

Hans-Christoph Becker, M.D.

Curriculum Vitae

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Curriculum Vitae

### **I. Personal Information**

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### **II. Educational Background**

1975-1983	Hohe Landesschule, Hanau, Germany	Grammar School
1983-1986	Schule für Krankenpflege Klinikum Hanau, Germany	Nursing School
9/9/1986	Nursing diploma	
1986-1988	Semmelweis University, Budapest, Hungary	Premedical School
1988-1989	University Hospital Saarland, Homburg/Saar, Germany	Medical School
1989-1993	Ludwig-Maximilian-University, Munich, Germany	Medical School
1993-1994	Klinikum Schwabing, Harlaching, Grosshadern, Munich	Internship
1994-2001	Ludwig-Maximilian-University, Munich, Germany	Residency/Fellowship
5/1/1995	German Medical License	
3/6/2002	German Radiology board certification	
4/25/2019	ECFMG certification	0-977-367-2
1/31/2020	Medical board of California certification	A167568
3/31/2020	Radiography X-ray Supervisor and Operator license	RHC00205380

### **III. Professional Appointments**

2001-2014	Professor of Radiology, Ludwig-Maximilian-University, Munich, Germany
Since 2015	Professor of Radiology, Stanford School of Medicine, CA, USA

#### **IV. Honors & Awards**

- A. Fellow of the Society of Cardiac Computed Tomography. March 2020
- B. Fellow of the Society of Advanced Body Imaging. October 2017.
- C. Andreas Gruenzig Lecture. Cardiovascular and Interventional Radiology Society of Europe, September 2008.
- D. Lechel U, **Becker C**, Langenfeld-Jäger G, Brix G, Posterpreis der Hanns-Langendorff-Stiftung für das Poster mit dem Titel: Dosisreduktion durch strommodulierte Dosisautomatik bei der MSCT: Vergleich von Messung und Rechnung“ at the 88<sup>th</sup> German Röntgenkongress 2007 in Berlin, May 19<sup>th</sup> 2007.
- E. Bastarrika G, **Becker CR**, Cano D, Wintersperger BJ, Cosin O, Knez A. Anatomy and Anomalies of the Origin and Course of the Coronary Arteries by Retrospectively Gated Multi-Slice (MSCT) Coronary Angiography: A Pictorial Review. Excellence in Design of the Education Exhibit presented at the 90<sup>th</sup> Scientific Assembly and Annual Meeting of the Radiological Society of North America, November 28th- December 3, 2004.
- F. **Becker CR**, Siemens Visiting Research Fellowship Grant, Wien at the 13<sup>th</sup> European Congress of Radiology, 6. March 2001.

## V. Scholarly Publications

### A. Peer-reviewed journal articles (original research)

1. Ding Y, Marin D, Vernuccio F, Gonzalez F, Williamson HV, **Becker HC**, Patel BN, Solomon J, Ramirez-Giraldo JC, Samei E. Variability of Quantitative Measurements of Metastatic Liver Lesions: A Multi-Radiation-Dose-Level and Multi-Reader Comparison. *Abdominal Radiology* 46, no. 1 (2021): 226–36.
2. Madani MH, Leung ANC, **Becker HC**, Chan FP, Fleischmann D. Aorto-Iliac/Right Leg Arterial Thrombosis Necessitating Limb Amputation, Pulmonary Arterial, Intracardiac, and Ilio-Caval Venous Thrombosis in a 40-Year-Old with COVID-19. *Clinical Imaging* 75 (2021): 1–4.
3. Zhou M, Bui N, Bolleddu S, Lohman M, **Becker HC**, Ganjoo K. Nivolumab plus Ipilimumab for Soft Tissue Sarcoma: A Single Institution Retrospective Review. *Immunotherapy* 12, no. 18 (2020): 1303–12.
4. Jubran A, Schnittger I, Tremmel J, Pargaonkar V, Rogers I, **Becker HC**, Yang S, Mastrodicasa D, Willeminck M, Fleischmann D. Computed Tomographic Angiography–Based Fractional Flow Reserve Compared With Catheter-Based Dobutamine-Stress Diastolic Fractional Flow Reserve in Symptomatic Patients With a Myocardial Bridge and No Obstructive Coronary Artery Disease Circulation. *Circ Cardiovasc Imaging* 2020 Feb;13(2):e009576.
5. Pargaonkar VS, Rogers IS, Su J, Forsdahl SH, Schreiber D, Chan FP, **Becker HC**, Fleischmann D, Tremmel JA, Schnittger I. Accuracy of a Novel Stress Echocardiography Pattern for Myocardial Bridge in Patients With Angina and No Obstructive Coronary Artery Disease—A Retrospective and Prospective Validation Cohort Study. *Int J Circulation* 2020 Feb 5;S0167-5273(19)33342.
6. Filipp FM, Schoeberl F, **Becker HC**, Becker-Bense S, Eren O, Straube A, Becker A. Coronary Artery Calcification Score in Migraine Patients. *Scientific Reports* 9, no. 1 (2019): 1–6.
7. Filippoloulos FM, Schoeberl F, **Becker HC**, Becker-Bense S, Eren O, Straube A, Becker A. Coronary artery calcium score in migraine patients. *Sci Rep* 2019 Oct 1;9(1):14069.
8. Zimmermann GS, R  ther T, Ziegler F, Greif M, **Becker C**, Becker A. Predictive value of coronary calcium for future cardiac events in asymptomatic patients: underestimation of risk in asymptomatic smokers. *Int J Cardiovas Imaging*. 2019 Jul;35(7):1387-1393.
9. Kalra MK, **Becker HC**, Enterline DS, Lowry CR, Molvin LZ, Singh R, Rybicki FJ. Contrast

