MEETING REPORT

# Commissioning Chemotherapy Services Conference

## Hosted by the UK Chemotherapy Board

**Tuesday 26 November 2019**
**Pullman London St Pancras Hotel**

www.commissioningcancer.co.uk

This meeting has been supported by the pharmaceutical industry through sponsorship and the purchase of exhibition stand space. Sponsoring companies have not influenced or been involved in the preparation of this event.

## Welcome and introduction

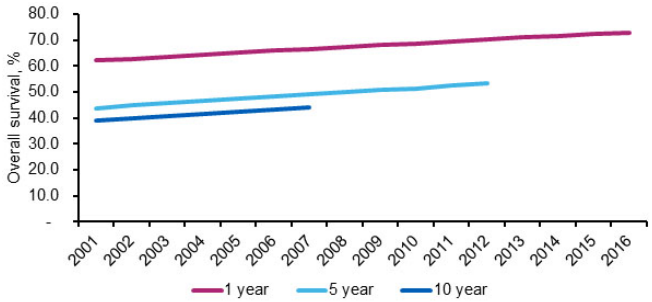
Dr Ruth Board (Consultant Medical Oncologist, Lancashire Teaching Hospitals), Chair of the United Kingdom Chemotherapy Board (UKCB) and this year's Commissioning Chemotherapy Services Conference, welcomed all attendees to the meeting and a day of excellent presentations and discussions.

## Cancer Care and the 10-year NHS Plan

Prof Peter Johnson (National Clinical Director for Cancer, NHS England) was the first speaker of the day and provided insights into the ambitions of the NHS long-term plan that aims to transform cancer care so that by 2028 an extra 55,000 people per year will survive for ≥5 years following their cancer diagnosis and that 75% of cancers will be diagnosed at an early stage.

Over the 15 years between 2001 and 2016 there has been steady progress in improving 1-year, 5-year and 10-year cancer survival rates (Figure 1).

**Figure 1. Cancer survival rates between 2001 and 2016.**




However, compared with 5-year survival rates for patients with cancer treated in the top 10% of European countries, there is still significant progress to be made, particularly for patients with cancers such as stomach, brain and ovary cancer.

To achieve the goals set out in the NHS long-term plan, five core targets have been identified: Deliver the most comprehensive screening programme in the world, ensure equitable and fast access to diagnostic tests and results, provide faster, safer and more precise treatments, deliver personalised care for all patients and transform follow-up care and harness the collaboration of academia, the NHS and industry.

Prof Johnson noted that the 20 Cancer Alliances in the UK will play a key role in leading the transformation of cancer care by delivering sustainable operational performance, developing rapid screening and diagnostic processes and driving the implementation of personalised care.

Since July 2016, the Cancer Drugs Fund (CDF) has funded 78 treatments for approximately 40,000 patients with 155 different cancers whilst remaining within its £340m budget. Of those 40,000 patients, 8,300 registered to receive treatment sooner than they would have through interim funding arrangements in the CDF and 17,500 registered to receive promising new treatments while further evidence is collected to address clinical uncertainty via managed access agreements. In addition, two treatments have completed their CDF managed access period and are now routinely commissioned following re-appraisal by the National Institute for Health and Care Excellence (NICE).

The Early Access to Medicines Scheme (EAMS) aims to provide earlier availability of promising new, unlicensed treatments to patients that have a high unmet clinical need. Currently, polatuzumab with bendamustine and rituximab are provided within the scheme for the treatment of diffuse large B-cell lymphoma (DLBCL).

The NHS long-term plan also seeks to transform care by improving access to novel treatments such as chimeric antigen receptor-T-cell (CAR-T) therapy, which may be curative for some patients, and histology-independent

treatments, which represent a step-change in cancer treatment as they target a molecular feature, rather than the tissue of origin.

