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University of Southern Denmark

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## Qualifications

Medical School, Medical Doctor, University of Southern Denmark  
Aug 2013 → Jan 2020  
Award Date: 31. Jan 2020

## Research interests

Caius focuses on PET/CT image segmentation and result interpretation. He is interested in workflow optimization and implementation of automated procedures, all the way from the medical image to the final statistical results. Caius is familiar with both FDG and NaF imaging, and contributed to his first publication in 2016.

## Employment

### Visiting Researcher

KI, Svendborg Hospital  
University of Southern Denmark  
1. Aug 2020 → 31. Aug 2023

### Reviewer

Advances in Biochemistry (SciencePG)  
United States  
1. Jun 2020 → present

### Medical Doctor

Odense University Hospital  
Odense, Denmark  
1. Feb 2020 → present

### Research assistant

Odense University Hospital  
Odense, Denmark  
1. Oct 2014 → 1. Jan 2020

## Research outputs

### Fusion and Healing Prediction in Posterolateral Spinal Fusion Using 18F-Sodium Fluoride-PET/CT

Constantinescu, C. M., Jacobsen, M. K., Gerke, O., Andersen, M. Ø. & Høilund-Carlsen, P. F., 16. Apr 2020, In : Diagnostics. 10, 4, 9 p., 226.

### Comparison of 18F-sodium fluoride uptake in the whole bone, pelvis, and femoral neck of multiple myeloma patients before and after high-dose therapy and conventional-dose chemotherapy

Zirakchian Zadeh, M., Østergaard, B., Raynor, W. Y., Revheim, M-E., Seraj, S. M., Acosta-Montenegro, O., Ayubcha, C., Yellanki, D. P., Al-Zaghal, A., Nielsen, A. L., Constantinescu, C. M., Gerke, O., Werner, T. J., Zhuang, H., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., 3. Apr 2020, In : European Journal of Nuclear Medicine and Molecular Imaging. 39, 6, p.

### Artificial intelligence-based versus manual assessment of prostate cancer in the prostate gland: a method comparison study

Mortensen, M. A., Borrelli, P., Poulsen, M. H., Gerke, O., Enqvist, O., Ulén, J., Trägårdh, E., Constantinescu, C., Edenbrandt, L., Lund, L. & Høilund-Carlsen, P. F., Nov 2019, In : Clinical Physiology and Functional Imaging. 39, 6, p.

**Prognostic value of NaF-PET/CT in non-instrumented posterolateral lumbar fusion**

Constantinescu, C., Piri, R., Gerke, O., Andersen, M. Ø. & Høilund-Carlsen, P. F., Oct 2019, In : European Journal of Nuclear Medicine and Molecular Imaging. 46, Suppl. 1, p. S242-S243 OP-631.

**Diagnostic implications of neuronal network diaschisis in patients with Parkinson's disease**

Majdi, A., Constantinescu, C., Pedersen, K., Wermuth, L., Gjedde, A. & Segtnan, E., 1. Jul 2019, In : Journal of Cerebral Blood Flow and Metabolism. 39, Suppl. 1, p. 565 1 p.

**A higher increase in FDG uptake in whole bone marrow of multiple myeloma patients from early to delayed pre-treatment scans is associated with poor response to treatment and inferior survival**

Zadeh, M. Z., Østergaard, B., Raynor, W., Ayubcha, C., Acosta-Montenegro, O., Yellanki, D., Seraj, S. M., Rojulpote, C., Gerke, O., Constantinescu, C. M., Werner, T., Zhuang, H., Høilund-Carlsen, P. F. & Alavi, A., 1. May 2019, In : Journal of Nuclear Medicine. 60, Supplement 1, 21.

**Assessment of uptake of FDG in the whole bone marrow of multiple myeloma and smoldering multiple myeloma patients through a novel method of PET/CT quantification: comparison with a control group**

Zadeh, M. Z., Østergaard, B., Raynor, W., Ayubcha, C., Acosta-Montenegro, O., Yellanki, D., Taghvaei, R., Gerke, O., Constantinescu, C. M., Werner, T., Zhuang, H., Høilund-Carlsen, P. F. & Alavi, A., 1. May 2019, In : Journal of Nuclear Medicine. 60, Supplement 1, 143.

**Baseline global splenic uptake of FDG in multiple myeloma patients: a higher uptake is associated with inferior overall survival**

Zadeh, M. Z., Nguyen, D., Østergaard, B., Ayubcha, C., Al-Zaghal, A., Raynor, W., Rojulpote, C., Gerke, O., Constantinescu, C. M., Werner, T., Zhuang, H., Høilund-Carlsen, P. F. & Alavi, A., 1. May 2019, In : Journal of Nuclear Medicine. 60, Supplement 1, 22.

