



# **Sidney Kimmel Comprehensive Cancer Center (SKCCC)- 2018 Update**

**William G. Nelson, M.D., Ph.D.**

**Marion I. Knott Director and Professor of Oncology**

# Presentation Overview

- DNA sequencing technologies providing new opportunities for cancer screening and early detection
- Immune checkpoint inhibitor treatment moving into the adjuvant setting for surgically-treatable lung cancer
- Bacteria may contribute to the development of colorectal cancer
- Transforming cancer care at SKCCC

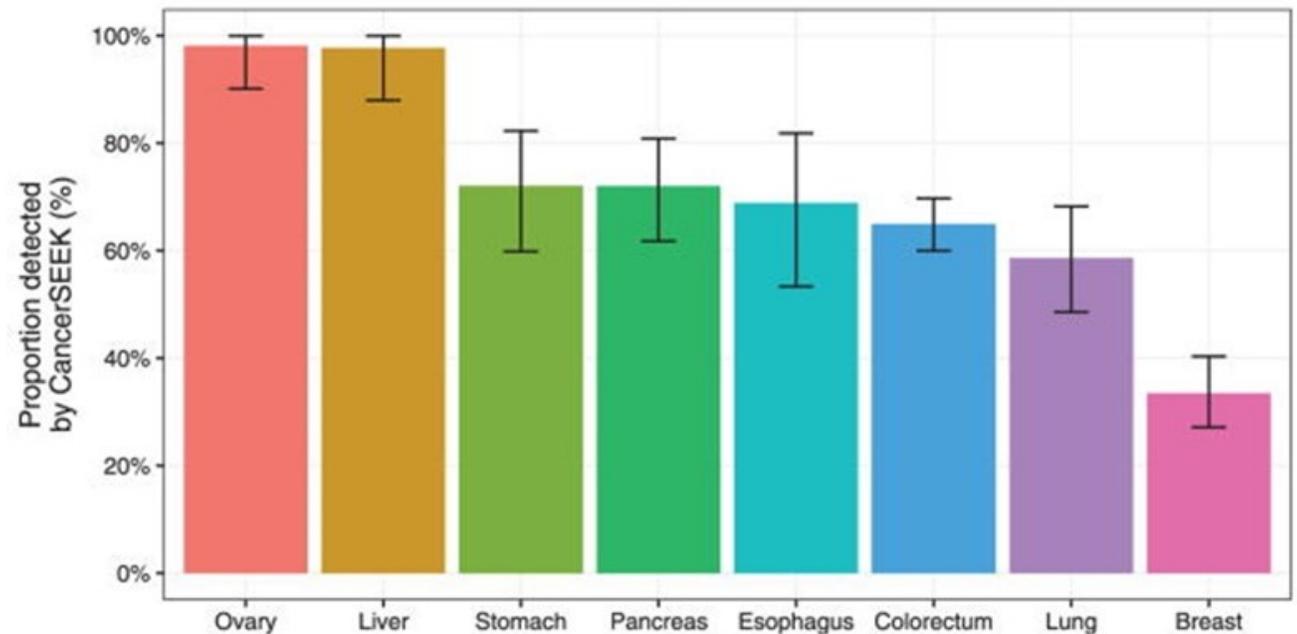


# Can **Cancer Screening** and **Early Detection** be Improved?



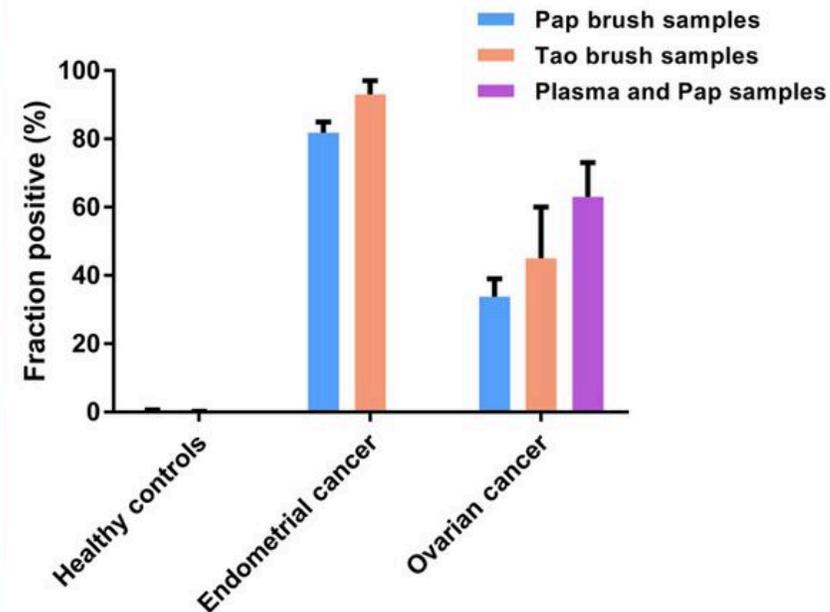
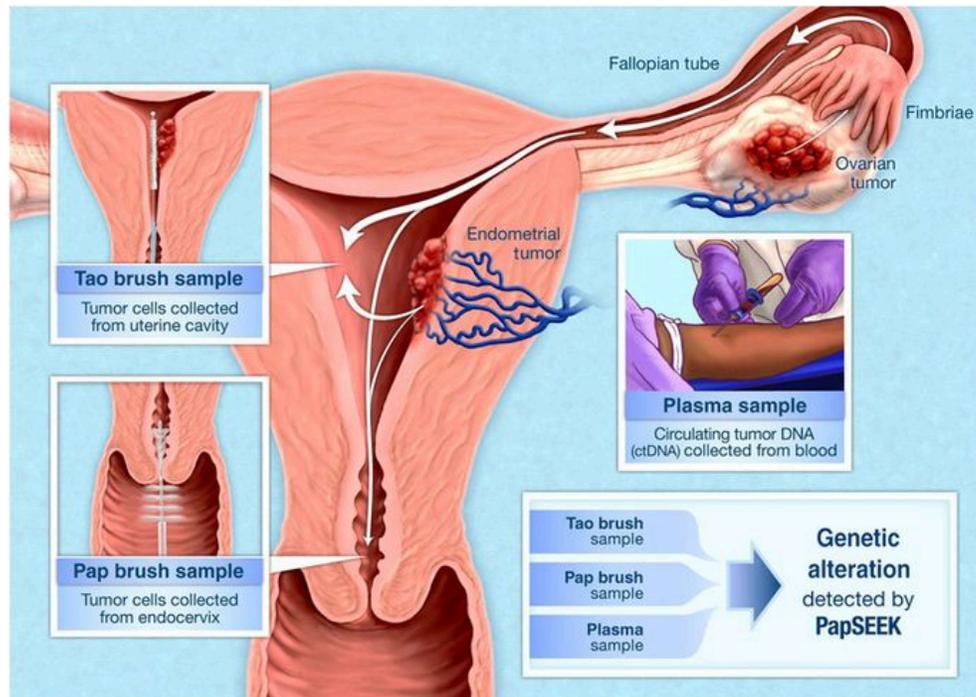
