

Stanford



Diego Augusto Santos Toesca

Postdoctoral Research Fellow, Radiation Therapy

Bio

BIO

I am a physician with post-graduate residency training in Radiation Oncology completed at University of São Paulo (USP), Brazil, in 2015. Currently undergoing a Postdoctoral Clinical Research Fellowship at the Department of Radiation Oncology, Stanford University. My research focus has been on SBRT efficacy and toxicity for treatment of liver and pancreatic tumors.

HONORS AND AWARDS

- Investigator-Initiated Research Grant - Varian Research Collaborations Program, Varian Medical Systems Inc. (2017-2018)
- Caywood Investigator Fund for Pancreatic Cancer, Stanford Cancer Institute, Division of Gastrointestinal Oncology (2016-2018)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member-in-training, American Society of Radiation Oncology (2015 - present)

PROFESSIONAL EDUCATION

- Radiation Oncology Residency, University of São Paulo (2015)
- General Surgery Residency, SES - São Paulo (2010)
- Doctor of Medicine, Federal University of Mato Grosso do Sul (2007)

STANFORD ADVISORS

- Daniel Chang, Postdoctoral Faculty Sponsor

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Clinical and translational research in GI oncology. Development of projects focused on liver and pancreatic cancer, with a special interest on stereotactic body radiotherapy (SBRT) data, including imaging, treatment planning, treatment response, toxicity prediction and overall outcomes.

LAB AFFILIATIONS

- Albert Koong, Koong Lab (7/1/2015 - - 6/30/2017)

Publications

PUBLICATIONS

- **Predicting Pancreatic Cancer Resectability and Outcomes Based on an Objective Quantitative Scoring System.** *Pancreas*
Toesca, D. A., Jeffrey, R. B., von Eyben, R., Pollom, E. L., Poullos, P. D., Poultsides, G. A., Fisher, G. A., Visser, B. C., Koong, A. C., Chang, D. T.

