If you plan to provide your saliva sample today

For the next 30 minutes, please refrain from these activities:

- Eating or drinking (even water)
- Brushing your teeth or using mouthwash
- Chewing gum or smoking
Genetics 101 &
Why Learning Your Genetics
Can Be Valuable
Our body is run by genes that are made up of DNA
Our genes shed light on our individual risk for developing hereditary cancers

- Genetic variation makes us unique.
- Most genetic variants do not increase cancer risk.
- Genetic variants that do increase cancer risk are called mutations.
- On average, about 1-2% people have a mutation in one of the 30 genes.
  - Several factors may affect this, such as ethnicity/ancestry, personal and family health history.
10-15% of cancers are hereditary

- **Hereditary cancer** is caused by an inherited mutation.
- **Familial cancer** refers to cancer that appears to occur more frequently in families than is expected from chance alone.
- **Sporadic cancer** refers to cancer that occurs due to spontaneous mutations that accumulate over a person’s life.
Certain genes can significantly increase the risk of hereditary cancer

Average Lifetime Risk of Cancer

- APC
- CDH1
- BRCA1
- CDK-N2A
- CDK-N2A
- BRCA1
- MLH1

Source: National Cancer Institute, Gastroenterology, JAMA Oncology, Science, Journal of the National Cancer Institute, American Association for Cancer Research, European Society of Human Genetics, Familial Cancer, Clinical Genetics
Knowing mutation status can lead to early detection or even prevention

Average 5-yr survival rate by stage

Source: Survival rates from National Cancer Institute; Inflation-adj treatment costs from American Health & Drug Benefits (breast), Journal of the National Cancer Institute and Health Care Financing Review (colon), JAMA Dermatology (melanoma), Current Women's Health Reviews and Cancer Research UK (ovarian)
The Color Test
Color analyzes 30 genes associated with eight of the most common hereditary cancers

**Hereditary cancer risk for women**
- Breast
- Ovarian
- Uterine
- Colorectal

**Hereditary cancer risk for men**
- Colorectal
- Pancreatic
- Stomach
- Melanoma
- Prostate
### 30 genes associated with increased risk for common hereditary cancers

* Only positions known to impact cancer risk analyzed: CDK4: only chr12:g.58145429-58145431 (codon 24) analyzed, EPCAM: only large deletions and duplications including 3' end of the gene analyzed, GREM1: only duplications in the upstream regulatory region analyzed, MITF: only chr3:g.70014091 (including c.952G>A) analyzed, POLD1: only chr19:g.50909713 (including c.1433G>A) analyzed, POLE: only chr12:g.133250250 (including c.1270C>G) analyzed.

** PMS2: Exons 12-15 not analyzed.

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Families benefit from this health information

• Results can be valuable for relatives as well.

• Absent additional information, each first-degree relative (including sons and daughters) has a 50% chance of having the same mutation

• Family Testing Program
Results:
What Do Negative & Positive Results Mean?
What negative results mean

- This means no mutations associated with an increased risk for breast, colorectal, melanoma, ovarian, pancreatic, prostate, stomach, or uterine cancer were identified in any of the 30 genes analyzed.

- Results incorporate personal and family health history.

- While this can be reassuring, it does not eliminate one’s risks.

- It is important, regardless of one’s results, to follow the screening and prevention plan recommended by their healthcare provider.
What positive results mean

- This means a mutation that increases risk for specific cancers was identified.

- This result does not mean that an individual has cancer or that they will definitely develop cancer in their lifetime.

- It is important to discuss results with one’s healthcare provider to design a personalized screening and prevention plan to manage the risk.
Receiving your results

- Results are released 3-4 weeks, on average, after your activated sample is received at the lab.

- Share your results with your healthcare providers.

- Consider sharing your results with your family members.

- Schedule a complimentary consult with a board-certified genetic counselor at Color.

- Color keeps you up to date:
  - Get updates when information about your cancer risk or screening guidelines changes.
  - Let us know when your personal or family health history changes, and we’ll re-assess to make sure you have the most relevant information.
Results are private and secure

• Your privacy is our priority. Color rigorously complies with HIPAA and industry security standards.
  • All data is encrypted when at rest or in transit.

• Your information belongs to you. The Color test is private and no personal health information is shared without your permission.