



**NATIONAL SOCIETY OF**  
**GENETIC**  
**COUNSELORS**  
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**38<sup>th</sup> Annual Conference**

**November 5-8, 2019** • Salt Lake City, Utah

# Downstream Revenue Generated by a Cancer Genetic Counselor

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**38<sup>th</sup> Annual Conference**  
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## Conflicts of Interest

- Full time UT Southwestern employee
- Co-developer of CancerGene Connect (now owned by Invitae)
- One day, unpaid Myriad Advisory Board consultant (reimbursed for travel/food)

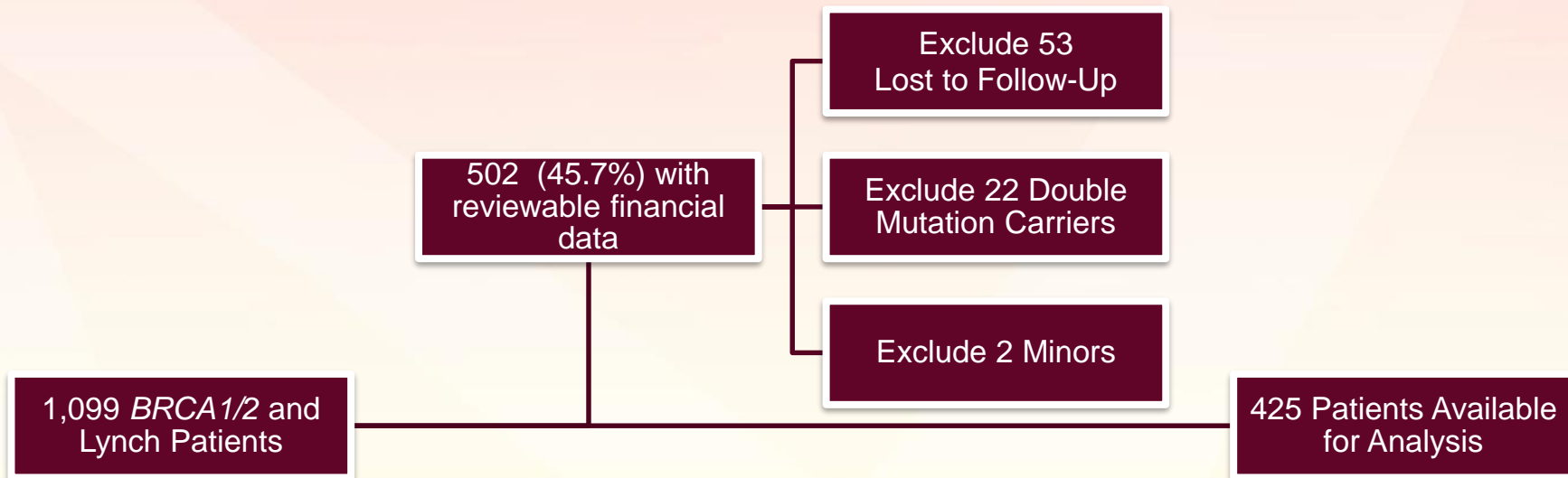
## Background

- CDC lists HBOC (*BRCA1/2*) and Lynch Syndrome as Tier 1 conditions
  - Need for genetic specialists has never been greater
- CMS does not recognize genetic counselors (GC) as providers
- Therefore, must evaluate other means to determine financial justifications of employing a GC

## Methods

- A retrospective chart review
  - Cancer Genetics Clinics at UT Southwestern Medical Center
    - November 2009 - January 2019
  - *BRCA1*, *BRCA2*, *MLH1*, *MSH2*, *MSH6* and *PMS2* positive patients
- All billable encounters (hospital, ambulatory/outpatient, professional fees) were recorded
  - Total revenue was calculated for each patient before and after they met with a GC
- Patient demographics were also collected