# Detection of **Mutant Cancer DNA** in the **Circulation** of Subjects with **Solid Organ Cancers**: Could this Aid in **Cancer Screening** and **Early Detection**?

- 1005 study subjects with cancer and 812 health controls
- **circulating cancer DNA (ctDNA)** detected in a median of **70%** of cases
- ctDNA detected in **<1%** of health controls

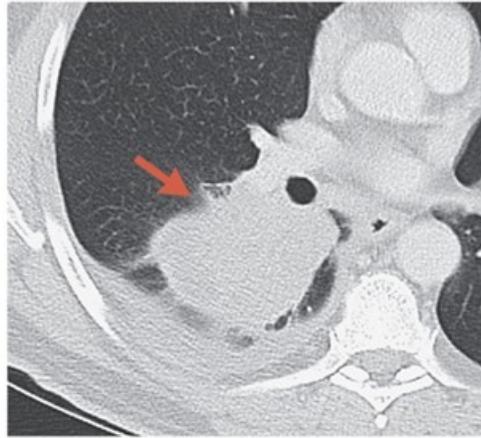


# Cancer DNA Detection for Gynecologic Cancers

- 382 study subjects with endometrial cancer, 245 with ovarian cancer, and 714 healthy controls
- cancer DNA detected in 93% of subjects with of endometrial cancer (best with the Tao brush collection)
- cancer DNA detected in 63% of subjects with ovarian cancer (best with combination of Pap brush and blood specimens)