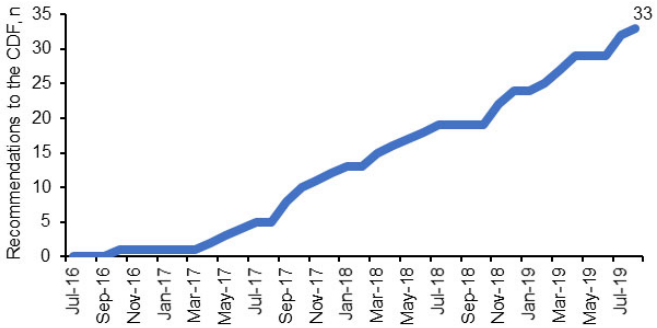
Prof Johnson concluded by noting that the NHS long-term plan will be impossible to implement without a suitable workforce. Currently, the NHS has a workforce plan through to 2021 that has resulted in growth of 3.2% in the workforce across six priority specialisms in the past year.[1] It is imperative that the NHS maintains this workforce growth so that sufficient resource will be available to achieve the ambitious goals of the NHS long-term plan.

## Meeting the Challenges of Funding Innovative Cancer Therapies – The NHS England Perspective

Mr Steve Williamson (Lead Cancer Pharmacist, NHS England) presented a summary of the challenges of funding cancer treatments and how these may be overcome. When considering whether a new cancer treatment should be made available for patients through the NHS, NICE makes one of three decisions: Yes – the treatment should be routinely commissioned, no – the treatment should not be routinely available, or it can be recommended to the CDF. A cancer treatment can be recommended to the CDF if there are key uncertainties regarding its clinical and/or cost effectiveness that can be resolved through data maturity/collection and at the time of appraisal the drug has a range of plausible estimates that cross the NICE threshold of cost effectiveness. Once recommended to the CDF the cancer treatment will be available through the NHS via a managed access agreement. Since its reform in 2016, the number of recommendations to the CDF has increased (Figure 2) and the percentage of NICE recommendations that have received 'No' responses following a technology appraisal has decreased.

Owing to the potential therapeutic benefit of the cancer treatments being considered for the CDF, it is important that patients receive timely access to these treatments.

**Figure 2. Recommendations to the CDF between July 2016 and July 2019.**




CDF, Cancer Drugs Fund.

To facilitate this, the early understanding of whether a novel treatment is likely to enter the CDF by NICE, the NHS and manufacturers is key. The red, amber, green (RAG) assessment was developed to examine the likelihood of entry into the CDF based on the following criteria:

- Will the technology have a conditional marketing authorisation for this indication?
- Is the technology part of the Medicines and Healthcare Products Regulatory Agency's EAMS?
- How mature will the clinical evidence be at the time of submission (for example is the marketing authorisation application based on a single-arm trial?)
- Is it likely that further clinical data would impact committee decision-making?
- Has the manufacturer expressed interest in the CDF?
- Did the manufacturer ask for more information about the CDF at the decision problem meeting?

CAR-T cell therapy is an immunotherapy that involves collecting and using a patients' own immune cells to treat their cancer. There are many different types of CAR-T therapies in development; however currently there are two that are approved in four indications (tisagenlecleucel is approved for the treatment of acute lymphoblastic leukemia [ALL] and DLBCL and axicabtagene ciloleucel is approved for the treatment of DLBCL and primary mediastinal B-cell lymphoma). To accommodate this new technology, the NHS has developed a new fast-track route which was first used in partnership with Novartis to provide tisagenlecleucel to patients with ALL. Following the announcement by the European Medicine's Agency that tisagenlecleucel had been granted a marketing authorisation for ALL, the new fast-track route meant that the first patients were treated at Great Ormond Street Hospital only three months later.

Mr Williamson concluded by noting that there are many innovative technologies in development for the treatment of cancer that have the potential to further disrupt cancer care pathways, such as tumour-agnostic therapies and other

novel CAR-T therapies. So that the NHS may provide these treatments to patients with cancer, it is important that HCPs address the key challenges around commissioning, health economic models and identifying those patients who can benefit from these new treatments.

## Questions for the Panel: Prof Peter Johnson and Mr Steve Williamson

The panel were asked to name three things that they would like to see before they retire. Prof Johnson noted that he would like to see significantly reduced mortality from cancer, the development of a cancer diagnostic system that diagnoses cancer as or more efficiently than any other country in the world, and the ability to deliver optimal treatment to every patient with cancer.

In response to a question on why the workforce plan did not include pharmacists, who are an important resource in the cancer care pathway, Mr Williamson responded that the pharmacy Clinical Reference Group are working to address the challenges faced by pharmacists in the cancer pathway and noted that workforce challenges are being closely monitored.

