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Place of Birth: Buffalo, NY

**EMPLOYMENT**

Hartford Healthcare, St. Vincent's Medical Center, Bridgeport, CT	
• Surgical Oncologist	2020-
University of Connecticut, Farmington, CT	
• Assistant Professor of Surgery	2021-
The Jackson Laboratory for Genomic Medicine, Farmington, CT	
• Senior Research Scientist	2020-

**EDUCATION AND TRAINING**

Yale College, New Haven, CT	
• BA - Architecture	1994-1999
Stockholm University, Stockholm, Sweden	
• MS - Computer and Systems Sciences	2002-2004
Harvard University Extension School, Cambridge, MA	
• Post-baccalaureate pre-medical program	2003-2004
Yale University, New Haven, CT	
• MS - Computational Biology & Bioinformatics	2004-2007
• PhD - Computational Biology & Bioinformatics	2004-2010
• MD	2004-2012
Yale-New Haven Hospital, New Haven, CT	
• General Surgery Resident	2012-2018
Memorial Sloan Kettering Cancer Center, New York, NY	
• Complex Surgical Oncology Fellow	2018-2020

**LICENSURE AND BOARD CERTIFICATION**

Connecticut Medical License (#66447)	7/2020-
New York State Medical License (#291718)	11/2017-11/2020
The American Board of Surgery, Complex Surgical Oncology, Board Eligible	
The American Board of Surgery, General Surgery (certification #064128)	11/2018

**HONORS/AWARDS**

Yale College, BA <i>cum laude</i> , distinction in the major	1999
Yale University School of Graduate Studies, PhD with distinction	2010
The Connecticut Chapter of the American College of Surgeons, Graduation Prize	2012
Yale School of Medicine, The MD/PhD Graduation award	2012
Yale School of Medicine, MD <i>cum laude</i>	2012
Yale Surgical Society, Basic Sciences Research Award	2016
Yale School of Medicine, Resident Mentorship Award	2017
Yale General Surgery Residency, Educational Chief Resident	2017-2018
Yale General Surgery Residency, Teaching Award	2018
Yale College Soccer, Captain and MVP	1998
Yale Surgical Society, Lindskog International Travel Award	2009
Yale General Surgery Residency, SICU Resident of the Year	2013

Ohse Research Grant, Principal Investigator \$40,000 2014

## WORK

Architecture Internship  
• Scheiwiller Svensson Arkitekter, Stockholm, Sweden 2000-2001  
• Cesar Pelli & Associates Architects, New Haven, CT 1998  
Professional Soccer Player, Stockholm, Sweden 1999-2003  
Assistant Coach, Yale University Women's Soccer 2004

## RESEARCH EXPERIENCE

Whole-genome approaches to various endocrine neoplasms for tumor characterization and biomarker discovery.  
Advisor: Tobias Carling, MD, PhD 2014-2018  
Integration of large-scale epigenomic and genomic data for prediction of treatment response in melanoma.  
Advisor: Michael Krauthammer, MD, PhD 2006-2010  
Genome-wide epigenetic profiling of head and neck squamous cell carcinoma.  
Advisor: Paul Lizardi, PhD 2004-2006  
Computational modelling of tumor heterogeneity using agent- and equation-based methods.  
Advisor: David Tuck, MD 2004  
Clustering-based gene selection for decision tree tumor classification using microarray expression data.  
Advisor: Henrik Boström, PhD, Stockholm University 2002-2003

## PROFESSIONAL MEMBERSHIPS

American Association for Cancer Research 2019-present  
American Society of Clinical Oncology 2018-present  
New England Surgical Society 2016-present  
Society of Surgical Oncology 2015-present  
Association for Academic Surgery 2013-present  
American College of Surgeons, Associate Fellow 2009-present  
International Society for Computational Biology 2009-present  
American Medical Association 2006-2012

## SKILLS

Languages: Swedish (fluent), Spanish (proficient)  
Programming Languages: R, Java, Python, Perl, MySQL

