BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME: Hanna Kelly Sanoff	POSITION TITLE Assistant Professor Department of Medicine
eRA COMMONS USER NAME HS8STNIH	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Williams College, Williamstown, MA	BA	1996	Biology
University of Pennsylvania, Philadelphia, PA	MD	2000	Medicine
University of North Carolina, Chapel Hill, NC	Residency	2000-2003	Internal Medicine
American Board of Internal Medicine	Certification	2003	Internal Medicine
University of North Carolina, Chapel Hill, NC	Fellowship	2003-2006	Medical Oncology
American Board of Internal Medicine	Certification	2006	Medical Oncology
University of North Carolina, Chapel Hill, NC	MPH	2008	Public Health Leadership

A. Personal Statement

I am a gastrointestinal medical oncologist and clinical investigator. I have formal training in clinical trials conduct and design as well as a master's in public health. My research is focused on refining treatment selection amongst understudied and high risk populations of patients with gastrointestinal cancer. I approach this through a combination of trials designed to discover biomarkers of treatment-related toxicity, and through comparative effectiveness research that investigates the real-world effectiveness of our cancer treatments. Through my research program I hope to find ways to increase the number of cancer patients able to safely receive effective cancer treatment.

B. Research and/or Professional Experience

Employment

2006-2009 Assistant Professor, Division of Hematology-Oncology, Department of Medicine, University of North Carolina at Chapel Hill
2006-2009 Member, Lineberger Comprehensive Cancer Center
2009-2012 Adjunct appointment, Clinical Assistant Professor, Division of Hematology-Oncology, Department of Medicine, University of North Carolina
2009-2012 Assistant Professor, Division of Hematology-Oncology, Department of Medicine, University of Virginia
2010-2012 Medical Director, UVA Medical Oncology Clinical Trials Office
2012-present Assistant Professor, Division of Hematology-Oncology, Department of Medicine, University of North Carolina at Chapel Hill

Honors and Awards

1996 *Magna Cum Laude*, Williams College.
2001 David Ontjes Award, University of North Carolina at Chapel Hill. Department of Medicine intern award.
2002 Golden Boots Award, University of North Carolina at Chapel Hill, Department of Medicine residents' award to a second year resident.
2003 Chairman's Award, University of North Carolina at Chapel Hill, Department of Medicine resident award (Marschall Runge, Chair).
2004 Selected as a K30 fellow.
2005 Amgen Hematology-Oncology fellowship training grant.
2005 Selected for the AACR "Molecular Biology in Clinical Oncology" workshop.
2006 Lineberger Comprehensive Cancer Center Population Sciences Developmental Award.
2006 NIH Loan Repayment Program Participant.

2007 UNC Medical Foundation Excellence Fund, Seed Grant
2008 NIH Loan Repayment Program renewal
2010 UVA Cancer Center Commonwealth Fund for Cancer Research, Pilot award
2010 American Cancer Society Institutional Research Grant (UVA)
2010 America's Top Doctor, Castle Connolly/ US News & World Report
2012 University of Virginia Department of Medicine Award for Outstanding Young Investigator