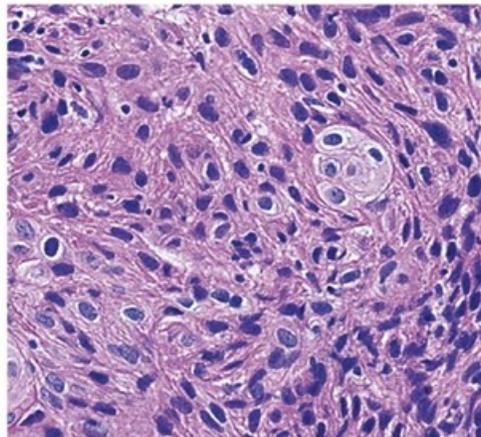
# Early Adjuvant Use of Immunotherapy for Lung Cancer



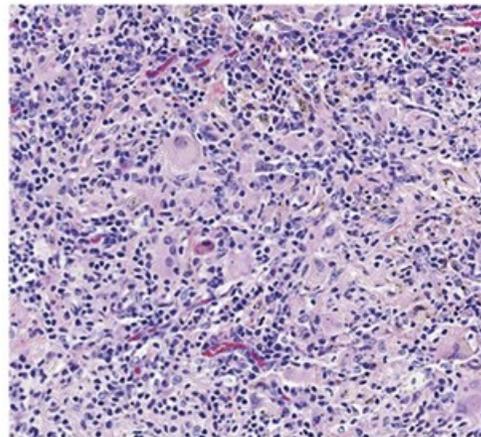
Pretreatment Imaging



Week 4 (before surgery)