- Administraion in CT: A patient -centric approach. *J Am Coll Radiol* 2019 Mar;16(3):295-301.
10. Pargaonkar VS, Rogers IS, Su J, Forsdahl SH, Schreiber D, Chan FP, **Becker HC**, Fleischmann D, Tremmel JA, Schnittger I. Diagnostic Accuracy of a Novel Stress Echocardiography Pattern for Myocardial Bridge in Patients With Angina and No Obstructive Coronary Artery Disease-a Retrospective and Prospective Validation Cohort Study. *Circulation* 138, no. Suppl\_1 (2018): A12332–A12332.
  11. Merriott DJ, Chaudhuri AA, Jin M, Chabon JJ, Newman A, Stehr H, Say C, Carter JN, Walters S, **Becker HC**, Das M, Padda S, Loo BW, Wakelee HA, Neal JW, Alizadeh AA, Diehn M. Circulating Tumor DNA Quantitation for Early Response Assessment of Immune Checkpoint Inhibitors for Lung Cancer. *International Journal of Radiation Oncology• Biology• Physics* 99, no. 2 (2017): S20–21.
  12. Forsdahl S, Rogers I, Schnittger I, Tanaka S, Kimura T, Pargaonkar CS, Chan FP, Fleischmann D, Tremmel JA, **Becker HC**. Myocardial bridges on coronary computed tomography angiography – correlation with intravascular ultrasound and fractional flow reserve. *Circulation J* 2017 Nov 24;81(12): 1894-1900.
  13. Bischoff B, Deseive S, Rampp M, Todica A, Wermke M, Martinoff S, Massberg S, Reiser MF, **Becker H**, Hausleiter J. Myocardial ischemia detection with single-phase CT perfusion in symptomatic patients using high-pitch helical image acquisition technique. *Int J Cardiovasc Imaging*. 2017 Apr;33(4): 569-576.
  14. Achenbach S, Paul JF, Laurent F, **Becker HC**, Rengo M, Caudron J, Leschka S, Vignaux O, Knobloch G, Benea G, Schlosser T, Andreu J, Cabeza B, Jacquier A, Souto M, Revel D, Qanadli SD, and Cademartiri F. Comparative assessment of image quality for coronary CT angiography with iobitridol and two contrast agents with higher iodine concentrations: iopromide and iomeprol. A multicentre randomized double-blind trial. *Eur Radiol* 2016 Feb;27(2):821-30.
  15. Brix G, Lechel U, Nekolla E, Griebel J, and **Becker C**. Radiation protection issues in dynamic contrast-enhanced (perfusion) computed tomography. *European journal of radiology*. 2015 Dez;84(12):2347-58.
  16. Lange P, Greif M, Bongiovanni D, Thaumann A, Nabauer M, Bischoff B, Helbig S, **Becker C**, Schmitz C, D'Anastasi M, Mehilli J, Boekstegers P, Massberg S, and Kupatt C. Bivalirudin