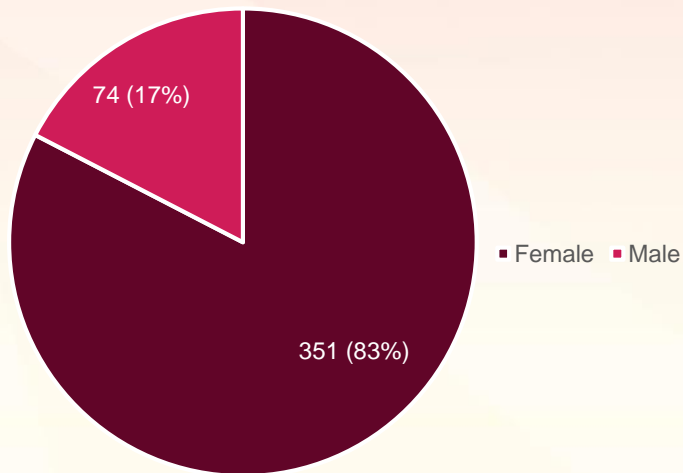
# Study Population



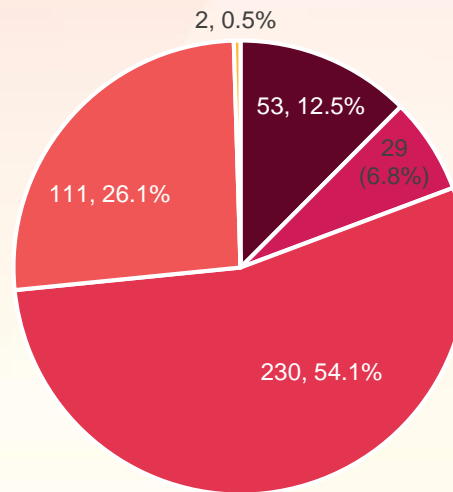


## Demographics: n=425

Gender Distribution



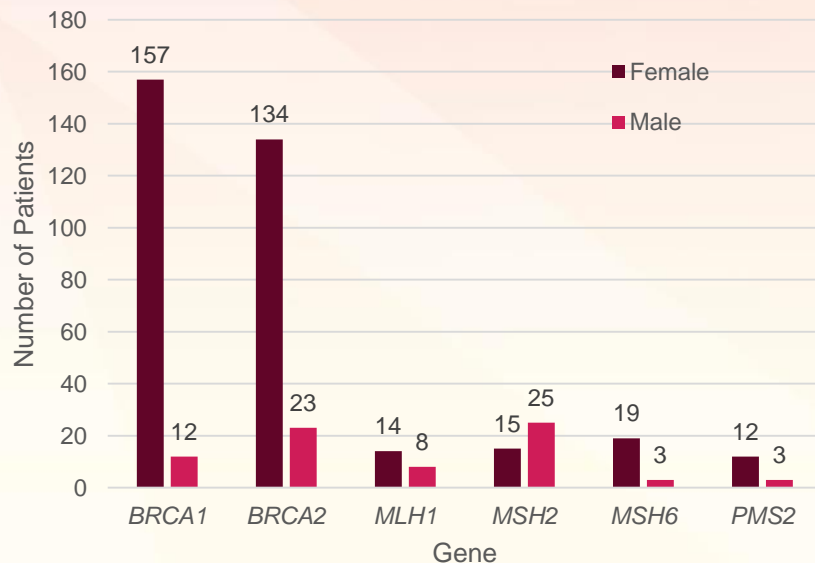
Ethnicity



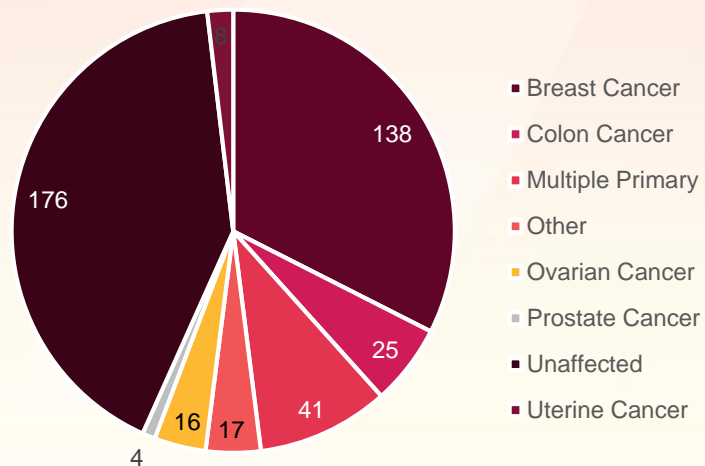
■ African American ■ Asian ■ Caucasian ■ Hispanic ■ Not Reported

