BCCGN
British Columbia Clinical Genomics Network

EDUCATIONAL LECTURES ON GENOMICS

GOT QUESTIONS?

What is genomics?

How is genomics changing medical practice?

How is genomics being used in diagnosis?

How is it being incorporated in clinial care?

GET ANSWERS @ WWW.BCCGN.CA/EDUCATION/LECTURES

GENOMIC TECHNOLOGIES

What is genomics? What have we learned so far through the use of genomic technologies? These lectures will provide information on genomic technologies such as Next Generation Sequencing (NGS) – a new, more cost effective and higher throughput sequencing methods, and Chromosomal Microarray - a molecular cytogenetic method for the analysis of copy number changes (gains/losses) in the DNA content of an individual.

INCORPORATING GENOMICS INTO CLINICAL CARE

With many different genomic technologies available such as next generation sequencing and chromosomal microarray, genomics is increasingly used in clinical care to determine diagnoses.

PERSONALIZED MEDICINE

Personalized medicine is the practice of using individualized information about each person, such as their genetic make-up, environmental exposures and lifestyle factors, to decide which therapy or combination of therapies will work best for them.

PHARMACOGENOMICS

The genetic makeup of an individual can impact how they respond to a medication in terms of its effectiveness and what side effects they may suffer. Pharmacogenomics helps prevent the life long debilitating side effects through differential choices of treatment modulation.

DIRECT TO CONSUMER (DTC) TESTING

Genetic tests are being marketed directly to patients via television, print advertisements, or the Internet without necessarily involving a doctor or insurance company in the process. There are many concerns regarding these types of tests including the validity of the findings, the clinical utility of the results, the lack of pre-test counselling offered to patients and the possibility of learning additional information.

PERSONAL EXPERIENCES

These testimonials, relating personal stories of genetic disorders and encounters with the medical system, provide insight into the unique concerns of these individuals and their families.

CHALLENGES TO INCORPORATE GENOMIC TESTING INTO CLINICAL CARE

These lectures will discuss some of the logistical, ethical and clinical challenges of introducing genomic technologies into clinical care.

INTELLECTUAL DISABILITY, AUTISM & MULTIPLE CONGENITAL ABNORMALITIES

Learn about how genomics is being used to diagnose intellectual disability, autism, multiple congenital anomalies and epilepsy.

ONCOLOGY

Genomics is being incorporated into many aspects of clinical care, in particular cancer diagnosis and treatment.

IMMUNOLOGY

Learn about how genomics is being utilized to diagnose children with idiopathic immunodeficiencies in order to determine the proper course of treatment.

CARDIOLOGY

Learn how genomics has been used to provide answers in families affected by sudden arrhythmic death.

Contact

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BCCGN is a technology-methodology platform supported by the Michael Smith Foundation for Health Research. It provides education for BC clinicians about genomics, access to BC's state-of-the art genomics technologies and support services. BCCGN's goal is to advance scientific knowledge in genomics and its application to improved health outcomes.