MSD AstraZeneca

CECOG
Central European Cooperative Oncology Group

A Guide To Genetic Consenting

Module 8:
Mainstream BRCA genetics: Learnings from an oncogenetic pathway

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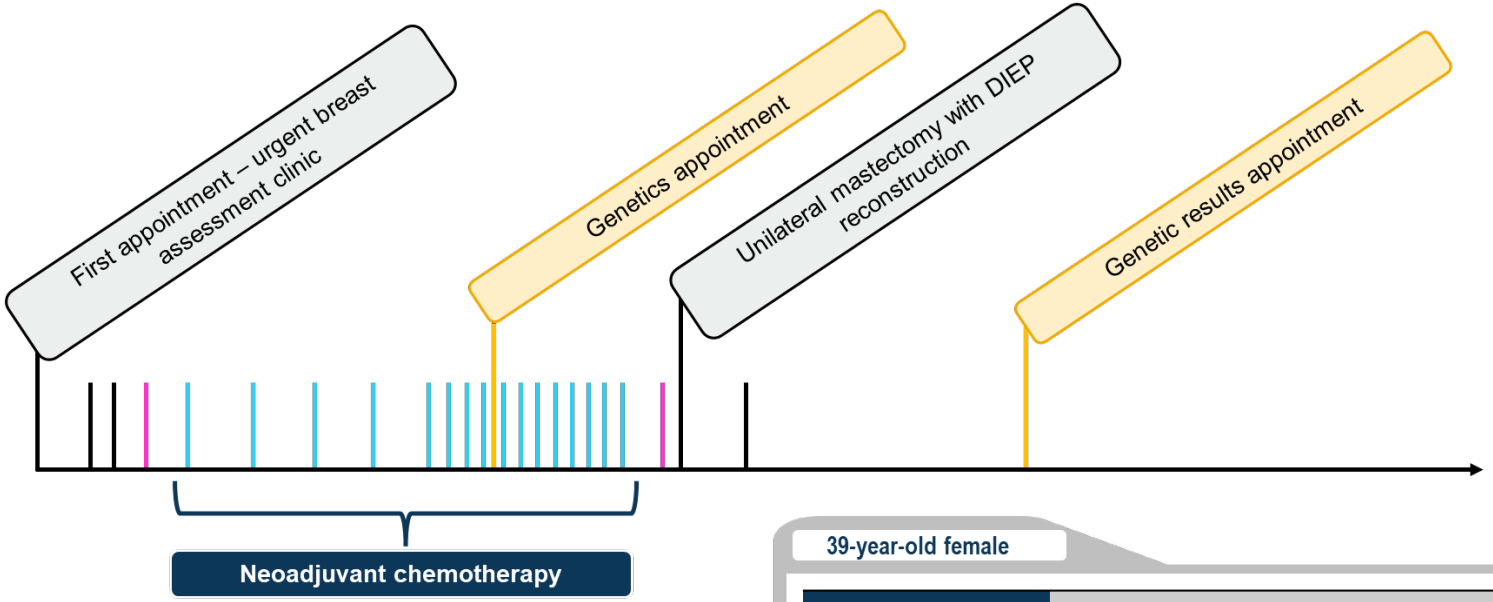
Learning objectives

The primary purpose of this learning module is to inform and educate non-genetics HCPs on genetic consenting.

This module will enable HCPs to:

- Understand how genetic testing can guide treatment decisions in cancer
- Define mainstream genetic testing for pathogenic gene variants for patients with cancer
- Consider the oncogenetic pathway and implementation of mainstream genetic consenting, based on current practice at the Royal Marsden