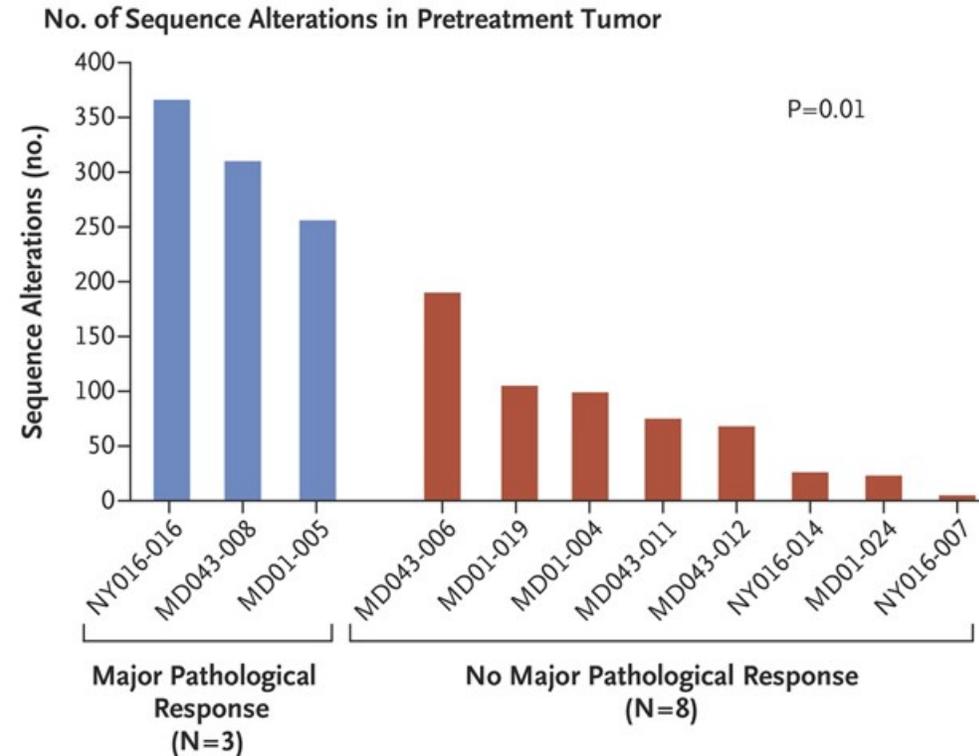


Pretreatment Tumor Biopsy

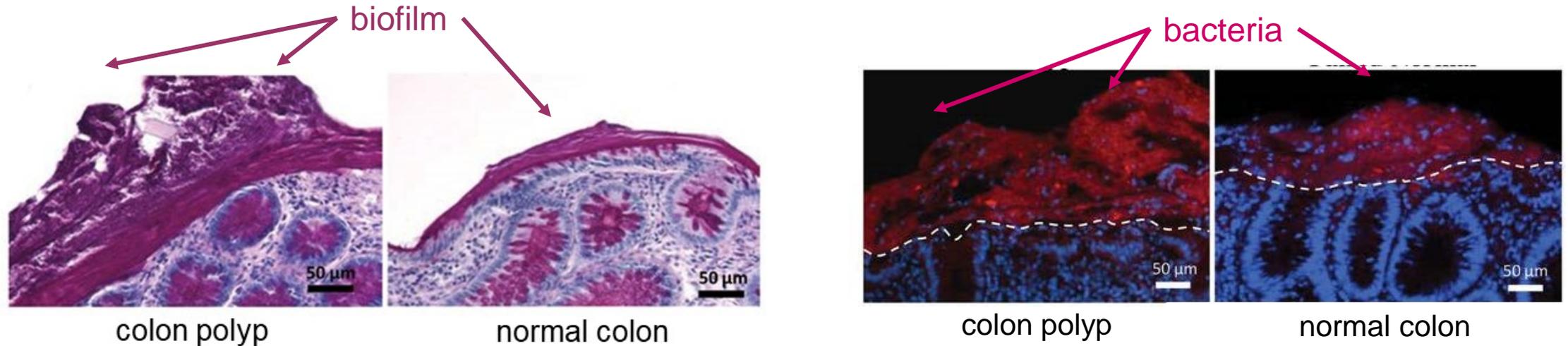


Resection Specimen

- 2 pre-operative doses of nivolumab to 21 subjects with non-small cell lung cancer
- major pathologic responses in 45% of cases—especially in setting of high levels of tumor mutations



# Do Certain Bacteria Cause Colorectal Cancer?

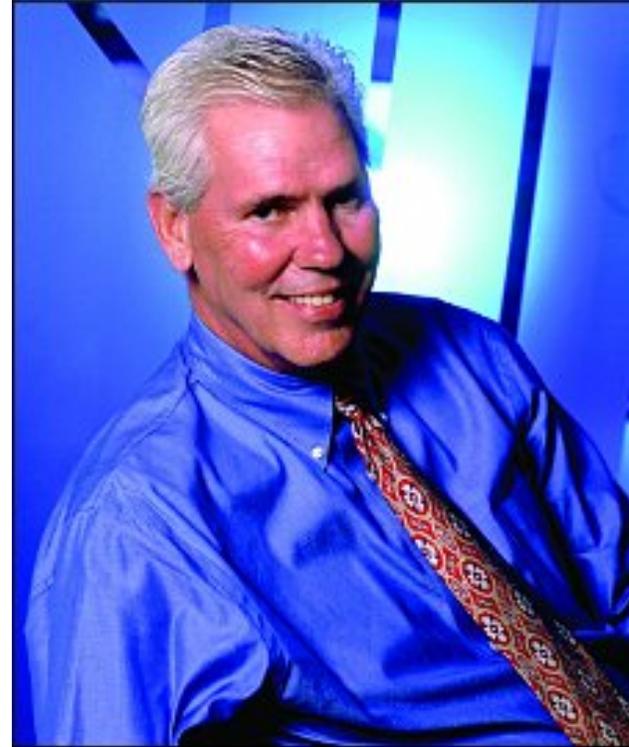


Total cases/ subjects	<i>E. coli</i>	<i>B. fragilis</i>	<i>E. coli</i> and <i>B. fragilis</i>	Neither organism
Familial adenomatous polyposis cases (n = 25)	17 (68%)	15 (60%)	13 (52%)	6 (24%)
Control subjects (n = 23)	5 (22%)	7 (30%)	5 (22%)	16 (70%)