; 48 (5): 622–28

- **Clinical Case Panel: Treatment Alternatives for Inoperable Hepatocellular Carcinoma.** *Seminars in radiation oncology*
Toesca, D. A., Barry, A., Sapisochin, G., Beecroft, R., Dawson, L., Owen, D., Mouli, S., Lewandowski, R., Salem, R., Chang, D. T.
2018; 28 (4): 295–308
- **Management of Borderline Resectable Pancreatic Cancer.** *International journal of radiation oncology, biology, physics*
Toesca, D. A., Koong, A. J., Poultides, G. A., Visser, B. C., Haraldsdottir, S., Koong, A. C., Chang, D. T.
2018; 100 (5): 1155–74
- **Assessment of hepatic function decline after stereotactic body radiation therapy for primary liver cancer.** *Practical radiation oncology*
Toesca, D. A., Osmundson, E. C., von Eyben, R., Shaffer, J. L., Koong, A. C., Chang, D. T.
2017; 7 (3): 173–182
- **Central liver toxicity after SBRT: An expanded analysis and predictive nomogram.** *Radiotherapy and oncology*
Toesca, D. A., Osmundson, E. C., Eyben, R. v., Shaffer, J. L., Lu, P., Koong, A. C., Chang, D. T.
2017; 122 (1): 130–136
- **The Utility of Stereotactic Body Radiotherapy for Palliation of Metastatic Pancreatic Adenocarcinoma.** *Practical radiation oncology*
Koong, A. J., Toesca, D. A., Baclay, J. R., Pollom, E. L., von Eyben, R., Koong, A. C., Chang, D. T.
2020
- **Stereotactic Body Radiation Therapy for Cholangiocarcinoma: Optimizing Locoregional Control With Elective Nodal Irradiation.** *Advances in radiation oncology*
Kozak, M. M., Toesca, D. A., von Eyben, R., Pollom, E. L., Chang, D. T.
2020; 5 (1): 77–84
- **Outcomes of Oligometastatic Colorectal Cancer treated with Stereotactic Ablative Radiotherapy**
Benson, K., Sandhu, N., Zhang, C., Ko, R. B., Toesca, D. S., Von Eyben, R., Diehn, M., Bush, K., Maxim, P. G., Gensheimer, M. F., Soltys, S. G., Loo, B. W., Pollom, et al
ELSEVIER SCIENCE INC.2019: E161–E162
- **Deep Learning Approach for Markerless Pancreatic Tumor Target Localization**
Zhao, W., Shen, L., Han, B., Yang, Y., Cheng, K., Toesca, D. S., Koong, A. C., Chang, D. T., Xing, L.
ELSEVIER SCIENCE INC.2019: S202–S203
- **Tolerability and Toxicity of Definitive and Preoperative Chemoradiation in Octogenarian Patients with Esophageal Cancer**
Rahimy, E., Koong, A., Toesca, D. S., Panjwani, N., Fisher, G. A., Chang, D. T., Pollom, E.
ELSEVIER SCIENCE INC.2019: E196
- **Stereotactic Body Radiotherapy for Cholangiocarcinoma: Optimizing Locoregional Control with Elective Nodal Irradiation**
Kozak, M., Toesca, D. S., Von Eyben, R., Pollom, E., Chang, D. T.
ELSEVIER SCIENCE INC.2019: E223–E224
- **Defining Clinical Target Volume in Patients with Early Stage Indolent Lymphoma Treated with Definitive Radiotherapy**
Al-Rowais, F., Toesca, D. S., Binkley, M. S., Von Eyben, R., Hoppe, R. T.
ELSEVIER SCIENCE INC.2019: E478
- **Improved Survival with Modified Folfirinox and Higher Doses of Stereotactic Body Radiation Therapy for Treatment of Locally Advanced Pancreatic Adenocarcinoma**
Ahmed, F., Toesca, D. S., Von Eyben, R., Kashyap, M., Pollom, E., Chang, D. T.
ELSEVIER SCIENCE INC.2019: E232–E233
- **Reirradiation with stereotactic body radiation therapy after prior conventional fractionation radiation for locally recurrent pancreatic adenocarcinoma.** *Advances in radiation oncology*
Koong, A. J., Toesca, D. A., von Eyben, R., Pollom, E. L., Chang, D. T.
; 2 (1): 27–36
- **Predicting Pancreatic Cancer Resectability and Outcomes Based on an Objective Quantitative Scoring System**
Toesca, D. S., Jeffrey, R., von Eyben, R., Pollom, E. L., Poulos, P. D., Poultides, G. A., Fisher, G. A., Visser, B. C., Koong, A. C., Chang, D. T.
LIPPINCOTT WILLIAMS & WILKINS.2019: 622–28