**Evaluation of myeloma bone disease by means of <sup>18</sup>F-sodium fluoride PET/CT**

Zadeh, M. Z., Østergaard, B., Seraj, S. M., Ayubcha, C., Raynor, W., Gerke, O., Constantinescu, C. M., Werner, T., Zhuang, H., Høilund-Carlsen, P. F. & Alavi, A., 1. May 2019, In : Journal of Nuclear Medicine. 60, Supplement 1, 24.

**Evaluation of response to treatment in multiple myeloma patients by a semi-automated FDG-PET/CT quantification method**

Zadeh, M. Z., Østergaard, B., Raynor, W., Ayubcha, C., Acosta-Montenegro, O., Seraj, S. M., Gerke, O., Constantinescu, C. M., Werner, T., Zhuang, H., Høilund-Carlsen, P. F. & Alavi, A., 1. May 2019, In : Journal of Nuclear Medicine. 60, Supplement 1, 23.

**Diagnostic manifestations of total hemispheric glucose metabolism ratio in neuronal network diaschisis: diagnostic implications in Alzheimer's disease and mild cognitive impairment**

Antonsen Segtnan, E., Majdi, A., Constantinescu, C. M., Grupe, P., Gerke, O., Dali, H. T. Í., Strøm, O. E., Holm, J., Alavi, A., Sadigh-Eteghad, S., Wermuth, L., Hildebrandt, M., Gjedde, A. & Høilund-Carlsen, P. F., May 2019, In : European Journal of Nuclear Medicine and Molecular Imaging. 46, 5, p. 1164-1174

**Association between age, uptake of <sup>18</sup>F-fluorodeoxyglucose and of <sup>18</sup>F-sodium fluoride, as cardiovascular risk factors in the abdominal aorta**

Arani, L. S., Gharavi, M. H., Zadeh, M. Z., Raynor, W. Y., Seraj, S. M., Constantinescu, C. M., Gerke, O., Werner, T. J., Høilund-Carlsen, P. F. & Alavi, A., 8. Mar 2019, In : Hellenic Journal of Nuclear Medicine. 22, 1, p. 14-19

**The Role of PET in Evaluating Atherosclerosis: A Critical Review**

Moghbel, M., Al-Zaghal, A., Werner, T. J., Constantinescu, C. M., Høilund-Carlsen, P. F. & Alavi, A., 1. Nov 2018, In : Seminars in Nuclear Medicine. 48, 6, p. 488-497

**FDG-PET/CT for assessment of pain perception and correlation to clinical outcome following surgery for lumbar disc herniation**

Stoettrup, C. C., Khosravi, M., Constantinescu, C. M., O'Neill, S., Andersen, M. Ø., Alavi, A. & Høilund-Carlsen, P. F., 2018.

**FDG-PET/CT for evaluation of inflammation in the lumbar spine following surgery for lumbar disc herniation**

Støttrup, C. C., Zadeh, M., Constantinescu, C. M., O'Neill, S., Andersen, M. Ø., Alavi, A. & Høilund-Carlsen, P. F., 1. Oct 2017, In : European Journal of Nuclear Medicine and Molecular Imaging. 44, 2 Suppl., p. 472 1 p., EP-0099.

**Comparison of global uptake of NaF-PET/CT in whole-body bone in multiple myeloma and healthy controls**

Zadeh, M. Z., Østergaard, B., Raynor, W., Taghvaei, R., Acosta-Montenegro, O., Ayubcha, C., Khosravi, M., Constantinescu, C. M., Nielsen, A. L., Werner, T., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., Jun 2017, p. 768.

**Feasibility of using global FDG uptake in bone marrow to assess treatment of multiple myeloma**

Acosta-Montenegro, O., Raynor, W., Østergaard, B., Zadeh, M. Z., Taghvaei, R., Constantinescu, C. M., Werner, T., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., Jun 2017, p. 189.

**Global quantification of NaF in the skeleton: assessing bone formation in multiple myeloma patients before and after treatment**

Raynor, W., Acosta-Montenegro, O., Østergaard, B., Zadeh, M. Z., Ayubcha, C., Taghvaei, R., Khosravi, M., Constantinescu, C. M., Werner, T., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., Jun 2017, p. 1214.

**Quantification of the total bone marrow activity with FDG-PET in multiple myeloma before and after treatment: comparison with a control group**

Zadeh, M. Z., Østergaard, B., Raynor, W., Taghvaei, R., Acosta-Montenegro, O., Khosravi, M., Nielsen, A. L., Constantinescu, C. M., Werner, T., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., Jun 2017, p. 190. 1 p.

