



EOS Solutions Key Publications

Germany – Switzerland

- Innmann, M. M., Reichel, F., Schaper, B., Merle, C., Beaulé, P. E., & Grammatopoulos, G.. How does spinopelvic mobility and sagittal functional cup orientation affect patient reported outcome 1 year after THA?—A prospective diagnostic cohort study. [The Journal of Arthroplasty. 2021](#)
University Hospital, Heidelberg – Germany
- Connolly, L. E., Schmid, S., Moschini, G., Meier, M. L., & Senteler, M.. Motion Capture-driven Musculoskeletal Spine Modeling: An OpenSim-based Inverse Kinematics Approach. [arXiv preprint. 2021](#)
Balgrist University Hospital – Switzerland
- Störmann, S., Chruga-Urban, A., Lüring, C., Bouillon, B., Gutteck, N., & Arbab, D.. Comparison of medial distal tibial angle in EOS imaging and weightbearing X-ray. [Foot and Ankle Surgery. 2020](#)
Klinikum Dortmund – Germany
- Koliogiannis, V. K. A., Brandlhuber, M., Messerschmidt, V., Stahl, R., Melcher, C., Schinner, R., ... & Baur-Melnyk, A.. Is the EOS imaging system as accurate as conventional radiography in grading osteoarthritis of the knee? [European Radiology. 2020](#)
University hospital LMU Munich – Germany
- Haffer H, Adl Amini D, Perka C, Pumberger M. The Impact of Spinopelvic Mobility on Arthroplasty: Implications for Hip and Spine Surgeons. [Journal of Clinical Medicine. 2020](#)
Charité University Medicine Berlin – Germany
- Fischer, M. C., Tokunaga, K., Okamoto, M., Habor, J., & Radermacher, K.. Preoperative factors improving the prediction of the postoperative sagittal orientation of the pelvis in standing position after total hip arthroplasty. [Scientific reports. 2020](#)
Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University – Germany
- Innmann, M. M., Weishorn, J., Beaule, P. E., Grammatopoulos, G., & Merle, C.. Pathologic spinopelvic balance in patients with hip osteoarthritis. [Der Orthopäde. 2020](#)
University Hospital, Heidelberg – Germany
- Mayr HO, Schmidt JP, Haasters F, Bernstein A, Schmal H, Prall WC. Anteversion angle measurement in suspected torsional malalignment of the femur in 3-dimensional EOS versus computed tomography—a validation study. [The Journal of Arthroplasty. 2020.](#)
Albert-Ludwigs-University of Freiburg / Schön Klinik München Harlaching - Germany

- Jud L, Roth T, Fürnstahl P, Vlachopoulos L, Sutter R, Fucentese SF. The impact of limb loading and the measurement modality (2D versus 3D) on the measurement of the limb loading dependent lower extremity parameters. [BMC Musculoskeletal Disorders. 2020](#)
Balgrist University Hospital - Switzerland
- Berg BI, Laville A, Courvoisier DS, Rouch P, Schouman T. Experiences with a new biplanar low-dose X-ray device for imaging the facial skeleton: A feasibility study. [PloS one. 2020](#)
University Hospital Basel and University Basel - Switzerland
- Caprara S, Moschini G, Snedeker JG, Farshad M, Senteler M. Spinal Sagittal Alignment Goals based on Statistical Modelling and Musculoskeletal Simulations. [Journal of Biomechanics. 2020](#)
Balgrist Hospital - Switzerland
- Van Drongelen, S., Kaldowski, H., Tarhan, T., Assi, A., Meurer, A., & Stief, F.. Are changes in radiological leg alignment and femoral parameters after total hip replacement responsible for joint loading during gait? [BMC musculoskeletal disorders, 2019](#)
Orthopaedic University Hospital Friedrichsheim, Frankfurt – Germany
- Almansour, H., Pepke, W., Bruckner, T., Diebo, B. G., & Akbar, M.. Three-Dimensional Analysis of Initial Brace Correction in the Setting of Adolescent Idiopathic Scoliosis. [Journal of clinical medicine. 2019](#)
University Hospital, Heidelberg – Germany
- Wanke-Jellinek L, Heese O, Krenauer A, Würtinger C, Siepe C J, Wiechert K, Mehren C. Is there any use? Validity of 4D rasterstereography compared to EOS 3D X-ray imaging in patients with degenerative disk disease. [European Spine Journal. 2019](#)
Schoen Klinik München Harlaching, Spine Center Munich - Germany
- Tessitore E, Melloni I, Gautschi OP, Zona G, Schaller K, Berjano P. Effect of mono-or bisegmental lordosizing fusion on short-term global and index sagittal balance: a radiographic study. [Journal of neurosurgical sciences. 2019](#)
Geneva University Hospital – Switzerland
- Hess S, Moser LB, Amsler F, Behrend H, Hirschmann MT. Highly variable coronal tibial and femoral alignment in osteoarthritic knees: a systematic review. [Knee Surgery, Traumatology, Arthroscopy. 2019](#)
Kantonsspital Baselland, Bruderholz – Switzerland
- Fritz B, Agten CA, Boldt FK, Zingg PO, Pfirrmann CW, Sutter R. Acetabular coverage differs between standing and supine positions: model-based assessment of low-dose biplanar radiographs and comparison with CT. [European Radiology, 2019](#)
Balgrist University Hospital - Switzerland