- **Markerless pancreatic tumor target localization enabled by deep learning.** *International journal of radiation oncology, biology, physics*
Zhao, W., Shen, L., Han, B., Yang, Y., Cheng, K., Toesca, D. A., Koong, A. C., Chang, D. T., Xing, L.
2019
- **Neural networks for deep radiotherapy dose analysis and prediction of liver SBRT outcomes.** *IEEE journal of biomedical and health informatics*
Ibragimov, B., Toesca, D., Yuan, Y., Koong, A., Daniel, C., Xing, L.
2019
- **Microsatellite Instability and Adjuvant Chemotherapy in Stage II Colon Cancer.** *American journal of clinical oncology*
Koenig, J. L., Toesca, D. A., Harris, J. P., Tsai, C. J., Haraldsdottir, S., Lin, A. Y., Pollom, E. L., Chang, D. T.
2019
- **Single Institution Experience with Stereotactic Body Radiation Therapy for Treatment of Adrenal Gland Metastases**
Koong, A., Toesca, D. S., Von Eyben, R., Koong, A. C., Chang, D. T.
ELSEVIER SCIENCE INC.2018: E91–E92
- **Sarcopenia in Overweight or Obese Patient is an Adverse Prognostic Factor in Pancreatic Cancer**
Nwachukwu, C. R., Wu, Y., Toesca, D. S., Von Eyben, R., Pollom, E., Chang, D. T.
ELSEVIER SCIENCE INC.2018: E76
- **Predicting Survival after Liver SBRT by Deep Learning-Based Analysis of Treatment Dose Plans**
Ibragimov, B., Toesca, D., Chang, D. T., Koong, A. C., Xing, L.
ELSEVIER SCIENCE INC.2018: E56
- **Worsening of Child-Pugh Score after Stereotactic Body Radiation Therapy Significantly Impacts Survival of Patients Treated for Hepatocellular Carcinoma**
Toesca, D. S., Wu, Y., Koong, A., Von Eyben, R., Osmundson, E. C., Shaffer, J., Koong, A. C., Chang, D. T.
ELSEVIER SCIENCE INC.2018: E64
- **Development of deep neural network for individualized hepatobiliary toxicity prediction after liver SBRT** *MEDICAL PHYSICS*
Ibragimov, B., Toesca, D., Chang, D., Yuan, Y., Koong, A., Xing, L.
2018; 45 (10): 4763–74
- **Stereotactic body radiation therapy for adrenal gland metastases: Outcomes and toxicity.** *Advances in radiation oncology*
Toesca, D. A., Koong, A. J., von Eyben, R., Koong, A. C., Chang, D. T.
2018; 3 (4): 621–29
- **Development of deep neural network for individualized hepatobiliary toxicity prediction after liver SBRT.** *Medical physics*
Ibragimov, B., Toesca, D., Chang, D., Yuan, Y., Koong, A., Xing, L.
2018
- **Convolutional Neural Networks for Identifying Correlation Between Dose Patterns Associated with Poor Survival and Early Local Recurrence After Metastatic Liver SBRT**
Ibragimov, B., Yuan, Y., Toesca, D., Chang, D., Koong, A., Xing, L.
WILEY.2018: E415
- **A Human Genome-wide RNAi Screen Reveals Diverse Modulators that Mediate IRE1 β -XBP1 Activation.** *Molecular cancer research : MCR*
Yang, Z., Zhang, J., Jiang, D., Khatri, P., Solow-Cordero, D. E., Toesca, D. A., Koumenis, C., Denko, N. C., Giaccia, A. J., Le, Q. T., Koong, A. C.
2018
- **Deep 3D dose analysis for prediction of outcomes after liver stereotactic body radiation therapy** *Medical Image Computing and Computer Assisted Intervention - MICCAI 2018*
Bulat, I., Diego, T. A., Yixuan, Y., Albert, K. C., Daniel, C. T., Lei, X.
2018: 684–92
- **Resectable and Borderline Resectable Pancreatic Cancer** *Gastrointestinal Malignancies - A Practical Guide on Treatment Techniques*
Toesca, D. A., Chang, D. T., Kim, E., Herman, J., Koong, A. C., Russo, S.
Springer International Publishing.2018; 1: 199–229
- **Prediction of pancreatic cancer surgical outcomes and prognosis based on an objective resectability scoring system** *2018 Gastrointestinal Cancers Symposium (GI-ASCO)*

Toesca, D. A., Jeffrey, B., von Eyben, R., Poullos, P. D., Poultsides, G. A., Fisher, G. A., Visser, B. C., Koong, A. C., Chang, D. T.
2018: 446