**Prognostic implications of total hemispheric glucose metabolism ratio in cerebro-cerebellar diaschisis**

Segtnan, E. A., Grupe, P., Jarden, J. O., Gerke, O., Ivanidze, J., Christlieb, S. B., Constantinescu, C. M., Pedersen, J. E., Houshmand, S., Hess, S., Zarei, M., Gjedde, A., Alavi, A. & Høilund-Carlsen, P. F., May 2017, In : Journal of Nuclear Medicine. 58, 5, p. 768-773

**Comparison of global uptake of NaF-PET/CT in whole-body bone in multiple myeloma and healthy controls**

Zadeh, M. Z., Østergaard, B., Raynor, W., Taghvaei, R., Acosta-Montenegro, O., Ayubcha, C., Khosravi, M., Constantinescu, C. M., Nielsen, A. L., Werner, T., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., 2017, In : Journal of Nuclear Medicine. 58, Suppl. 1, p. 768

**Decline with age in normal cerebral and cerebellar glucose metabolism in women and men determined by FDG PET/CT**

Seifar, F., Parnianfard, N., Constantinescu, C. M., Shakouri, K. & Høilund-Carlsen, P. F., 2017, In : European Journal of Nuclear Medicine and Molecular Imaging. 44, Suppl. 2, p. 616 1 p., EP-0434.

**Diagnostic implications of total hemi-spheric glucose metabolism ratio in Mild cognitive impairment and Alzheimer's disease**

Antonsen Segtnan, E., Majidi, A., Constantinescu, C. M., Grupe, P., Dali, H. T. Í., Strøm, O. E., Holm, J., Seyedi Vafae, M., Sadigh-Eteghad, S., Wermuth, L., Gjedde, A. & Høilund-Carlsen, P. F., 2017, In : European Journal of Nuclear Medicine and Molecular Imaging. 44, 2 Suppl. , p. 597-598 EP-0392.

**Evaluation of the role of aging on quantification of NaF uptake in the shoulder, hip and knee joints**

Zadeh, M. Z., Raynor, W., Taghvaei, R., Khosravi, M., Shamchi, S. P., Østergaard, B., Constantinescu, C. M., Nielsen, A. L., Werner, T., Høilund-Carlsen, P. F. & Alavi, A., 2017, In : Journal of Nuclear Medicine. 58, Suppl. 1, p. 1215

**Feasibility of using global FDG uptake in bone marrow to assess treatment of multiple myeloma**

Acosta-Montenegro, O., Raynor, W., Østergaard, B., Zadeh, M. Z., Taghvaei, R., Constantinescu, C. M., Werner, T., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., 2017, In : Journal of Nuclear Medicine. 58, Suppl. 1, p. 189

**Global quantification of NaF in the skeleton: assessing bone formation in multiple myeloma patients before and after treatment**

Raynor, W., Acosta-Montenegro, O., Østergaard, B., Zadeh, M. Z., Ayubcha, C., Taghvaei, R., Khosravi, M., Constantinescu, C. M., Werner, T., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., 2017, In : Journal of Nuclear Medicine. 58, Suppl. 1, p. 1214

**Increasing level of FDG uptake in shoulder, hip, and knee joints with aging: age related inflammation in the joints**

Zadeh, M. Z., Raynor, W., Taghvaei, R., Khosravi, M., Shamchi, S. P., Østergaard, B., Nielsen, A. L., Constantinescu, C. M., Werner, T., Høilund-Carlsen, P. F. & Alavi, A., 2017, In : Journal of Nuclear Medicine. 58, Suppl. 1, p. 1228

**Quantification of the total bone marrow activity with FDG-PET in multiple myeloma before and after treatment: comparison with a control group**

Zadeh, M. Z., Østergaard, B., Raynor, W., Taghvaei, R., Acosta-Montenegro, O., Khosravi, M., Nielsen, A. L., Constantinescu, C. M., Werner, T., Abildgaard, N., Høilund-Carlsen, P. F. & Alavi, A., 2017, In : Journal of Nuclear Medicine. 58, Suppl. 1, p. 190 1 p.

**Inter-observer variability of total hemispheric glycolysis ratio obtained at 1-hour and 3-hour FDG-PET/CT imaging in glioma patients**

Segtnan, E. A., Constantinescu, C. M., Holm, J., Grupe, P., Gerke, O. & Høilund-Carlsen, P. F., 2016.

**Total hemispheric glycolysis ratio by FDG-PET/CT in gliomas; Evaluating diaschisis and potential prognostic information**

Segtnan, E. A., Grupe, P., Gerke, O., Jarden, J. O., Christlieb, S. B., Constantinescu, C. M., Pedersen, J.E., Houshmand, S., Hess, S., Zarei, M., Gjedde, A., Alavi, A. & Høilund-Carlsen, P. F., 2016.