## PUBLICATIONS

### Original Research

- **Rubinstein JC**, Nicolson NG, Rottmann D, Morotti R, Korah R, Carling T, Christison-Lagay ER. Choice of Control Tissue Impacts Designation of Germline Variants in a Cohort of Papillary Thyroid Carcinoma Patients. *Annals of Oncology* 2020 Mar;S0923-7534(20):36074-9.
- Klemen ND, Wang M, **Rubinstein JC**, Olino K, Clune J, Ariyan S, Cha C, Weiss S, Kluger H, Sznol M. Survival After Checkpoint Inhibitors for Metastatic Acral, Mucosal, and Uveal Melanoma. *Journal for Immunotherapy of Cancer* 2020 Mar;8:e000341.
- **Rubinstein JC**, Herrick-Reynolds K, Dinauer C, Morotti R, Udelsman R, Christison-Lagay ER. Recurrence and Complications in Pediatric Papillary Thyroid Cancer in a High-Volume Practice. *Journal of Surgical Research* 2020 Jan;249:58-66.
- **Rubinstein JC**, Khan SA, Christison-Lagay ER, Cha C. APC mutational patterns in gastric adenocarcinoma are enriched for missense variants with associated decreased survival. *Genes Chromosomes and Cancer*. 2020 Jan;59:64-68.
- **Rubinstein JC**, Herrick-Reynolds K, Dinauer C, Morotti R, Christison-Lagay ER. Lymph Node Ratio Predicts Recurrence in Pediatric Papillary Thyroid Cancer. *Journal of Pediatric Surgery*. 2019 Jan;54(1):129-132.
- Brown TC, Murtha TD, **Rubinstein JC**, Korah R, Carling T. SLC12A7 alters adrenocortical carcinoma cell adhesion properties to promote an aggressive invasive behaviour. *Cell Commun. Signal*. 2018 Jun 8;16(1):27.
- Murtha TD, Brown TC, **Rubinstein JC**, Haglund F, Juhlin CC, Larsson C, Korah R, Carling T. Overexpression of cytochrome P450 2A6 in adrenocortical carcinoma. *Surgery* 2017 Jan;161(6):1667-1674.

- **Rubinstein JC**, Han G, Jackson L, Bulloch K, Ariyan S, Narayan D, Gould-Rothberg B, Han D. Regression in thin melanoma is associated with nodal recurrence after a negative sentinel node biopsy. *Cancer Medicine* 2016 Oct;5(10):2832-2840.
- **Rubinstein JC**, Brown TC, Christison-Lagay ER, Zhang Y, Kunstman JW, Juhlin CC, Nelson-Williams C, Goh G, Quinn CE, Callender GG, Udelsman R, Lifton RP, Korah R, Carling T. Shifting Patterns of Genomic Variation in the Somatic Evolution of Papillary Thyroid Carcinoma. *BMC Cancer* 2016 Aug;16(1):646.
- **Rubinstein JC**, Brown TC, Goh G, Juhlin CC, Stenman A, Korah R, Carling T. Chromosome 19 Amplification Correlates with Advanced Disease in Adrenocortical Carcinoma. *Surgery* 2016 Jan;159(1):296-301.
- Brown TC, Juhlin CC, Healy JM, Stenman A, **Rubinstein JC**, Korah R, Carling T. DNA Copy Amplification and Overexpression of SLC12A7 in Adrenocortical Carcinoma. *Surgery* 2016 Jan;159(1):250-257.
- Juhlin CC, Stenman A, Haglund F, Clark VE, Brown TC, Baranoski J, Bilguvar K, Goh G, Svahn F, **Rubinstein JC**, Caramuta S, Yasuno K, Günel M, Bäckdahl M, Prasad ML, Korah R, Lifton R, Carling T. Whole-exome sequencing defines the mutational landscape of genetic orphan pheochromocytoma and identifies *KMT2D* as a recurrently mutated gene. *Genes Chromosomes and Cancer* 2015 Sep;54(9):542-54.
- Kunstman JW, Juhlin CC, Goh G, Brown TC, Stenman A, Healy JM, **Rubinstein JC**, Choi M, Kiss N, Nelson-Williams C, Mane S, Rimm DL, Prasad MJ, Hoog A, Zedenius J, Larsson C, Korah R, Lifton RP, Carling T. Characterization of the mutational landscape of anaplastic thyroid cancer via whole-exome sequencing. *Human Molecular Genetics* 2015 Jan;24(8):2318-2329.
- **Rubinstein JC**, Sznol M, Pavlick AC, Ariyan S, Cheng E, Bacchicocchi A, Kluger HM, Narayan D, Halaban R. Incidence of the V600K mutation among melanoma patients with BRAF mutations, and potential therapeutic response to the specific BRAF inhibitor PLX4032. *Journal of Translational Medicine* 2010 Jul 14;8:67.
- **Rubinstein JC**, Tran N, Ma S, Halaban R, Krauthammer M. Genome-wide methylation and expression profiling identifies promoter characteristics affecting demethylation-induced gene up-regulation in melanoma. *BMC Medical Genomics* 2010 Feb 9;3(1):4.
- Szpakowski S, Sun X, Lage J, Dyer A, **Rubinstein JC**, Kowalski D, Sasaki C, Costa J, Lizardi PM. Loss of epigenetic silencing in tumors preferentially affects primate-specific retroelements. *Gene* 2009 Dec 15;448(2):151-67.
- Lizardi PM, Szpakowski S, Sun X, Lage J, Dyer A, **Rubinstein JC**, Kowalski D, Brandsma J, Chen M, Zhao H, Sasaki C, Costa J. The Epigenetic Status of Subfamilies of DNA Repeats as Differentiation-Independent Metrics for Genome Instability in Cancer Epidemiology. *Environmental and Molecular Mutagenesis*. 2009 Aug 1;50(7):549-549.