- vs Heparin in Patients Who Undergo Transcatheter Aortic Valve Implantation. *The Canadian journal of cardiology*. 2015 Aug;31(8):998-1003.
17. Weiland FL, Marti-Bonmati L, Lim L, and **Becker HC**. Comparison of patient comfort between iodixanol and iopamidol in contrast-enhanced computed tomography of the abdomen and pelvis: a randomized trial. *Acta Radiol*. 2014 Jul;55(6):715-24.
  18. von Ziegler, Greif M, Tittus J, Schenzle J, **Becker C**, and Becker A. Distribution of coronary calcifications in patients with suspected coronary heart disease. *Am Heart J*. 2014 Apr;167(4):568-75.
  19. Jochheim D, Schneider VS, Schwarz F, Kupatt C, Lange P, Reiser M, Massberg S, Gutierrez-Chico JL, Mehilli J, and **Becker HC**. Contrast-induced acute kidney injury after computed tomography prior to transcatheter aortic valve implantation. *Clin Radiol*. 2014 Oct;69(10):1034-8.
  20. Lange P, Greif M, Vogel A, Thaumann A, Helbig S, Schwarz F, Schmitz C, **Becker C**, D'Anastasi M, Boekstegers P, Pohl T, Laubender RP, Steinbeck G, and Kupatt C. Reduction of pacemaker implantation rates after CoreValve® implantation by moderate predilatation. *EuroIntervention*. 2014 Feb;9(10):1151-7.
  21. Greif M, Lange P, Nabauer M, Schwarz F, **Becker C**, Schmitz C, Pohl T, D'Anastasi M, Boekstegers P, Massberg S, and Kupatt C. Transcatheter aortic valve replacement with the Edwards SAPIEN XT and Medtronic CoreValve prosthesis under fluoroscopic guidance and local anaesthesia only. *Heart*. 2014 May;100(9):691-5.
  22. Bamberg F, Marcus RP, Becker A, Hildebrandt K, Bauner K, Schwarz F, Greif M, von Ziegler, Bischoff B, **Becker HC**, Johnson TR, Reiser MF, Nikolaou K, and Theisen D. Dynamic myocardial CT perfusion imaging for evaluation of myocardial ischemia as determined by MR imaging. *JACC Cardiovasc Imaging*. 2014 Mar;7(3):267-77.
  23. Marwan M, Hausleiter J, Abbara S, Hoffmann U, **Becker C**, Ovrehus K, Ropers D, Bathina R, Berman D, Anders K, Uder M, Meave A, Alexanderson E, and Achenbach S. Multicenter Evaluation Of Coronary Dual-Source CT angiography in patients with intermediate Risk of Coronary Artery Stenoses (MEDIC): study design and rationale. *J Cardiovasc Comput Tomogr*. 2014 May-Jun;8(3):183-8.
  24. Helck A, Schonermarck U, Habicht A, Notohamiprodjo M, Stangl M, Klotz E, Nikolaou K, la Fougere, Clevert DA, Reiser M, and **Becker C**. Determination of split renal function using

- dynamic CT-angiography: preliminary results. PLoS One. 2014 Mar 11;9(3):e91774.
25. Schwarz F, Lange P, Zinsser D, Greif M, Boekstegers P, Schmitz C, Reiser MF, Kupatt C, and **Becker HC**. CT-angiography-based evaluation of the aortic annulus for prosthesis sizing in transcatheter aortic valve implantation (TAVI)-predictive value and optimal thresholds for major anatomic parameters. PLoS One. 2014 Aug 1;9(8):e103481.
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  28. Clevert DA, Gurtler VM, Meimarakis G, D'Anastasi M, Weidenhagen R, Reiser MF, and **Becker CR**. Classification of endoleaks in the follow-up after EVAR using the time-to-peak of the contrast agent in CEUS examinations. Clin Hemorheol Microcirc. 2013;55(1):183-91.
  29. Greif M, von Ziegler, Wakili R, Tittus J, **Becker C**, Helbig S, Laubender RP, Schwarz W, D'Anastasi M, Schenzle J, Leber AW, and Becker A. Increased pericardial adipose tissue is correlated with atrial fibrillation and left atrial dilatation. Clin Res Cardiol. 2013 Aug;102(8):555-62.

