

## Courses available from Elaine Vickers in 2024

### General courses on the science behind targeted cancer treatments & immunotherapy:

**1 Targeted treatments & immunotherapy for solid tumours: demystifying the science (1 day or 6 x 45-minute webinars)**

**Description:** This course gives cancer nurses and trials staff the knowledge and confidence to discuss targeted cancer treatments with patients and colleagues. The day focuses on cancer biology and the science behind licensed treatments for solid tumours, including monoclonal antibodies, small molecule kinase inhibitors and immunotherapies.

**2 Introduction to precision cancer medicine (1 day or 6 x 45-minute webinars)**

**Description:** Elaine first introduces the scientific concepts that underpin the idea of precision medicine. She looks at the features of cancer cells we can target, the treatments available, and the tests and technologies needed to match targets with treatments. She also provides examples of where a precision approach is already being used. Elaine then turns her attention to precision medicine's limitations and current realities. Elaine describes why a precision approach isn't always possible or might not give the best outcome for a patient. She looks through the results from various precision medicine trials as examples and looks at the difference between expectations and reality.

**3 A beginner's guide to cancer immunotherapy (½ day or 3 x 45-minute webinars)**

**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 white blood cells, such as regulatory T cells and myeloid-derived suppressor cells. Checkpoint inhibitors are described in detail, as are some lessons we have learned from trials that have included thousands of people with a wide range of cancer types. The course also covers CAR T cells and vaccine-based treatments.

**4 Immunotherapy for solid tumours (½ day or 3 x 45-minute webinars)**

**Description:** This course focuses on cancer's relationship with the immune system and how this knowledge is used to improve the outlook of people with various solid tumours. Elaine focuses much of her attention on the checkpoint inhibitor group of immunotherapies, which include PD-1, PD-L1, and CTLA-4 targeted antibody therapies. Elaine will describe how checkpoint inhibitors boost cancer-fighting T cells. She'll also highlight some of the lessons learned through the hundreds of clinical trials with checkpoint inhibitors that have taken place over the past decade. In the latter part of the morning, Elaine explains other technologies, such as vaccine-based treatments and oncolytic viruses.

**5 Novel immunotherapies for solid tumours (½ day or 3 x 45-minute webinars)**

**Description:** Similar to course 4, this time emphasising the progress made in developing immunotherapies such as CAR T cell therapy, TCR-engineered T cell therapy, tumour-infiltrating lymphocytes, T cell engagers, and vaccine-based treatments. As in course 4, Elaine begins with an introduction to immunotherapy and the relationship between cancer and the immune system. She then explains the science behind each novel immunotherapy approach.

## Courses about specific types of cancer

### 6 Targeted treatments and immunotherapy for breast cancer (4 x 45-minute webinars)

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

### 7 Targeted treatments and immunotherapy for lung cancer (1 day or 6 x 45-minute webinars)

**Description:** This course describes the faulty genes, pathways and proteins that drive small cell and non-small cell lung cancer. Elaine also explains the scientific rationale behind targeted treatments and immunotherapies 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.

### 8 Targeted treatments & immunotherapy for melanoma (½ day or 3 x 45-minute webinars)

**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 course also includes an overview of novel treatments such as antigen and DNA vaccines and other agents in early-phase trials.

### 9 Targeted treatments & immunotherapy for haematological cancers (1 day or 6 x 45-minute webinars)

**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 targeting CD20 and antibody-drug conjugates such as brentuximab vedotin and inotuzumab ozogamicin. It also includes treatments that target FLT3, Bcl-2, and B cell receptor signalling, and treatments for multiple myeloma such as immunomodulators, proteasome inhibitors and antibodies. The science behind CAR T cell therapy, including the prospects for using this strategy against a range of haematological cancers, is described.

### 10 CAR T cell science for nurses (½ day or 3 x 45-minute webinars)

**Description:** This course introduces nurses to the scientific concepts that underpin CAR T cell therapy. It is ideal for nursing teams who already deliver CAR T cell therapy or will do so soon. The course includes an introduction to immunotherapy approaches using immune effector cells. It includes an overview of the CAR T cell process, an in-depth look at the CAR protein, the results obtained from trials so far, and reasons for resistance, relapse, and side effects.

### 11 Targeted treatments & immunotherapy for bowel cancer (½ day or 3 x 45-minute webinars)

**Description:** This course aims to provide an up-to-date overview of modern systemic treatment approaches for people with bowel cancer. This includes treatments such as EGFR-targeted antibodies and immunotherapy with checkpoint inhibitors. The course also looks at the potential for treatments targeted at a greater range of driver mutations, such as those affecting K-Ras and HER2.

**12 Targeted treatments & immunotherapy for upper GI cancers (½ day or 3 x 45-minute webinars)**

**Description:** In this course, Elaine provides an overview of the biology and genetics of oesophageal cancer, stomach cancer, small bowel cancer, pancreatic cancer, liver cancer and cancers of the biliary system.

She also explains the science behind various treatment approaches for these diseases, including relevant targeted therapies and immunotherapies, as well as approaches in trials.

**13 Targeted treatments & immunotherapy for ovarian cancer (½ day or 3 x 45-minute webinars)**

**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 the use of PARP inhibitors. The day also includes the potential of immunotherapy with checkpoint inhibitors and novel approaches for treatment, such as antibody-drug conjugates.

**14 Targeted treatments & immunotherapy for gynaecological cancers (½ day or 3 x 45-minute webinars)**

**Description:** Broader than course 13, this course provides an overview of the biology and genetics of ovarian, endometrial, cervical, vulval and vaginal cancers. Elaine also explains the science behind various treatment approaches for these diseases, including relevant targeted therapies and immunotherapies and approaches in trials. Because of their importance, Elaine will pay particular attention to the use of PARP inhibitors to treat women with ovarian cancer.

**15 Introducing the science behind treatments for prostate cancer (½ day or 3 x 45-minute webinars)**

**Description:** In this course, Elaine delves into the biology and genetics of prostate cancer. She describes the science behind standard treatments such as radiotherapy (including SABR and radionuclides such as <sup>177</sup>Lu-PSMA-617), chemotherapy, and first- and second-generation hormone therapies. The course also covers the science behind the use of PARP inhibitors, checkpoint inhibitor immunotherapy, third-generation hormone therapies, PI3K & AKT inhibitors, and PSMA-targeted treatments.

**16 Targeted treatments & immunotherapy for urological cancers (½ day or 3 x 45-minute webinars)**

**Description:** This course begins with an overview of the gene mutations and other defects that drive prostate, kidney, and bladder cancer. Elaine then provides an overview of prostate cancer treatments, such as first- and second-generation hormone therapies, PARP inhibitors, and PSMA-targeted treatments. Lastly, Elaine describes immunotherapies (such as checkpoint inhibitors) and targeted therapies (including angiogenesis inhibitors and antibody-drug conjugates) given to some people with bladder and kidney cancer.

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