#### Invited Manuscripts, Reports, and Reviews

- **Rubinstein JC**, Christison-Lagay ER. Reply to the Letter to the Editor “Germline-somatic fluidity in guiding patient care. Reply to the Letter to the Editor: “Choice of control tissue impacts designation of germline variants in a cohort of papillary thyroid carcinoma patients. *Annals of Oncology* 2020, in press.
- **Rubinstein JC**. A Brief Primer on Big Data for Surgeons. *Journal of Surgical Oncology* 2020 Jan;121:419-421.
- **Rubinstein JC**, Nicolson N, Ahuja N. Next Generation Sequencing in Esophageal and Gastric Malignancy. *Surgical Clinics of North America* 2019 Jun;99(3):511-527.
- **Rubinstein JC**, Farrelly J, Stitelman D, Christison-Lagay ER. Anomalies of the Gastrointestinal Tract. *Surgical and Perioperative Management of Patients with Anatomic Anomalies*. Narayan D et al. (eds.) Springer Nature Switzerland AG 2021.
- **Rubinstein JC**, Majumdar SK, Laskin W, Lazaga F, Prasad ML, Carling T, Khan SA. Hyperparathyroidism-jaw tumor syndrome associated with large-scale 1q31 deletion. *J. Endocr. Soc* 2017 May 25;1(7):926-930.
- Herrin MA, **Rubinstein JC**, Christison-Lagay ER. Temsirolimus Therapy and Small Bowel Perforation in a Pediatric Patient with Clostridium Septicum Bacteremia. *Journal of Pediatric Surgery Case Reports* 2015 Jun;29(8):320-323.
- **Rubinstein JC**, Liu L, Caty MG, Christison-Lagay ER. Pathologic leadpoint is uncommon in ileo-colic intussusception regardless of age. *Journal of Pediatric Surgery* 2015 Oct;50(10):1665-1667.
- **Rubinstein JC**, Christison-Lagay ER. Successful treatment of visceral infantile hemangioma of the omentum and mesentery with propranolol. *Journal of Pediatric Surgery Case Reports* 2014 Jun 4;2(6):302-4.
- **Rubinstein JC**, Visa A, Zhang L, Antonescu CR, Christison-Lagay ER, Morotti, RA. Primary low-grade fibromyxoid sarcoma of the kidney in a child with the alternative EWSR1-CREB3L1 gene fusion. *Pediatric and Developmental Pathology* 2014 Aug;17(4):321-6.

- **Rubinstein JC.** Perspectives on an education in Computational Biology and Medicine. *Yale Journal of Biology and Medicine* 2012 Sep;85(3):331-7.

#### In Preparation

- Cameron DB, **Rubinstein JC**, Callender GG, Dinauer CW, Christison-Lagay ER. Specific Amino Acid Substitution as well as RET Codon Location Influence Age of Onset and Penetrance of Pheochromocytoma in MEN2 Kindreds. In preparation.
- **Rubinstein JC.** A Brief Primer on Sequencing: Understanding Variants of Any Significance. In preparation.

