

# CGx Testing

Cancer Genetics Testing

## Understand your patients' risk factors for cancer using the power of genetics.

Diax Lab's cancer genetic testing (CGx) targets the most important genes associated with breast, colon, pancreatic, gynecological and melanoma cancers. These tests are ordered frequently by oncologists, as well as family doctors and internal medicine doctors that are primary care physicians and with patients with at-risk family histories.

### Inherited Gene Mutations

Diax Labs offers a multi-gene panel that accurately identifies the presence of an inherited gene mutation or alteration. A patient who receives a negative test result will benefit from peace of mind knowing they did not inherit a harmful gene variant, while a patient who receives a positive test result will benefit from opportunities to better understand and potentially manage their cancer risk, and to make important decisions about their medical care.

In addition to determining an increased risk for developing cancer, our blood panel also points to types of cancer screenings that should be conducted.

**While many inherited genetic variants are beneficial or neutral, others are harmful and believed to contribute to 5-10% of all cancers.**

#### Breast and Ovarian Cancer

BRCA genes come in pairs (BRCA1 and BRCA2). Only one gene in the pair needs to have a mutation to put a patient at risk for cancer. For women, a BRCA mutation increases the risk for breast and ovarian cancers. For men, the overall risk for cancer is lower than women, although the risk for breast, prostate and skin cancers is increased.

#### Lynch Syndrome

Inherited mutations in the genes of MLH1, MSH2, MSH6, PMS2 and EPCAM give a patient an increased lifetime risk of certain cancers. This genetic syndrome, known as Lynch syndrome and also called hereditary non-polyposis colorectal cancer (HNPCC), puts patients at a higher risk of certain types of cancer

### Who and Why to Test

The American Cancer Society has outlined certain factors associated with cancers that run in families. Physicians should consider CGx testing for any patient who has one or more of these family histories.

- Multiple cases of the same type of cancer, particularly if it is a rare or uncommon type of cancer
- Cancers occurring at younger-than-usual ages, such as colorectal cancer in a 22-year-old
- More than one type of cancer occurring in one family member, such as a female with both breast and ovarian cancer
- Cancers occurring in both of a pair of organs, such as both breasts, both kidneys, both eyes, both ovaries
- Cancer occurring in a gender not usually affected, such as breast cancer in a male relative
- Cancer occurring across generations, such as grandmother, mother and daughter, or grandfather, father and son
- Childhood cancer occurring in more than one sibling, such as sarcoma in both a sister and brother