## Demographics: n=425

Gender by Gene Mutation



Cancer Incidence



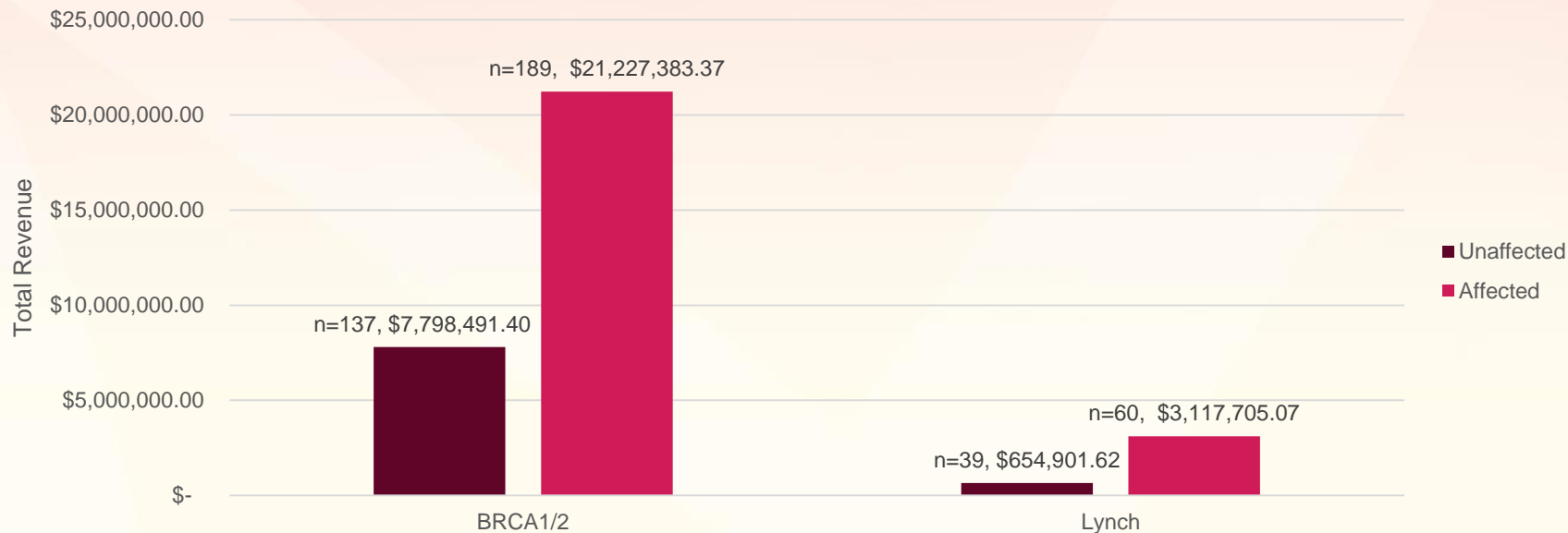


## Total Population

- **\$32,798,481** in downstream revenue
  - mean/year = \$3,252,273
  - mean/patient = \$77,173
- *BRCA1/2* positive patients (n=326) = **\$29,025,875**
- Lynch syndrome positive patients (n=99) = **\$3,772,607**