# Skip Viragh Outpatient Cancer Care Building

**Skip Viragh Outpatient Building**

**180,000 ft<sup>2</sup> – infusion – imaging – pharmacy**



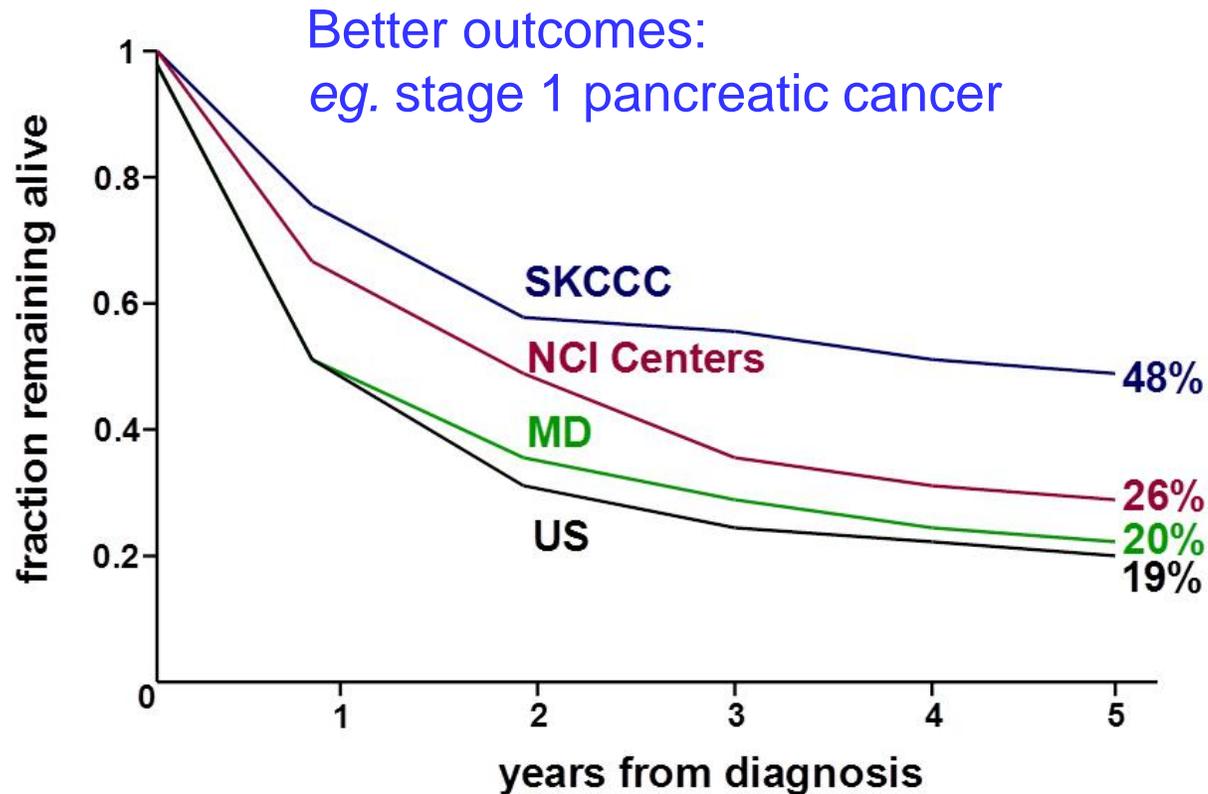
**Skip Viragh**  
Philanthropist

# Multidisciplinary **Initial Evaluation Services** Promote Trans-Disciplinary Research

- SKCCC Multidisciplinary Clinic offerings in:
  - Head and Neck Cancers
  - Lung Cancer (including a Pulmonary Nodule Clinic)
  - Breast cancer
  - Prostate Cancer
  - Liver Cancer
  - Colorectal Cancer
  - Pancreas Cancer
- ~10-20% of new patients with these diseases pass through these Clinics
- **Diagnosis/tumor grade/tumor stage changes** for as many as **25% or more** of cases with treatment implications\*

\*Zhang *et al.* Curr Oncol 2013; Elnahal *et al.* Int J Rad Onc Biol Phys 2016

# Dedicated Multidisciplinary Initial Evaluation Services Improve Quality of Cancer Care: Pancreatic Cancer



Change in treatment recommendation ~ 24%



Change in diagnosis ~ 4%



Change in cancer stage ~ 14%



JOHNS HOPKINS  
MEDICINE

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THE SIDNEY KIMMEL  
COMPREHENSIVE CANCER  
CENTER

Questions?