- Almansour H, Pepke W, Rehm J, Bruckner T, Spira D, Akbar M. Interrater reliability of three-dimensional reconstruction of the spine : Low-dose stereoradiography for evaluating bracing in adolescent idiopathic scoliosis. [Der Orthopäde. 2019](#)
University Hospital, Heidelberg – Germany
- Tschoeke SK. Thoracolumbar Instrumentation and Fusion for Degenerative Disc Disease. [Spine Surgery 2019](#)
Klinikum Dortmund – Germany
- Franke J, Michalitsis S. Adjacent Segment Disease with 13 Years Follow Up and Five Operations. [Spine Surgery 2019](#)
Klinikum Magdeburg - Germany
- Studer D, Heidt C, Büchler P, Hasler CC. Treatment of early onset spinal deformities with magnetically controlled growing rods: a single centre experience of 30 cases. [Journal of Children's Orthopaedics. 2019](#)
Children's Hospital, University of Basel – Switzerland
- Tabard-Fougère A, Bonnefoy-Mazure A, Dhouib A, Valaikaite R, Armand S, Dayer R. Radiation-free measurement tools to evaluate sagittal parameters in AIS patients: a reliability and validity study. [European Spine Journal 2019](#)
University Hospital Geneva - Switzerland
- Rosskopf A, Sutter R, Pfirrmann C, Buck F. 3D hindfoot alignment measurements based on low-dose biplanar radiographs: a clinical feasibility study. [Skeletal Radiol. 2018](#)
Balgrist University Hospital – Switzerland
- Van Drongelen S, Fey B, Stief F, Kaldowski H, Ipek D, Meurer A. Changes in leg alignment after total hip replacement detected with the EOS system. [Gait & Posture, 2018](#)
Orthopaedic University Hospital Friedrichsheim – Germany
- Rehm J, German T, Akbar M, Pepke W, Kauczor HU, Weber MA, Spira D. 3D-modeling of the spine using EOS imaging system: Inter-reader reproducibility and reliability. [PLoS One. 2017 Feb 2;12\(2\):e0171258](#)
University Hospital, Heidelberg – Germany
- Rosskopf AB, Buck FM, Pfirrmann CW, Ramseier LE. Femoral and tibial torsion measurements in children and adolescents: comparison of MRI and 3D models based on low-dose biplanar radiographs. [Skeletal Radiol. 2017 Feb 3](#)
University Hospital Balgrist - Switzerland

- Agten CA, Jonczy M, Ullrich O, Pfirrmann CW, Sutter R, Buck FM. Measurement of Acetabular Version based on Biplanar Radiographs with 3D Reconstructions in Comparison to CT as Reference Standard in Cadavers. [Clin Anat. 2017 Mar 13](#)
Balgrist University Hospital – Switzerland
- Tabard-Fougère A, Bonnefoy-Mazure A, Hanquinet S, Lascombes P, Armand S, Dayer R. Validity and Reliability of Spine Rasterstereography in Patients with Adolescent Idiopathic Scoliosis. [Spine \(Phila Pa 1976\). 2016 May 11](#)
Geneva University Hospitals - Switzerland
- Rosskopf AB, Pfirrmann CW, Buck FM. Assessment of two-dimensional (2D) and three-dimensional (3D) lower limb measurements in adults: Comparison of micro-dose and low-dose biplanar radiographs. [Eur Radiol. 2016](#)
Balgrist University Hospital – Switzerland
- Dietrich TJ, Pfirrmann CW, Schwab A, Pankalla K, Buck FM. Comparison of radiation dose, workflow, patient comfort and financial break-even of standard digital radiography and a novel biplanar low-dose X-ray system for upright full-length lower limb and whole spine radiography. [Skeletal Radiol. 2013](#).
Department of Radiology, Orthopedic University Hospital Balgrist, Zurich - Switzerland
- Buck FM, Guggenberger R, Koch PP, Pfirrmann CW. Femoral and Tibial Torsion Measurements With 3D Models Based on Low-Dose Biplanar Radiographs in Comparison With Standard CT Measurements. [AJR Am J Roentgenol2012 Nov;199\(5\):W607-12.](#)
Orthopedic University Hospital Balgrist - Switzerland