

# Molecular Mechanisms of Targeted Treatments for Solid Tumours

## Virtual study day

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Thursday 3 December 2020

Event ID 856

### Aims:

Over the course the morning, experienced cancer educator Dr Elaine Vickers guides you through the scientific concepts that underpin many of the most used targeted cancer treatments for solid tumours.

Beginning with the bigger picture – what we can and can't target – she describes the mechanisms of action of the two main types of treatment: monoclonal antibodies that target cell surface proteins, and small molecules that block kinases. Many of these treatments target over-active, growth factor-controlled signalling pathways.

Elaine will explain the function of these pathways in healthy cells and their defects in cancer cells. She'll also describe why blocking these pathways sometimes works, and sometimes doesn't. Lastly, Elaine turns her attention to other targets and to various biomarker tests to select the right approach for each patient.

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

This morning is the first part of a virtual study day. On Friday 04 December it is followed by "Molecular Mechanisms of Immunotherapies for Solid Tumours".

### 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.

### Cost:

£50 per day

£160 for Elaine's 3<sup>rd</sup>, 4<sup>th</sup>, 7<sup>th</sup> & 8<sup>th</sup> December events

### Register:

[www.royalmarsden.nhs.uk/studydays](http://www.royalmarsden.nhs.uk/studydays)



### Get in touch:

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## Programme- Day 1:

Over the course of three videos, Dr Vickers guides us through the scientific concepts that underpin many of the most used targeted cancer treatments. Beginning with the bigger picture – what we can and can't target – she then describes the mechanisms of action of the two main types of treatment: monoclonal antibodies that target cell surface proteins, and small molecules that block kinases. Many of these treatments target over-active, growth factor-controlled signalling pathways. Elaine will explain the function of these pathways in healthy cells and their defects in cancer cells. She'll also describe why blocking these pathways sometimes works, and sometimes doesn't. Lastly, Elaine turns her attention to other targets and to various biomarker tests to select the right approach for each patient.

**10:00**      **Welcome and Introductions**

**10:10**      **Session 1—Targeted Cancer Treatments – the current landscape**

- Hallmarks of cancer cells – which can we target?
- The pros and cons of small molecule kinase inhibitors and monoclonal antibodies
- When they work, and when they don't

**10:45**      **Live Q&A**

**10:55**      **Break/Sponsor Exhibition**

**11:00**      **Session 2—Targeting Cell Communication Pathways**

- Targeting growth factor receptors: EGFR, HER2, MET
- Inhibitors of growth factor receptor fusion proteins: ALK, ROS1, RET, TRKA/B/C
- B-Raf & MEK inhibitors
- PI3K & mTOR inhibitors

**11:35**      **Live Q&A**

**11:45**      **Break/Sponsor Exhibition**

**11:50**      **Session 3—Other Targets and Treatments**

- Angiogenesis inhibitors
- PARP inhibitors
- CDK inhibitors
- Biomarkers of response and resistance

**12:25**      **Live Q&A**

**Please note that the content will be available online for 30 days after the event.**

**Sponsors:**

The above sponsors provided funding for the study day, but they have had no input into the programme, selection of speakers or topics.