30. Greif M, Arnoldt T, von Ziegler, Ruemmler J, **Becker C**, Wakili R, D'Anastasi M, Schenzle J, Leber AW, and Becker A. Lipoprotein (a) is independently correlated with coronary artery calcification. *Eur J Intern Med.* 2013 Jan;24(1):75-9.
31. Schramm N, Englhart E, Schlemmer M, Hittinger M, Ubleis C, **Becker CR**, Reiser MF, and Berger F. Tumor response and clinical outcome in metastatic gastrointestinal stromal tumors under sunitinib therapy: comparison of RECIST, Choi and volumetric criteria. *Eur J Radiol.* 2013 Jun;82(6):951-8.
32. Bischoff B, Meinel FG, Del Prete, Reiser MF, and **Becker HC**. High-pitch coronary CT angiography in dual-source CT during free breathing vs. breath holding in patients with low heart rates. *European journal of radiology.* *Eur J Radiol.* 2013 Dec;82(12):2217-21.
33. Helck A, Wessely M, Notohamiprodjo M, Schonermarck U, Klotz E, Fischereeder M, Schon F, Nikolaou K, Clevert DA, Reiser M, and **Becker C**. CT perfusion technique for assessment of early kidney allograft dysfunction: preliminary results. *Eur Radiol.* 2013 Sep;23(9):2475-81.
34. Greif M, von Ziegler, Bamberg F, Tittus J, Schwarz F, D'Anastasi M, Marcus RP, Schenzle J, **Becker C**, Nikolaou K, and Becker A. CT stress perfusion imaging for detection of haemodynamically relevant coronary stenosis as defined by FFR. *Heart.* 2013 Jul;99(14):1004-11.
35. Karpitschka M, Augart D, **Becker HC**, Reiser M, and Graser A. Dose reduction in oncological staging multidetector CT: effect of iterative reconstruction. *Br J Radiol.* 2013 Jan;86(1021):20120224.
36. Bischoff B, Bamberg F, Marcus R, Schwarz F, **Becker HC**, Becker A, Reiser M, and Nikolaou K. Optimal timing for first-pass stress CT myocardial perfusion imaging. *Int J Cardiovasc Imaging.* 2013 Feb;29(2):435-42.
37. Bischoff B, Meinel FG, Reiser M, and **Becker HC**. Novel single-source high-pitch protocol for CT angiography of the aorta: comparison to high-pitch dual-source protocol in the context of TAVI planning. *Int J Cardiovasc Imaging.* 2013 Jun;29(5):1159-65.
38. Schramm R, Kupatt C, **Becker C**, Bombien R, Reichart B, Sodiani R, and Schmitz C. Transcatheter aortic valve implantation in aortic coarctation. *Thorac Cardiovasc Surg.* 2013 Jun;61(4):336-9.



39. Schramm R, Mair H, **Becker C**, Schwarz F, Bombien R, Juchem G, Sodian R, Kupatt C, and Schmitz C. Partial inferior sternotomy and deep hypothermic circulatory arrest for rescue of a failed TAVI case: what does constitute 'inoperable'? *Thorac Cardiovasc Surg.* 2013 Aug;61(5):431-4.
40. von Ziegler, Brendel M, Uebleis C, Helbig S, Greif M, Ruemmler J, **Becker C**, Hacker M, Steinbeck G, and Becker A. SPECT myocardial perfusion imaging as an adjunct to coronary calcium score for the detection of hemodynamically significant coronary artery stenosis. *BMC Cardiovasc Disord.* 2012 Dec 4;12:116.
41. Greif M, Leber AW, Saam T, Uebleis C, von Ziegler, Rummler J, D'Anastasi M, Arias-Herrera V, **Becker C**, Steinbeck G, Hacker M, and Becker A. Determination of pericardial adipose tissue increases the prognostic accuracy of coronary artery calcification for future cardiovascular events. *Cardiology.* 2012;121(4):220-7.
42. Greif M, Lange P, Mair H, **Becker C**, Schmitz C, Steinbeck G, and Kupatt C. Transcatheter Edwards Sapien XT valve in valve implantation in degenerated aortic bioprostheses via transfemoral access. *Clin Res Cardiol.* 2012 Dec;101(12):993-1001
43. Bamberg F, Marcus R, Sommer W, Schwarz F, Nikolaou K, **Becker CR**, Reiser MF, and Johnson TR. Diagnostic image quality of a comprehensive high-pitch dual-spiral cardiothoracic CT protocol in patients with undifferentiated acute chest pain. *Eur J Radiol.* 2012 Dec;81(12):3697-702.
44. **Becker HC**, Augart D, Karpitschka M, Ulzheimer S, Bamberg F, Morhard D, Neumaier K, Graser A, Johnson T, and Reiser M. Radiation exposure and image quality of normal computed tomography brain images acquired with automated and organ-based tube current modulation multiband filtering and iterative reconstruction. *Invest Radiol.* 2012 Mar;47(3):202-7.
45. Connell L, Koerte IK, Laubender RP, Morhard D, Linn J, **Becker HC**, Reiser M, Brueckmann H, and Ertl-Wagner B. Hyperdense basilar artery sign-a reliable sign of basilar artery occlusion. *Neuroradiology.* 2012 Apr;54(4):321-7.
46. Sommer WH, **Becker CR**, Haack M, Rubin GD, Weidenhagen R, Schwarz F, Nikolaou K, Reiser MF, Johnson TR, and Clevert DA. Time-resolved CT angiography for the detection and classification of endoleaks. *Radiology.* 2012 Jun;263(3):917-26.