C. Publications [Kelly is my maiden name]

Selected Peer-Reviewed Articles

1. **Sanoff HK**, Sargent DJ, Campbell ME, Morton RF, Fuchs CS, Ramanathan RK, Williamson SK, Findlay BP, Pitot HC, Goldberg RM. N9741: 5 Year Data and Prognostic Factor Analysis of Oxaliplatin and Irinotecan Combinations for Advanced Colorectal Cancer. J Clin Oncol, 2008; 26(35): 5721-7. PMCID: PMC2645101
2. Sargent DJ, Köhne CH, **Sanoff HK**, et al. A pooled safety and efficacy analysis examining the effect of performance status on outcomes in 9 first line treatment trials using individual patient date from 6,286 patients with metastatic colorectal cancer. J Clin Oncol, 2009; 27(12): 1948-55. PMCID: PMC2669760
3. Liu Y, **Sanoff HK**, Cho H, Burd CE, Torrice C, et al. *INK4/ARF* Transcript Expression Is Associated with Chromosome 9p21 Variants Linked to Atherosclerosis. PLoS ONE 2009; 4(4): e5027. PMCID: PMC2660422
4. Liu Y, **Sanoff HK**, Cho H, Burd CE, Torrice C, Ibrahim JG, Thomas NE, Sharpless NE. Expression of p16INK4a in peripheral blood T-cells is a biomarker of human aging. Aging Cell, 2009, 8(4):439-48. PMCID: PMC2752333
5. **Sanoff HK,** Sargent DJ, Green EM, McLeod HL, Goldberg RM. Racial Differences in advanced colorectal cancer outcomes and pharmacogenetics: a subgroup analysis of a large randomized clinical trial. J Clin Oncol, 2009: 27(25):4109-15. PMCID: PMC2734422.
6. Tsygankov D, Liu Y, **Sanoff H**, Sharpless N, Elston T. A Quantitative Model for Age-Dependent Expression of the p16INK4a Tumor Suppressor. Proc Natl Acad Sci U S A. 2009; 29; 106(39):16562-7. PMCID: PMC2757807
7. Goldberg RM, Sargent DJ, Morton RF, Green E, **Sanoff HK**, McLeod H, Buckner J. NCCTG study N9741: Leveraging learning from an NCI cooperative group phase III trial. The Oncologist, 14 (10): 970-8. PMCID: PMC2917613
8. **Sanoff HK,** Davies J, Walko C, Buie L, Chiu WY, Ivanova A, O'Neil B, Stinchcomb TE, Keller K, Dees EC. Phase I trial of vinflunine and pemetrexed in refractory solid tumors. Invest New Drugs. 2011; 29 (1): 131. PMCID: PMC3143820.
9. **Sanoff HK,** Goldberg RM, Pignone MP. Assessing the quality of initial consultations regarding adjuvant colon cancer therapy. Clin Colorectal Cancer, 2010; 9(2): 113-118. NIHMSID 200782
10. O'Neil BH, Raftery L, Calvo BF, Chakravarthy AB, Ivanova A, Meyers MO, Kim HJ, Chan E, Wise PE, Caskey LS, Bernard SA, **Sanoff HK**, Goldberg RM, Tepper JE. A phase I study of bortezomib in combination with standard 5-fluorouracil and external beam radiotherapy for the treatment of locally advanced or metastatic rectal cancer. Clin Colorectal Cancer, 2010; 9(2): 119-25. NIHMSID 200786
11. **Sanoff HK,** Davies JM, Walko C, Irvin W, Buie L, Keller K, Ivanova A, Chiu WK, O'Neil BH, Stinchcombe TE, Dees EC. A Phase I evaluation of the combination of vinflunine and erlotinib in patients with refractory solid tumors. Investigational New Drugs 2011; 29(5): 978-83. PMCID: PMC2988886
12. Song Z, von Figura G, Liu Y, Kraus JM, Torrice C, Dillon P, Rudolph-Watabe M, Ju Z, Kestler HA, **Sanoff H**, Rudolph KL, Lifestyle impacts on the aging-associated expression of biomarkers of DNA damage and telomere dysfunction in human blood. Aging Cell, 2010; 9(4): 607-15. PMCIC: PMC2910221
13. Burd CE, Jeck WR, Liu Y, **Sanoff HK**, Wang Z, Sharpless NE. Expression of linear and novel circular forms of INK4/ARF-associated non-coding RNA correlates with atherosclerosis risk. PLoS Genet 2010; 6(12):e10001233. PMCID: PMC2996334
14. Machado M, Harris T, **Sanoff HK**. Racial variations in colorectal cancer outcomes and the role of pharmacogenetics. Eur J Clin Med Oncol 2010, 2(3).
15. **Sanoff HK**, Bernard S, Goldberg RM, Morse MA, Garcia R, Woods L, O'Neil BH. Phase II study of capecitabine, oxaliplatin, cetuximab for advanced hepatocellular carcinoma. Gastrointestinal Cancer Research, 2011; 4 (3): 78-83. PMCID: PMC3201640

16. Lund JL, Stürmer T, Sandler RS, **Sanoff HK**, Harlan LC, Warren JL. Identifying specific chemotherapeutic agents using Medicare data: a validation study. Medical Care, 2011 10 Nov, [epub]. PMCID: PMC3290707
17. Mack CD, Carpenter WR, Meyer AM, **Sanoff HK**, Stürmer T. Racial disparities in receipt and comparative effectiveness of oxaliplatin for stage III colon cancer. Cancer, 2012; 118(11): 2925-34. PMCID: PMC3290729
18. **Sanoff HK,** Carpenter WR, Martin CF, et al. Comparative effectiveness of oxaliplatin-containing versus non-oxaliplatin adjuvant chemothreapy for stage III colon cancer. J Natl Cancer Inst 2011; 104 (3): 1-17. PMCID: PMC3274510.
19. Meyerhardt JA, Li L, **Sanoff HK,** Carpenter WR, Schrag D. The effectiveness of bevacizumab with first-line combination chemotherapy for medicare patients with stage IV colorectal cancer. J Clin Oncol, 2012; 30 (6): 608-615. PMCID: PMC3295559
20. **Sanoff HK,** Carpenter WR, Freburger J, Li L, Chen K, Zullig LL, Goldberg RM, Schymura MJ, Schrag D. Comparison of adverse events during 5FU versus 5FU/oxaliplatin adjuvant chemotherapy for stage III colon cancer: A population based analysis. Cancer 2012; 118(17): 4309-20. *PMC Journal-In Process*
21. Carpenter WR, Meyer AM, Wu Y, Qaqish B, **Sanoff HK**, Goldberg RM, Weiner BJ. Translating research into practice: the role of provider based research networks in the diffusion of an evidence-based colon cancer treatment innovation. Medical Care 2012, 50(8): 737-48.
22. **Sanoff HK**, Carpenter WR, Sturmer T, Goldberg RM, Martin CF, Fine JP, McCleary NJ, Meyerhardt JA, Niland J, Kahn KL, Schymura MJ, Schrag D. The effect of adjuvant chemotherapy on survival of patients with stage III colon cancer diagnosed after age 75. J Clin Oncol 2012; 30(21): 2624-34. PMID 22665536. *PMC Journal-In Process*
32. Lund JL, Stürmer T, **Sanoff HK**, Brookhart A, Sandler RS, Warren J. Determinants of oxaliplatin receipt among older stage II and III colon cancer patients. Cancer, 2013. Epub March. PMID 23512326