#### Abstracts

- Cameron DB, **Rubinstein JC**, Callender GG, Dinauer CW, Christison-Lagay ER. Specific Amino Acid Substitution as well as RET Codon Location Influence Age of Onset and Penetrance of Pheochromocytoma in MEN2 Kindreds. Poster of Distinction. New England Surgical Society Annual Meeting, Montreal, Canada. September 2019.
- **Rubinstein JC**, Herrick-Reynolds K, Dinauer C, Morotti R, Christison-Lagay ER. Lymph Node Ratio Predicts Recurrence in Pediatric Papillary Thyroid Cancer. Podium Presentation. American Pediatric Surgery Association-International Pediatric Surgical Oncology Symposium, Palm Desert, CA. May 2018.
- **Rubinstein JC**, Charles Cha. Exome Sequencing Demonstrates Patterns of APC Mutation in Gastric Adenocarcinoma. Podium Presentation. Society of Surgical Oncology Annual Cancer Symposium, Chicago, IL. March 2018.
- Herrick-Reynolds K, **Rubinstein JC**, Dinauer C, Hammers L, Prasad M, Morotti R, Udelsman R, Christison-Lagay ER. Use of Ultrasound for Prognostication and Surgical Decision-Making in Pediatric Papillary Thyroid Cancer. Poster Presentation, American Academy of Pediatrics National Conference, Uniformed Services Section, San Francisco, CA. October 2016.
- **Rubinstein JC**, Herrick-Reynolds K, Dinauer C, Morotti R, Udelsman R, Christison-Lagay ER. Predictors of Recurrence in Pediatric Papillary Thyroid Cancer. Podium Presentation. American Pediatric Surgery Association-International Pediatric Surgical Oncology Symposium, San Diego, CA. May 2016.
- Brown TC, Murtha TD, **Rubinstein JC**, Korah R, Carling T. *SLC12A7* promotes Adrenocortical Carcinoma Cell Malignant Behavior. Podium Presentation. New England Surgical Society Annual Meeting, Boston, MA. September 2016.
- **Rubinstein JC**, Han G, Jackson L, Bulloch K, Ariyan S, Narayan D, Gould-Rothberg B, Han D. Regression in thin melanoma is associated with nodal recurrence after a negative sentinel node biopsy. Poster presentation. Society of Surgical Oncology Annual Cancer Symposium. Boston, MA. March 2016.
- **Rubinstein JC**, Brown T, Korah, R, Carling T. Recurrent Patterns of Single Nucleotide Polymorphism in the MAPK-pathway of Papillary Thyroid Carcinoma Patients. Poster presentation. Annual Meeting of the New England Surgical Society, Newport, RI. September 2015.
- **Rubinstein JC**, Christison-Lagay ER. Mutational Burden in the Neuroblastoma Genome Varies by Race. Poster presentation. Annual Meeting of the New England Surgical Society, Newport, RI. September 2015.
- **Rubinstein JC**, Christison-Lagay ER. Landscape of Genomic Alteration in Neuroblastoma. Podium Presentation. European Congress of Paediatric Surgery, Ljubljana, Slovenia. June 2015.
- **Rubinstein JC**, Brown T, Juhlin CC, Stenman A, Korah R, Carling T. Characterizing Copy Number Variation in Adrenocortical Carcinoma via Next-Generation Sequencing. Poster presentation. Annual Meeting of the American Association of Endocrine Surgeons, Nashville, TN. May 2015.
- **Rubinstein JC**, Tran N, Halaban R, Krauthammer MO. High-Throughput Sequencing of the Melanoma Epigenome for Biomarker Discovery. Podium Presentation. NLM Informatics Training Conference, Denver, CO. June 2010.
- **Rubinstein JC**, Tran N, Halaban R, Krauthammer M. Toward Computational Prediction of Demethylation Induced Gene Reactivation in Cancer. Poster presentation. ISMB/ECCB Conference, Stockholm, Sweden 2009.

#### Theses

- **Rubinstein JC.** Translational Epigenetics: Applications of High-Throughput Genomic Technologies for Melanoma Diagnostics and Treatment. Yale University School of Graduate Studies Doctoral Dissertation, August 2010.
- **Rubinstein JC.** Clustering for Feature Selection in the Classification of Microarray Gene Expression Data. Master's series No. 03-88 DSV-SU/KTH, December 2003.

#### INVITED TALKS

- Human Genomic Variation and the Evolution of Cancer. Society of Clinical Surgery Annual Meeting, New Haven, CT. November 2016.
- Computational Cancer Biology and Somatic Evolution: 3 Billion Moving Targets. Developmental Therapeutics Research Program Retreat, Yale Cancer Center, New Haven, CT. April 2016.
- A Dynamic Genome: Exome Sequencing Papillary Thyroid Carcinoma. Surgical Grand Rounds, Yale University, New Haven, CT. September 2015.
- Comprehensive Analysis of Tumor and Normal Genomes in Papillary Thyroid Cancer. Smilow 5th Anniversary Symposium: A Personalized Medicine Approach to Cancer Care, New Haven, CT. September 2015.
- Addressing the Bottleneck in Translational Research: Accelerating Progress to the Clinic through Bioinformatics. Computational Biology & Bioinformatics Department Retreat, Yale University, New Haven, CT. September 2009.