# Affected vs. Unaffected Patient Revenue

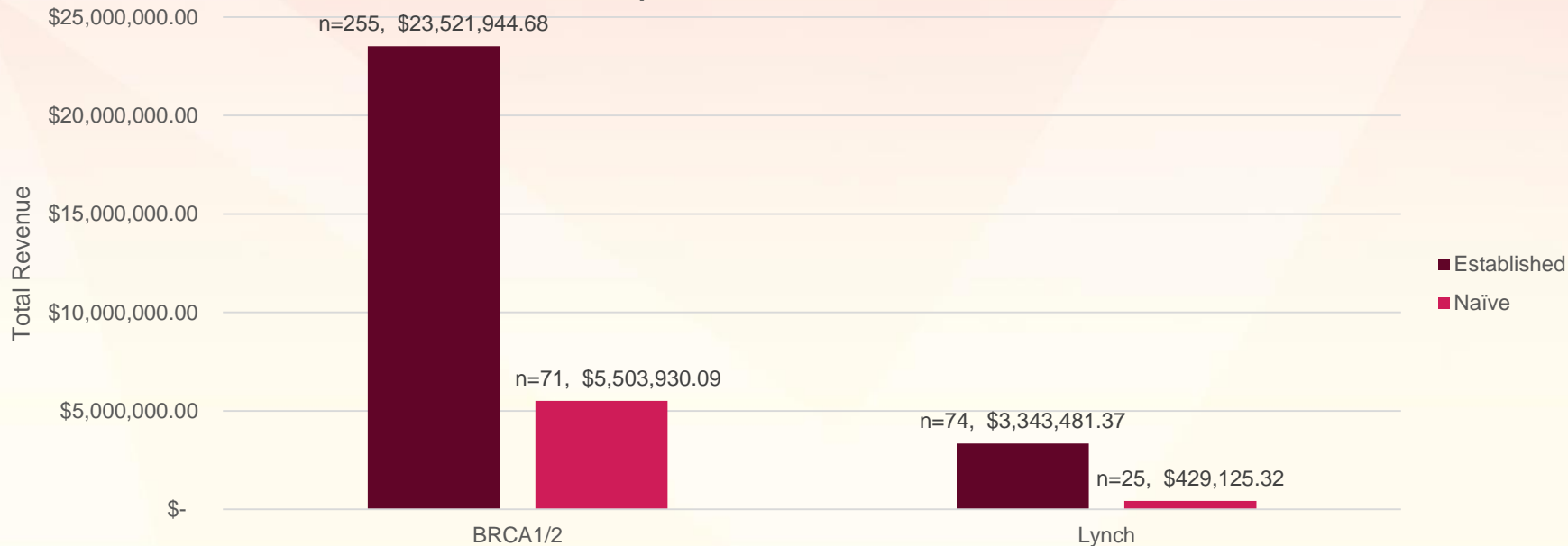
Affected patients = \$24,345,088  
Unaffected patients = \$8,453,393



# Established vs. Naïve Patients

Established patients = \$26,865,426

Naïve patients = \$5,933,055



# Annual Revenue per Genetic Counselor

Based on internal data:

- Test uptake rate = 85.6%
- Positive rate = 15.0%
  - 30.0% = *BRCA1/2* positive
  - 12.6% = Lynch positive

Gene	# Patients	Annual Revenue
<i>BRCA1/2</i>	19.7	
Lynch	8.3	
<b>Total</b>	28.0	

- Full-time cancer GC = ~10.2 new patients per week\*
- 50-week clinic year = ~ 510 new patients

\*NSGC. Professional Status Survey 2018: Work Environment. 2018.

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Gene	# Patients	Annual Revenue
<i>BRCA1/2</i>	19.7	\$1,749,566
Lynch	8.3	\$314,384
Total	28.0	\$2,063,950

Estimated Total Revenue per GC per year: **\$2,063,950**

Clinical Cancer GC's annual unweighted salary\*: **\$80,805**

\*NSGC Professional Status Survey 2019: Salary and Benefits

# Limitations and Strengths

## Limitations

- Only analyzed data from compliant patients
  - Sample collection bias: NCI-designated academic medical center
- Cancer GCs did not bill for consults at time of study
  - Consultation revenue not captured

## Strengths

- Study demographics accurately reflect population
- These numbers reflect a 72-90% compliance rate – translatable to other medical center
- Large naïve and unaffected populations – MARKETING!



## Conclusions

- Downstream revenue after seeing a GC is substantial
- The fiscal value of GCs is not limited to just revenue generated just through consultation fees or test utilization management
- Literature suggests cost-saving to patients and payers following GC services
- Recommendations by a GC can reduce cancer incidence and mortality, ultimately helping to save lives

## Future Directions

- Downstream revenue based on patients' management choices
- Analyze data for other gene mutations

# Questions?

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