

Courses available from Elaine Vickers, 2020

Course levels:

Basic – suitable for anyone, no matter what their background

Intermediate – ideal for ward nurses, research nurses, clinical nurse specialists, administrative staff, clinical trials coordinators

Intermediate/advanced – suitable for experienced research nurses and trials staff, pharmacists, clinical nurse specialists, pharmaceutical companies, junior doctors or anyone else involved in cancer who understands concepts such as DNA, chromosomes, genes and the cell cycle

Advanced – intensive courses that provide less background information and cover a wider range of topics than the intermediate/advanced courses

General courses on cancer biology and targeted cancer treatments:

Basic

1 **Cancer, biology, treatments and trials: A guide for consumers (2 days)**

Description: This course provides a broad grounding in cancer cell biology, including key concepts such as cells, DNA, proteins, cell division, gene transcription, genetic mutations, cell communication and cancer growth and metastasis. It gives an overview of standard cancer treatments and an introduction to the concepts behind targeted cancer treatments and immunotherapies. It also includes an overview of the drug development process and clinical trials and provides time for delegates to interact with the presenter and ask questions, and involves a number of question sheets and interactive tasks.

2 **An introduction to cancer biology and the way cancer drugs work (1 day)**

Description: This course provides an overview of cancer cell biology, DNA damage, and the behaviour of cancer cells. It includes a description of the drugs used to treat cancer since the 1950s (chemotherapy and hormone treatments), and the science behind two new sets of cancer treatments: targeted cancer treatments and immunotherapies.

Intermediate

3 **Cancer biology and targeted treatments: demystifying the science (1 day)**

Description: This course gives cancer nurses and trials staff the knowledge and confidence to discuss targeted cancer treatments with patients and colleagues. The focus of the day is on cancer biology and the science behind licensed treatments for solid tumours, including monoclonal antibodies, small molecule kinase inhibitors and immunotherapies. This is Elaine's most popular study day. She has delivered it many times across the UK and, like all of Elaine's courses, she updates the materials before every session.

4 Cancer biology & personalised cancer treatments for solid tumours (2 days)

Description: This course provides a grounding in cancer biology and genetics before moving to descriptions of a wide range of targeted treatments for solid tumours (such as Herceptin for breast cancer, B-Raf/MEK inhibitors for melanoma and EGFR inhibitors for lung cancer and bowel cancer) and immunotherapy with checkpoint inhibitors. It also includes the reasons behind drug resistance and cancer recurrence and an introduction to biomarkers and personalised cancer care. Uses a variety of question sheets and quizzes.

5 A beginner's guide to cancer immunotherapy (½ day)

Description: This course begins with an introduction to the relationship between cancer and the immune system. Various concepts behind immunotherapy are explained, such as the importance of cytotoxic T cells and of white blood cells such as regulatory T cells and myeloid-derived suppressor cells. Checkpoint inhibitors are described in detail, as are some of the lessons we have learned from trials that have included thousands of people with a wide range of cancer types. The day also covers CAR T cells and vaccine-based treatments.

Intermediate/advanced

6 The science of targeted cancer treatments (1 day)

Description: This course is used by research networks and clinical trials units for their more experienced staff. As well as an overview of targeted treatments against EGFR, HER2, B-Raf, MEK, mTOR, angiogenesis etc. It also includes concepts behind cancer immunotherapies such as checkpoint inhibitors and CAR T cells. It ends with a discussion of clinical trial design and the use of biomarkers.

7 Cancer biology & the science of new cancer treatments (2 days)

Description: Similar to course 4, but requires delegates to have some prior understanding of cancer cell biology. It includes an introduction to targeted treatments for haematological cancers such as rituximab, venetoclax, ibrutinib and treatments for multiple myeloma.

Advanced

8 Molecular mechanisms of targeted cancer treatments (1 day)

Description: This course covers a wide range of licensed and experimental cancer treatments, explaining their biological mechanism of action at a molecular and cellular level. It also contains detailed information on mechanisms of drug resistance and discusses the future of personalised cancer medicine.

Courses about specific types of cancer

(all of these courses can be adapted for different audiences)

9 Targeted treatments for breast cancer (1 day or ½ day)

Description: This study day provides an overview of the cellular and genetic makeup of breast cancer and explains the science behind targeted treatments in use and in development. Includes an overview of hormone treatments and chemotherapy as well as HER2-targeted treatments and CDK4/6 inhibitors. Novel strategies for triple-negative cancers are discussed, such as PARP inhibitors and immunotherapy.

10 Targeted treatments for lung cancer (1 day)

Description: This course describes the faulty genes, pathways and proteins that drive small cell and non-small cell lung cancer. It also explains the scientific rationale behind targeted treatments in use and in development for these diseases, including the progress made with checkpoint inhibitors such as nivolumab, pembrolizumab and durvalumab. Other treatments covered include inhibitors of EGFR, ALK, ROS1, B-Raf, HER2, MET, FGFR and Trk proteins, and angiogenesis inhibitors.

11 Targeted treatments for malignant melanoma (1 day or ½ day)

Description: This course covers the biology and genetics of malignant melanoma and the science behind the latest treatment approaches. Both B-Raf/MEK inhibitors and checkpoint inhibitors are explained and the latest trial data is presented. The day also includes an overview of novel treatments such as antigen and DNA vaccines and other agents in early phase trials.

12 Targeted treatments for haematological cancers (1 day)

Description: This course introduces the unique cellular and genetic features of haematological cancers. It covers a range of targeted treatment approaches in use and in development for these cancers, including monoclonal antibodies that target CD20 and antibody-drug conjugates such as brentuximab vedotin and inotuzumab ozogamicin. It also includes treatments that target FLT3, JAK2 and B cell receptor signalling, and treatments for multiple myeloma such as immunomodulators, proteasome inhibitors and antibodies. The science behind CAR T cell therapy is described, including the prospects for using this strategy against a range of haematological cancers.

13 Targeted treatments for cancers of the digestive system (1 day)

Description: This course provides a description of the faulty genes and proteins that drive colorectal, head and neck, oesophageal, gastric, pancreatic and liver cancer. It also provides an overview of targeted treatment approaches (such as angiogenesis inhibitors, EGFR and HER2-targeted treatments) and immunotherapy using checkpoint inhibitors. The progress made in each cancer is described.

14 Demystifying the science behind advances in ovarian cancer (1 day or ½ day)

Description: This course begins with an overview of the gene mutations and other defects that drive ovarian cancer (including fallopian tube and other primary peritoneal cancers). It also examines how this knowledge impacts treatment choice and explains the science behind chemotherapy and PARP, B-Raf and angiogenesis inhibitors. The day also includes the potential of immunotherapy and novel approaches for treatment, screening and patient monitoring.

15 Targeted treatments for urological cancers (1 day)

Description: This course provides a description of the faulty genes and proteins that drive prostate, kidney, bladder and testicular cancer. It also provides an overview of targeted treatment approaches for these diseases, such as hormone therapy, immunotherapy, kinase inhibitors and angiogenesis inhibitors.

Please contact Elaine (elaine@sciencecommunicated.co.uk) if you would like to discuss how any of these courses can be adapted to your training needs.