Phys.* 2007;34(1):246-55.

55. Ringl H, **Scherthaner RE**, Bankier AA, Weber M, Prokop M, Herold CJ, Schaefer-Prokop C. JPEG2000 compression of thin-section CT images of the lung: effect of compression ratio on image quality. Radiology. 2006;240(3):869-77.
56. Gulesserian T, Mahnken AH, **Scherthaner R**, Memarsadeghi M, Weber M, Tacke A, Kettenbach J. Comparison of expandable electrodes in percutaneous radiofrequency ablation of renal cell carcinoma. Eur J Radiol. 2006;59(2):133-9.

Books

Chapter "Management of Peripheral Arterial Disease" in "Managing Cardiovascular Complications in Diabetes", Wiley-Blackwell, 05/2014

Congress activities

Several abstracts and poster presentations at RNSA, ECR, CIRSE, SIR, WCIO, ESGAR, ESHNR, ICIS and OERG during the last few years.

Invited speaker at ESHNR 2010 and OERG 2012

Session moderator at ECR 2012 and OERG 2012

Research Grants

Austrian Science Fund, 2010, TRP 67 Translational-Research-Programm, Co-Principal Investigator

MAX KADE Fellowship 2013, Principal Investigator

Awards

Daily Bulletin of RSNA 2014

RSNA News 2015 Video Interview: <http://www.rsna.org/NewsDetail.aspx?id=14702>

Poster award at the SIR meeting 2015

Dr. Franz Holeczke award 2016