HCP=healthcare professional

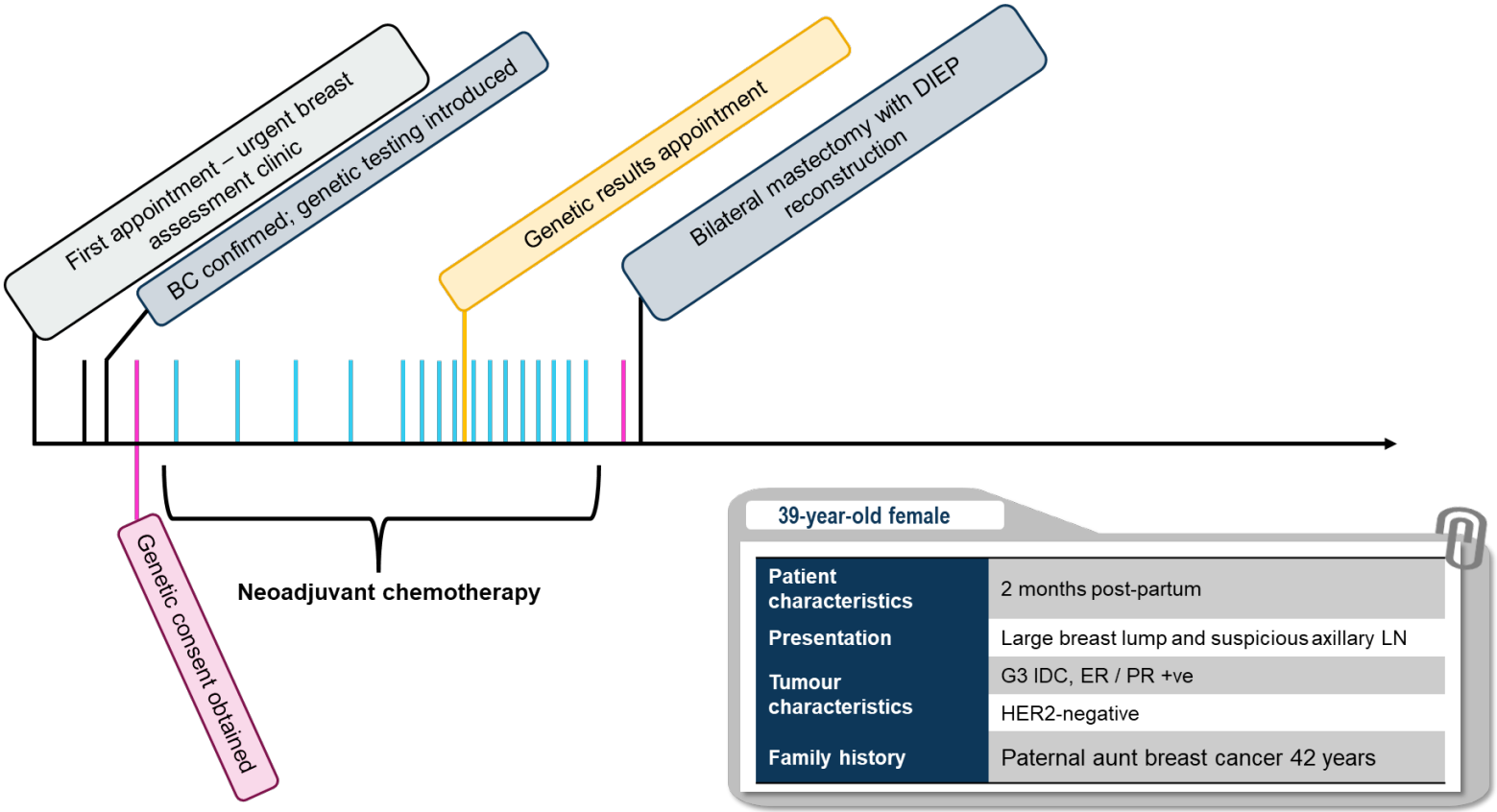


39-year-old female

Patient characteristics	2 months post-partum
Presentation	Large breast lump and suspicious axillary LN
Tumour characteristics	G3 IDC, ER / PR +ve
	HER2-negative
Family history	Paternal aunt breast cancer 42 years

DIEP=deep inferior epigastric perforator; ER=oestrogen receptor; HER2=human epidermal growth factor receptor 2; IDC=invasive ductal carcinoma; LN=lymph node; PR=progesterone receptor

Personal opinion, Angela George



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Additionally…

Genetic testing criteria designed to limit testing

- Reflecting resource-intensive, high-cost testing
- At a time when there are no treatment implications
- Testing predominantly for family

