Demystifying the Science Behind Targeted Treatments and Immunotherapies for Malignant Melanoma

Introduction

The aim of this course is to provide an up-to-date overview of modern systemic treatment approaches given to people with malignant melanoma. Including treatment combinations and new approaches currently being investigated in clinical trials.

Dr Vickers' goal is to explain the science that underpins each treatment. She also hopes to provide learners with a broad understanding of why treatments work well for some patients but not for others.

Elaine's presentations are full of colourful and enlightening illustrations to help learners make sense of scientific concepts. Her descriptions avoid unnecessary jargon and are pitched so that even those with a limited understanding of cell biology are able to understand.

Format

The morning's content is split over three presentations of 30-40 minutes each. Elaine will be online throughout the morning to interact with learners and answer questions in the live Q&A sessions. Videos of the presentations will be available online for 30 days after the live event.

Audience

This content is ideal for research nurses, clinical nurse specialists, pharmacists and clinical trials coordinators. It may also be of interest to other healthcare professionals involved in the diagnosis and treatment of people with solid tumours, and to junior doctors.

About Dr Vickers

Elaine has a degree in Medical Science from the University of Birmingham and a PhD in Molecular Biology from the University of Manchester. She has worked as a specialist cancer educator and writer for almost 20 years. Her goal is to unravel the complexities of cancer biology and new cancer treatments and to make these topics interesting and accessible to non-scientists. Elaine is the author of: "A Beginner's Guide to Targeted Cancer Treatments", which was commended by the British Medical Association's book awards in 2019.

Description of content:

Over the course of three presentations, Dr Vickers explains the reasons why B-Raf & MEK inhibitors and checkpoint inhibitors have become such important treatment approaches for people with malignant melanoma.

She begins by explaining the faulty processes and DNA mutations that lead to an invasive melanoma. Elaine also describes the complex and dynamic relationship between melanoma cancer cells and the person's immune system.

Building on these foundations, we learn about the advent of B-Raf and MEK inhibitors, why they work better in combination, and the trial results that have led to their widespread use. In addition, Elaine summarises the results from pivotal trials investigating various checkpoint inhibitors for melanoma. She also describes novel targeted treatments and immunotherapy approaches in trials.

Content

Session 1 – Biology and genetics of malignant melanoma
- Cell of origin and mechanisms of development
- Key genetic mutations in malignant melanoma
- Differences between melanomas on sun-exposed vs. non-sun exposed skin and between cutaneous and non-cutaneous melanomas

LIVE Q&A

Session 2 – B-Raf and MEK inhibitors
- Growth factor receptor signalling pathways and the normal functions of B-Raf and MEK
- Licensed B-Raf & MEK inhibitors; summary of pivotal trials
- Resistance mechanisms to B-Raf/MEK inhibitors
- Recent trial data and the path ahead
- Other actionable mutations and biomarkers

LIVE Q&A

Session 3 – Immunotherapy for malignant melanoma
- Melanoma and the immune system – a dynamic relationship
- Checkpoint inhibitor mechanism of action
- Why checkpoint inhibitors often work well against melanoma, and why they sometimes don't
- Licensed checkpoint inhibitors; summary of pivotal trials
- Recent trial data and the path ahead, including trials to determine whether immunotherapy or targeted therapy is the best first option for people with *BRAF*-mutated disease
- Novel immunotherapies in trials

LIVE Q&A