47. Schmauss D, Schmitz C, Bigdeli AK, Weber S, Gerber N, Beiras-Fernandez A, Schwarz F, **Becker C**, Kupatt C, and Sodian R. Three-dimensional printing of models for preoperative planning and simulation of transcatheter valve replacement. *Ann Thorac Surg.* 2012 Feb;93(2):e31-3.
48. Ubleis C, Groebner M, von Ziegler, Becker A, Rischpler C, Tegtmeier R, **Becker C**, Lehner S, Haug AR, Cumming P, Bartenstein P, Franz WM, and Hacker M. Combined anatomical and functional imaging using coronary CT angiography and myocardial perfusion SPECT in symptomatic adults with abnormal origin of a coronary artery. *Int J Cardiovasc Imaging.* 2012 Oct;28(7):1763-74.
49. von Ziegler, Rummler J, Kaczmarek I, Greif M, Schenzle J, Helbig S, **Becker C**, Meiser B, and Becker A. Detection of significant coronary artery stenosis with cardiac dual-source computed tomography angiography in heart transplant recipients. *Transpl Int.* 2012 Oct;25(10):1065-71.
50. Hittinger M, Staehler M, Schramm N, Ubleis C, **Becker C**, Reiser M, and Berger F. Course of size and density of metastatic renal cell carcinoma lesions in the early follow-up of molecular targeted therapy. *Urol Oncol.* 2012 Sep;30(5):695-703.
51. **Becker C**, Waggershauer T, Tiling R, Weckbach S, Johnson T, Meissner O, Klingenberg-Regn K, Reiser M, and Hoffmann RT. C-arm computed tomography compared with positron emission tomography/computed tomography for treatment planning before radioembolization. *Cardiovasc Intervent Radiol.* 2011 Jun;34(3):550-6.
52. Schramm N, Schlemmer M, Enghart E, Hittinger M, **Becker C**, Reiser M, and Berger F. Dual energy CT for monitoring targeted therapies in patients with advanced gastrointestinal stromal tumor: initial results. *Curr Pharm Biotechnol.* 2011 Apr;12(4):547-57.
53. Schlemmer M, Sourbron SP, Schinwald N, Nikolaou K, **Becker CR**, Reiser MF, and Berger F. Perfusion patterns of metastatic gastrointestinal stromal tumor lesions under specific molecular therapy. *Eur J Radiol.* 2011 Feb;77(2):312-8.
54. Helck A, Bamberg F, Sommer WH, Wessely M, **Becker C**, Clevert DA, Notohamiprodjo M, Reiser M, and Nikolaou K. Optimized contrast volume for dynamic CT angiography in renal transplant patients using a multiphase CT protocol. *Eur J Radiol.* 2011 Dec;80(3):692-8.