- **Can looking at density differences between liver parenchyma and oligometastatic lesions predict outcomes and toxicities in patients receiving stereotactic body radiation therapy for metastasectomy?** *2018 Gastrointestinal Cancers Symposium (GI-ASCO)*
Jin, W., Toesca, D. A., Osmundson, E., Shaffer, J. L., Koong, A. C., Chang, D. T.
2018: 479
- **Strategies for prediction and mitigation of radiation-induced liver toxicity.** *Journal of radiation research*
Toesca, D. A., Ibragimov, B., Koong, A. J., Xing, L., Koong, A. C., Chang, D. T.
2018
- **Assessing local progression after stereotactic body radiation therapy for unresectable pancreatic adenocarcinoma: CT versus PET.** *Practical radiation oncology*
Toesca, D. A., Pollom, E. L., Poullos, P. D., Flynt, L., Cui, Y., Quon, A., von Eyben, R., Koong, A. C., Chang, D. T.
2017; 7 (2): 120-125
- **Nonoperative Management of Rectal Cancer: A Modern Perspective.** *Oncology (Williston Park, N.Y.)*
Qian, Y., Chin, A. L., Toesca, D. A., Koong, A. C., Chang, D. T.
2017; 31 (10): e13–e22
- **Efficacy and Safety of Stereotactic Body Radiation Therapy for Treatment of Inoperable Intrahepatic and Perihilar Cholangiocarcinoma** *59th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*
Toesca, D. A., Osmundson, E., Shaffer, J., von Eyben, R., Koong, A. C., Chang, D. T.
2017: E192
- **The Impact of Chemotherapy Regimen and Radiation Dose of Stereotactic Body Radiation Therapy for Locally Advanced Pancreatic Adenocarcinoma** *59th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*
Toesca, D. A., Pollom, E. L., von Eyben, R., Koong, A. C., Chang, D. T.
2017: E193
- **Outcomes after Stereotactic Body Radiotherapy for Treatment of Hepatocellular Carcinoma** *59th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*
Toesca, D. A., Osmundson, E., Shaffer, J., von Eyben, R., Koong, A. C., Chang, D. T.
2017: E192–E193
- **Combining deep learning with anatomy analysis for segmentation of portal vein for liver SBRT planning.** *Physics in medicine and biology*
Ibragimov, B., Toesca, D., Chang, D., Koong, A., Xing, L.
2017
- **Deep Learning-Based Autosegmentation of Portal Vein for Prediction of Central Liver Toxicity After SBRT** *59th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*
Ibragimov, B., Toesca, D. A., Chang, D. T., Koong, A. C., Xing, L.
2017: E672
- **Increased Visceral to Subcutaneous Fat Ratio Is Associated With Decreased Overall Survival in Pancreatic Cancer** *58th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*
Nwachukwu, C. R., Toesca, D. A., Liu, Y., Koong, A., von Eyben, R., Koong, A. C., Chang, D. T.
ELSEVIER SCIENCE INC.2016: E220–E220
- **Hepatobiliary Toxicity Association With Central Biliary Tract Dose After Stereotactic Body Radiation Therapy: An Expanded Analysis** *58th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*
Toesca, D. A., Osmundson, E., Shaffer, J., von Eyben, R., Koong, A. C., Chang, D. T.
ELSEVIER SCIENCE INC.2016: S141–S142
- **Stereotactic Body Radiation Therapy After Surgical Resection for Locally Recurrent Pancreatic Adenocarcinoma** *58th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*
Nwachukwu, C. R., Toesca, D. A., Pollom, E., von Eyben, R., Chang, D. T., Koong, A. C.
ELSEVIER SCIENCE INC.2016: E158–E158
- **The Impact of FDG Positron Emission Tomography for Assessment of Local Progression of Unresectable Pancreatic Adenocarcinoma After Stereotactic Body Radiation Therapy** *58th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*

Toesca, D. A., Pollom, E., Nwachukwu, C. R., von Eyben, R., Koong, A. C., Chang, D. T.
ELSEVIER SCIENCE INC.2016: E205–E205

- **Assessment of Hepatic Function Decline After Stereotactic Body Radiation Therapy for Primary Liver Tumors Using the Albumin-Bilirubin (ALBI) Score** *58th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*

Toesca, D. A., Osmundson, E., Shaffer, J., von Eyben, R., Koong, A. C., Chang, D. T.
ELSEVIER SCIENCE INC.2016: E203–E204

- **Reirradiation With Stereotactic Body Radiation Therapy After Prior Conventional Fractionation Radiation for Locally Recurrent Pancreatic Adenocarcinoma** *58th Annual Meeting of the American-Society-for-Radiation-Oncology (ASTRO)*

Toesca, D. A., Pollom, E., Nwachukwu, C. R., von Eyben, R., Koong, A. C., Chang, D. T.
ELSEVIER SCIENCE INC.2016: E205–E205

PRESENTATIONS

- Hepatobiliary Toxicity Association With Central Biliary Tract Dose After Stereotactic Body Radiation Therapy: An Expanded Analysis - 58th ASTRO's Annual Meeting
- Prediction of Pancreatic Cancer Surgical Outcomes and Prognosis Based on an Objective Resectability Scoring System - 2017 ECOG-ACRIN Cancer Research Group Meeting (October 26, 2017)