DGIM Project Summary

Name of Project: **WISDOM Study**

Investigator(s):
PIs: **Laura Esserman, MD, MBA, Laura.esserman@ucsf.edu,**
UCSF Co-investigators:
Laura van 't Veer, PhD, Laura.vantveer@ucsf.edu,
Jeff Tice, MD, Jeff.Tice@ucsf.edu
Elad Ziv, MD, Elad.Ziv@ucsf.edu
Robert Hiatt MD PhD, Robert.Hiatt@ucsf.edu
Celia Kaplan DrPH, Celia.Kaplan@ucsf.edu
The WISDOM study is live at all UC Medical Centers. Co-investigators at sites and affiliates:
UCSD, Andrea Z. LaCroix, PhD
UCLA, Arash Naeim, MD, PhD
UCI, Hoda Anton-Culver, PhD
UCDavis, Alexander Borowsky, MD
Sanford Health, Thomas Cink, MD

Primary contacts:
Irene Acerbi, PhD, Program Manager, Irene.acerbi@ucsf.edu
Jennie Ling, Clinical Research Coordinator, jennie.ling@ucsf.edu

Research question(s):

Determine if personalized screening as compared to annual screening:

1. **Is as safe (number of stage IIB cancers developed in each group)**
2. **Is less morbid (false positive recall rate, rate/grade of DCIS)**
3. **Is more accepted by women**
4. **Enables prevention**
5. **Has greater healthcare value**

Brief Background/Significance:

Breast Cancer: Nearly 1 in 8 women in the U.S. will be diagnosed with breast cancer during their lifetime. In 2014, an estimated 232,670 new cases of invasive breast cancer will be diagnosed, along with 62,570 new cases of non-invasive (in situ) breast cancer. It is the most common cancer for women and the second leading cause of cancer death in women after lung cancer, resulting in approximately 39,620 deaths in 2013.

Current Breast Cancer Screening Recommendations and Controversy: For almost 30 years, annual mammograms for women over the age of 40 have been a cornerstone of the U.S. strategy to reduce mortality from breast cancer. A number of advances in our understanding of breast cancer biology and screening, have led to calls to update our screening strategy. In 2009, the US Preventive Services Task Force (USPSTF) introduced changes to screening guidelines, recommending that annual mammograms for all women ages 40-75 be replaced by biennial screening for women ages 50-75, and that screening in a woman's 40s should be individualized by taking participant context into account, including the participant's values regarding specific benefits and harms of screening. Despite being based on a thorough review of the scientific literature; these recommendations continue to spark debate and scientific opinion on the effectiveness of annual screening is greatly divided. The radiology and obstetrics/gynecology community argues that annual mammograms starting at age 40 reduce the rate of interval cancers. Primary care physicians and other specialists believe that annual screening results in more false-positives and unnecessary treatment and that a more targeted approach could result in fewer false-positives and less over-diagnosis without increasing the number of interval cancers. Since 2009 this debate has intensified, paralyzing the system and thwarting any efforts to change or improve screening. The end result is that women are frustrated and confused, and some have stopped screening altogether.

Despite our vastly improved understanding of breast cancer risk, the only criteria used to establish a woman's screening recommendations is her age (and BRCA status if known). However, there are risk models available that incorporate personal and family history of breast disease, endocrine exposures and breast density to assess breast cancer risk. Most recently certain genetic mutations and common genetic variants (single nucleotide polymorphisms or SNPs) have been confirmed predictors as well. Therefore, advances in our understanding of breast cancer biology, risk assessment, and imaging have provided us with better tools and sufficient knowledge to replace the one-size-fits-all approach to screening and to implement a new, personalized model, one that provides recommendations on when to start, when to stop, and how often to screen, based upon well characterized measures of risk.

Inclusion:

- Female, age 40-74
- No current or prior diagnosis of breast cancer or DCIS

Exclusion:

- Previous double mastectomy

Method of contact/recruitment (be specific)
Email invitation prior to scheduled DGIM appointment. Flyers, posters, digital signage in waiting areas. All scripts, emails & material are IRB approved.

Benefits/burden for participants (clearly identify potential for harm)
Burden: participants sign up, consent and take questionnaire online through a secure online portal. The initial assessment can take from 30mins to an hour. Patients in the personalized arm receive a saliva test at home, activate it online, and send it back free of charge. The participants complete 10 minute pre-populated questionnaire once a year.
Benefit: Breast Cancer Surveillance Consortium (BCSC) model of breast cancer risk is run for all participants in the study. Participants identified at elevated risk are informed in writing as well as their physicians, and are offered a free phone consultation with a Breast Health Specialist to discuss their personal risk.
Participants self-assigned or randomized to the "personalized arm" receive an additional genetic test free of charge, which tests for mutations in 9 genes associated to breast cancer risk, and receive their genetic test results.
Harm: none

Any benefits or burden to DGIM practitioners?
Benefit: screening assignment, consultation notes and genetic tests results will be made available to PCPs through Apex. All recommendations provided by WISDOM are within the current guidelines.
Burden: Patients may ask DGIM practitioners to discuss their WISDOM screening recommendation during their appointment.

We are happy to provide an informational presentation about the study risk models and thresholds to the DGIM physicians group, in addition to FAQ sheet and flyers, to keep the DGIM group up to date.
Next scheduled presentation of the WISDOM study to the DGIM group is October 23rd 2017.

Timeline for recruitment: November 10th 2016- November 31st 2018

Funding source: Patient Centered Outcomes Research Institute

Potential for DGIM collaborators? (We encourage DGIM resident and fellow involvement in particular): **Jeff Tice MD, Elad Ziv MD, Yiwey Shieh MD**

Do you agree to notify us when recruitment is completed? **Yes**

Date form completed: 09/26/2017