55. Bamberg F, Dierks A, Nikolaou K, Reiser MF, **Becker CR**, and Johnson TR. Metal artifact reduction by dual energy computed tomography using monoenergetic extrapolation. *Eur Radiol.* 2011 Jul;21(7):1424-9.
56. **Becker CR**, Vanzulli A, Fink C, de Faveri, Fedeli S, Dore R, Biondetti P, Kuettner A, Krix M, and Ascenti G. Multicenter comparison of high concentration contrast agent iomeprol-400 with iso-osmolar iodixanol-320: contrast enhancement and heart rate variation in coronary dual-source computed tomographic angiography. *Invest Radiol.* 2011 Jul;46(7):457-64.
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58. Bamberg F, Sommer WH, Hoffmann V, Achenbach S, Nikolaou K, Conen D, Reiser MF, Hoffmann U, and **Becker CR**. Meta-analysis and systematic review of the long-term predictive value of assessment of coronary atherosclerosis by contrast-enhanced coronary computed tomography angiography. *J Am Coll Cardiol.* 2011 Jun 14;57(24):2426-36.
59. Bamberg F, Becker A, Schwarz F, Marcus RP, Greif M, von Ziegler, Blankstein R, Hoffmann U, Sommer WH, Hoffmann VS, Johnson TR, **Becker HC**, Wintersperger BJ, Reiser MF, and Nikolaou K. Detection of hemodynamically significant coronary artery stenosis: incremental diagnostic value of dynamic CT-based myocardial perfusion imaging. *Radiology.* 2011 Sep;260(3):689-98.
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62. Kirchhoff S, Herzog P, Johnson T, Bohm H, Nikolaou K, Reiser MF, and **Becker CH**. Assessment of radiation exposure on a dual-source computed tomography-scanner performing coronary computed tomography-angiography. *Eur J Radiol*. 2010 Jun;74(3):e181-5.
63. Bamberg F, Klotz E, Flohr T, Becker A, **Becker CR**, Schmidt B, Wintersperger BJ, Reiser MF, and Nikolaou K. Dynamic myocardial stress perfusion imaging using fast dual-source CT with alternating table positions: initial experience. *Eur Radiol*. 2010 May;20(5):1168-73.
64. Bamberg F, Sommer WH, Schenzle JC, **Becker CR**, Nikolaou K, Reiser MF, and Johnson TR. Systolic acquisition of coronary dual-source computed tomography angiography: feasibility in an unselected patient population. *Eur Radiol*. 2010 Jun;20(6):1331-6.
65. Sommer WH, Helck A, Bamberg F, Albrecht E, **Becker CR**, Weidenhagen R, Kramer H, Reiser MF, and Nikolaou K. Diagnostic value of time-resolved CT angiography for the lower leg. *Eur Radiol*. 2010 Dec;20(12):2876-81.
66. Sommer WH, Schenzle JC, **Becker CR**, Nikolaou K, Graser A, Michalski G, Neumaier K, Reiser MF, and Johnson TR. Saving dose in triple-rule-out computed tomography examination using a high-pitch dual spiral technique. *Invest Radiol*. 2010 Feb;45(2):64-71.
67. Schenzle JC, Sommer WH, Neumaier K, Michalski G, Lechel U, Nikolaou K, **Becker CR**, Reiser MF, and Johnson TR. Dual energy CT of the chest: how about the dose? *Invest Radiol*. 2010 Jun;45(6):347-53.
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70. Graser A, **Becker CR**, Staehler M, Clevert DA, Macari M, Arndt N, Nikolaou K, Sommer W, Stief C, Reiser MF, and Johnson TR. Single-phase dual-energy CT allows for characterization of renal masses as benign or malignant. *Invest Radiol*. 2010 Jul;45(7):399-405.

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#### **B. Peer-reviewed publications other (i.e. editorials, commentaries, etc.)**

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23. **Becker CR.** Coronary CT angiography in symptomatic patients. *Eur Radiol.* 2005 Feb;15 Suppl 2:B33-41.
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### C. Book Chapters

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2. **Becker CR**, Graser A, Herzog P. Technical prerequisites. *Becker In: Reiser MF, van Kaick G, Fink C, Schoenberg SO eds. Springer-Verlag Berlin, Heidelberg, New-York 2007.*
3. **Becker CR**. Cardiovascular Disease. *In: Reiser MF, van Kaick G, Fink C, Schoenberg SO eds. Springer-Verlag Berlin, Heidelberg, New-York 2007.*
4. **Becker C**, Knez A. Current and Future Clinical Potential. *In: Ohnesorge BM, Flohr TG, Becker CR, Knez A, Reiser MF. Multi-slice and Dual-source CT in Cardiac Imaging. Springer-Verlag Berlin, Heidelberg, New-York 2006; 179-191.*
5. **Becker CR**. Multidetector-Row CT Angiography of the Coronary Arteries. *In: Catalano C, Passariello R, eds. Multidetector Row CT Angiography. Springer-Verlag Berlin, Heidelberg, New-York 2005; 125-136.*
6. **Becker CR**. Current und Future Indications of Cardiac MDCT. *In: Marchal G, Vogl TJ, Heiken JP, Rubin GD, eds. Multidetector-Row Computed Tomography. Springer-Verlag Berlin, Heidelberg, New-York 2005; 73-78.*
7. **Becker CR**. Techniques and Protocols for Acquisition and Display of Contrast-Enhanced CT Angiography. *In: Schöpf UJ. Humana Press Totowa, New Jersey 2005; 229-235.*
8. **Becker CR**. Multidetector Row CT Imaging of Clinical and Preclinical Coronary Atherosclerosis. *In: Schöpf UJ. Humana Press Totowa, New Jersey 2005; 377-380.*