Books and Chapters

1. **Sanoff HK** and Schrag D. Outcomes Research in Colorectal Cancer. In, Kelsen DP, Daly JM, Kern SE, Levin B, Tepper JE, Van Cutsem E (eds). *Gastrointestinal Oncology, Principles and Practice, second edition*. Philadelphia, PA: Lippincott, Williams & Wilkins, 2008: 127-134.
2. **Sanoff HK** and Mitchell B. Leukemias. In, Runge MS and Greganti MA (eds). *Netter's Internal Medicine, second edition.* Philadelphia, PA. Elsevier; 2009: 536-540.
3. **Sanoff HK.** Therapy for metastatic colorectal cancer in elderly patients and those with a poor performance status. In *Uptodate,* version 20.9 July 2012.
4. Clark JW and **Sanoff HK**. Adjuvant therapy for resected stage III (node-positive) colon cancer. In, *UpToDate,* version 20.9, July 2012.
8. **Sanoff HK.** Adjuvant chemotherapy for resected stage II colon cancer. In, *UpToDate,* version 20.9, July 2012.
9. **Sanoff HK.** Adjuvant therapy for resected colon cancer in elderly patients. In, *UpToDate,* version 20.9, July 2012.

c. Research Support

Active

1-KO7-CA160722-01 (Sanoff) 9/1/12 8/31/16 6.00 Calendar (50.00%)
National Cancer Institute 159,678.00
Use and Comparative Effectiveness of Innovative Therapies for Hepatoellular Carcinoma

The proposed research forms the core of a five year training program in CE research and HCC. Highlights of the training program include didactic training in the methods needed to analyze large observational datasets, health services research content, and multidisciplinary HCC training.

Completed

NIH T32 HL007149 (Beverly Mitchell, PI) 7/2004-6/2006
NRSA training grant.

Population Sciences Award 07/1/2006-06/30/2007
Lineberger Comprehensive Cancer Center, University of North Carolina
"Development of an adjuvant chemotherapy decision aid for older colon cancer patients".
This grant provides research development funds from the Lineberger Cancer Center.

UNC Medial Foundation Excellence Fund Seed Grant 03/07-03/08
University of North Carolina
"Development of an adjuvant chemotherapy decision aid for older colon cancer patients".
This grant provides research development funds and is from the Medical Foundation of UNC.

K12 RR023248-02 (Orringer) 07/01/07-06/30/08
NIH/NCRR
UNC Multidisciplinary Clinical Research Career Development Program
This K12 enables UNC to recruit a cohort of fellows and junior faculty members drawn from at least four disciplines, and prepare them for careers in multidisciplinary clinical research.

1KL2RR025746-01 (Pisano) 5/19/2008-4/30/2009
NIH/NCRR
UNC Clinical Translational Science Award-K12 Scholars Program (KL2).
A national consortium with the goal of transforming how clinical and translational research is conducted, ultimately enabling researchers to provide new treatments more efficiently and quickly to patients. Dr. Sanoff's role in the grant was that of funded Scholar.

Burroughs Wellcome Foundation (Sharpless) 7/07-3/12
Clinical Scientist Award in Translational Research
"p16INK4a Tumor Suppressor in Stem Cell Aging"
This award funds research into aging as mediated by the tumor suppressor senescence pathway. Dr. Sanoff's role was that of co-investigator.

Agency for Healthcare Research and Quality (PI: Murray, Project PI: Carpenter) 11/08-11/10
Developing Evidence to Inform Decisions about Effectiveness: The DEcIDE Network
Cancer Multi-center Research Consortium
This consortium is funded to perform comparative effectiveness research in cancer. Dr. Sanoff's role is a co-investigator on two task orders about colorectal cancer comparative effectiveness and comparative effectiveness of emerging therapies.

American Cancer Society
Institutional Research Grant, 4/2010-4/2011
"Translational Phase II study of accelerated fraction radiotherapy and concurrent capecitabine as neoadjuvant therapy for localized pancreas cancer with molecular determinants of resistance". This award provides funds for a pilot study of a novel radiation platform and a molecular assessment of mechanisms of treatment resistance in orthotopic xenograft models of pancreatic cancer. Dr. Sanoff's role is that of principal investigator.

UVA Cancer Center, Commonwealth Fund for Cancer Research
Pilot award, 4/2010-5/31/2012
"Translational Phase II study of accelerated fraction radiotherapy and concurrent capecitabine as neoadjuvant therapy for localized pancreas cancer with molecular determinants of resistance". This award provides funds for a pilot study of a novel radiation platform and a molecular assessment of mechanisms of treatment resistance in orthotopic xenograft models of pancreatic cancer. Dr. Sanoff's role is that of principal investigator.