Criteria to select high-risk patients

- But will miss many patients
- Especially male-inherited

Good recognition of TNBC / *BRCA1*m

- But ER +ve patients undertested

Focus on moving towards impact on treatment for patient

- Rather than just for cancer prevention in family members

High survival rate from breast cancer

- Risk of second primary breast cancer and ovarian cancer

Increasing demand on genetics services

- Lengthening waiting times

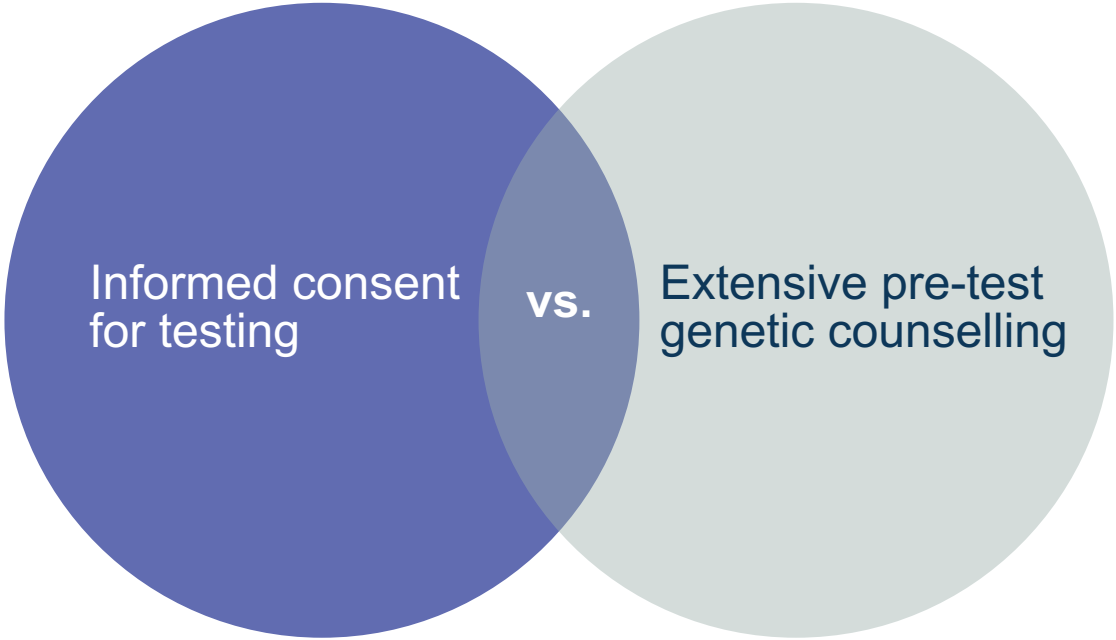
ER=oestrogen receptor

Personal opinion, Angela George

Oncogenetic pathway

- **Integration of testing** into oncology care
- **Educate** oncology clinicians to consent patients for testing
  - Including oncologists, specialist nurses
- Testing of patients who meet pre-agreed criteria
- **Reduces the need to refer** to genetics
- Potential to discuss **specific treatment implications** in more detail

Personal opinion, Angela George



Personal opinion, Angela George

Breast MCG programme[1,2]

- Testing for breast cancer patients **at the time of diagnosis or relapse**
- Testing on the basis of **tumour and personal characteristics**
- **Consenting** in oncology clinics via **oncology or surgical teams**

ELIGIBILITY CRITERIA (one or more of)[2]:

1. BC ≤45 years
2. Two primary BCs, both ≤60 years
3. Triple-negative BC
4. BC and / or OC
5. Male BC

Actions by approved clinical team member (oncology or genetics):

1. Information sheet (MCG IS1) given to patient
2. BRCA gene testing discussed
3. Blood and request form sent to lab

No mutation

Action by genetics:

- Result and information sheet (MCG IS2) sent to patient
- Result sent to cancer team
- Genetics appt sent to patient

Mutation

Action by genetics:

- Result and information sheet (MCG IS3) sent to patient
- Result sent to cancer team
- Genetics appt sent to patient

Variant requiring evaluation

Action by genetics:

- Result and information sheet (MCG IS4) sent to patient
- Result sent to cancer team
- Genetics appt sent to patient

BC=breast cancer; MCG=mainstreaming cancer genetics; OC=ovarian cancer

1. Speaker communication from Zoe Kemp; 2. Kemp Z, et al. *JAMA Netw Open* 2019;2:e194428

Section summary

- Mainstreaming allows genetic testing to be integrated into the patient management pathway
- Programmes require close collaboration between oncology and genomics to set up and run

- Mainstream consenting has been shown to:
  - Reduce waiting times for testing and account for faster turnaround of test results
  - Facilitate use of genetic information for multiple tumour-types
  - Impact therapeutic decisions for patients

Personal opinion, Angela George