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10. **Becker CR.** Multislice Computed Tomography Angiography of the Coronary Arteries. In: Reiser MF, Takahashi M, Modic M, Becker CR, eds. Multislice CT. Heidelberg: Springer-Verlag 2004; 159-170.
11. **Becker CR.** MDCT Angiography of the Coronary Arteries. In: Schöpf UJ, ed. Multidetector-Row CT of the Thorax. Springer-Verlag Berlin, Heidelberg, New-York 2004; 327-338.
12. **Becker CR.** Coronary Artery Imgaing Using CT. In: Lanzer P, Topol EJ, eds. PanVascular Medicine, Integrated Clinical Management. Springer-Verlag Berlin, Heidelberg, New-York 2002; 453-457.
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14. **Becker C,** Ohnesorge B, Schoepf U, Reiser M. Coronary atherosclerosis in multislice computed tomography. In: Marincek B, Ros PR, Reiser M, Baker ME, eds. Multislice CT: a practical guide, 5th International SOMATOM CT Scientific User Conference, Zurich, June, 2000. Springer-Verlag Berlin, Heidelberg, New York 2001: 98-110.
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#### **D. Books**

1. Ohnesorge BM, Flohr T, **Becker CR,** Knez A, Reiser MF, eds. Multi-slice and dual-source CT in Cardiac Imaging. Principles, Protocols, Indications, Outlook. Second edition. Springer Verlag Berlin Heidelberg New York 2007 ISBN 3-540-25523-0.
2. Reiser MF, Takahashi M, Modic M, **Becker CR,** eds. Multislice CT. Heidelberg: Springer-Verlag Berlin Heidelberg New York 2004



Hans-Christoph Becker, M.D.  
Curriculum Vitae

## **VI. Editorial Services**

### **A. Editorial Board Membership**

Der Radiologe (since 2007)

European Radiology, Section Cardiac Imaging (since 2004)

### **B. Other peer review activities**

Journal of the American Medical Association

Radiology (articles & scientific abstracts)

Circulation

American Heart Association (scientific abstracts)

Journal of the American College of Cardiology

American Journal of Roentgenology

European Radiology

European Journal of Radiology

European Heart Journal

Fortschritte Röntgenstrahlen

Der Radiologe

Cardiovascular Diagnosis and Therapy

Journal of Computer Assisted Tomography

## VII. GRANTS

### A. Active

**Source:** Siemens Medical Solutions

**PI:** Fleischmann, Dominik

**Title:** Optimization of Injection Protocols

**Role:** Co-Investigator

**Period:** 12/15/2012-10/31/2020

**Goal:** To identify under-perfused or ischemic myocardium in patients with indeterminate degree of coronary obstruction. We will also demonstrate the value of stress testing in kidney transplant candidates without apparent active cardiac condition.

**Source:** NIH 5R01 CA195443-03

**PI:** Kamaya, Aya

**Title:** 3D Dynamic Contrast-Enhanced US for Monitoring Chemotherapy of Liver Metastasis

**Role:** Co-Investigator

**Period:** 04/01/2016-03/01/2021

**Goal:** To assess the feasibility and reproducibility of a novel volumetric perfusion ultrasound imaging approach in patients with liver metastases from colorectal cancer and to evaluate early potential predictors of response to therapy.

### **VIII. Patents**

1. Becker HC, Feuerlein U, Scheuring M. Control method and control system. United States Patent 9,760,830 B2 Sep. 12, 2017.
2. Becker HC, Flohr T, Schmidt B. Selection of a radiation shaping filter. United States Patent 9,254,109 B2, Feb 9, 2016.
3. Becker HC, Fischbach R, Flohr T, Kopp A, Ohnesorge B, Schaller S. Method and data processing device to support diagnosis and/or therapy of a pathological change of a blood vessel. United States Patent 7,570,983 B1, Apr 8, 2009
4. Becker HC, Flor T, Ohnesorge B. Method for examining a body region execution a periodic motion. United States Patent 6,560,309 B1, May 6, 2003.

### **IX. Service to Professional Organizations**

#### **A. Membership**

Radiological Society of North America (RSNA)

European Society of Radiology (ESR)

North American Society for Cardiovascular Imaging (NASCI)

Society of Body Computed Tomography & Magnetic Resonance

European Society of Oncologic Imaging

#### **X. Local Site Radiology Oncology Clinical Trial Reviewer**

1. ACP-196 Alone and in Combination With Pembrolizumab in Subjects With Recurrent Ovarian Cancer (KEYNOTE191). (RECIST 1.1)
2. A Study of Escalating Doses of DCDS0780A in Patients With Relapsed or Refractory B-cell Non-Hodgkin's Lymphoma. (Cheson, Lugano)
3. A Study to Evaluate Safety, Tolerability, and Pharmacokinetics of Escalating Doses of AGS67E Given as Monotherapy in Subjects With Refractory or Relapsed Lymphoid Malignancies. (Cheson, Lugano)
4. Novel Combinations of CC-122, CC-223, CC-292, and Rituximab in Diffuse Large B-cell Lymphoma. (Cheson, Lugano)
5. Clinical Trial of Lurbinectedin (PM01183) in Platinum Resistant Ovarian Cancer Patients (CORAIL). (RECIST 1.1)
6. A Study of Niraparib in Patients With Ovarian Cancer Who Have Received Three or Four Previous Chemotherapy Regimens (QUADRA). (RECIST 1.1)
7. A Study of Duvelisib in Combination With Rituximab or Obinutuzumab in Subjects With Previously Untreated CD20+ Follicular Lymphoma (CONTEMPO). (Cheson, Lugano)
8. Study of Pembrolizumab (MK-3475) as Monotherapy in Participants With Previously-Treated Locally Advanced Unresectable or Metastatic Colorectal Cancer (MK-3475-164/KEYNOTE-164). (RECIST 1.1, irRECIST)
9. Study of Pembrolizumab (MK-3475) vs Standard Therapy in Participants With Microsatellite Instability-High (MSI-H) or Mismatch Repair Deficient (dMMR) Stage IV Colorectal Carcinoma (MK-3475-177/KEYNOTE-177). (RECIST 1.1, irRECIST)
10. Study of Tipifarnib in Subjects With Relapsed or Refractory Peripheral T-Cell Lymphoma (PTCL). (Cheson, Lugano)
11. A Phase 1-2 Multi-Center Study Evaluating KTE-C19 in Subjects With Refractory Aggressive Non-Hodgkin Lymphoma (ZUMA-1) (ZUMA-1). (Cheson, Lugano)
12. Study of IDO Inhibitor in Combination With Gemcitabine and Nab-Paclitaxel in Patients With Metastatic Pancreatic Cancer. (RECIST 1.1, irRC)
13. Study of IDO Inhibitor in Combination With Gemcitabine and Nab-Paclitaxel in Patients With Metastatic Pancreatic Cancer. (RECIST 1.1, irRC)

14. Study of Pembrolizumab (MK-3475) in Participants With Relapsed or Refractory Classical Hodgkin Lymphoma (MK-3475-087/KEYNOTE-087). (Cheson, Lugano)
15. A Study Evaluating Herceptin/Perjeta, Tarceva, Zelboraf, and Erivedge Treatment Targeted Against Certain Mutations in Cancer Patients. (RECIST 1.1)
16. A Study of Niraparib in Patients With Ovarian Cancer Who Have Received Three or Four Previous Chemotherapy Regimens (QUADRA) . (RECIST 1.1, irRC)
17. A Phase 1 Study to Investigate the Safety and Tolerability of REGN1979 in Patients With CD20+ B-Cell Malignancies. (Cheson, Lugano)
18. Study of Brentuximab Vedotin Combined With Bendamustine in Patients With Hodgkin Lymphoma. (Cheson, Lugano)
19. A Study of Brentuximab Vedotin Combined With Nivolumab for Relapsed or Refractory Hodgkin Lymphoma. (Cheson, Lugano)
20. ECHELON-2: A Comparison of Brentuximab Vedotin and CHP With Standard-of-care CHOP in the Treatment of Patients With CD30-positive Mature T-cell Lymphomas (ECHELON-2). (Cheson, Lugano)
21. A Study of Niraparib in Patients With Ovarian Cancer Who Have Received Three or Four Previous Chemotherapy Regimens (QUADRA). (RECIST 1.1, irRC)