An audience member noted that in the NHS, gastroenterologists are more common than oncologists, who are more common than pathologists. When asked about how the NHS should recruit more pathologists, Prof Johnson replied that recruitment of pathologists has been difficult owing to the highly specialist nature of the role. Prof Johnson highlighted that the development of artificial intelligence will continue to support pathologists but speculated that the role will always need to involve humans.

When asked about the optimal way of working regarding large cancer centres and local cancer units, Prof Johnson noted that that local cancer units should deliver more routine care and cancer centres should be reserved for more complex cases, such as patients treated with immunotherapies that may have adverse events that cancer units aren't familiar with.

When asked about why nurses were not included within the workforce planning presentation, Mr Williamson highlighted that nurses are key to the cancer care pathway and that developing strategies to ensure sufficient nursing resource is important. Prof Johnson added that there are lots of ongoing discussions about increasing the nursing workforce across all therapy areas, not just for oncology, which is why it wasn't included in the presentation.

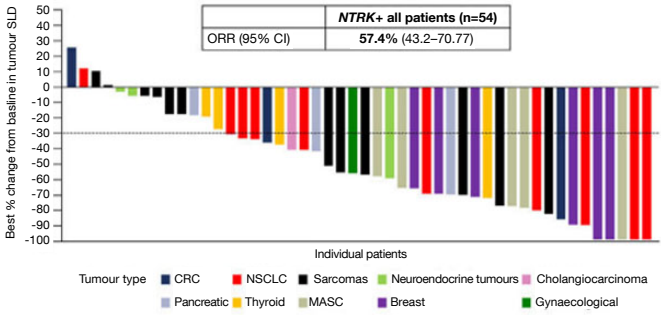
An audience member asked the panel why access to tumour-agnostic treatments by paediatric patients has stalled. Prof Johnson noted that the paediatric population aren't routinely included in clinical trials during the development of novel treatments. However, if there is a need for a particular approved treatment by the paediatric population then there are policies in place to make the treatments available. Optimising the dose and ensuring the same biological plausibility are the main challenges in providing cancer treatments to the paediatric population.

## Genomic Medicine in Oncology

The morning continued with a presentation from Dr Emma Howard (Deputy Director, North West Genomic Laboratory Hub) who presented an overview of the current genomic cancer testing landscape and provided insight into the 100,000 genomes project. As the cost of genetic testing decreases, the research community continues to identify key genetic biomarkers that may be associated with the development of cancer. An example of this is NTRK gene fusions that occur in multiple tumour types and has demonstrated pan-tumour drugability (Figure 3).[2]

Dr Howard speculated that large next generation sequencing gene panels or whole genome sequencing could provide a one-stop genomic companion diagnostic tool in the future. To investigate this, the 100,000 genomes project was launched in 2012 to sequence the entire genomes of 100,000 NHS patients and their families. The aims of the project are to increase discovery of pathogenic genomic variants, accelerate uptake of advanced genomic medicine into the NHS, increase

**Figure 3. Objective response rates in patients with NTRK gene fusions.**




CI, confidence interval; CRC, colorectal cancer; MASC, mammary analogue secretory carcinoma; NSCLC, non-small cell lung cancer; ORR, objective response rate; SLD, sum of the longest diameters.

public understanding and support for genomic medicine and advance the life science industry in the UK.

Dr Howard noted several key challenges in the development and application of whole genome sequencing. It was estimated that the 100,000 genomes project resulted in approximately 21 petabytes of sensitive patient data, which required the development of new infrastructure to hold the data and keep it sufficiently protected. In addition, as whole genome sequencing represents a step-change in cancer diagnostics, education was needed within the 13 NHS Genomic Medicine Centres so that the staff were able to handle the solid tissue samples appropriately. This included moving away from formalin fixation to obtain the best possible tissue for genomic analysis, formalin-free theatres, use of refrigeration to preserve tissue, use of vacuum packing and use of fixatives that do not damage DNA samples.

The clinical data gathered from whole genome sequencing is stratified into four tiers based on the Association for Molecular Pathology (AMP) variant tiering system. Genomic variations are tiered based on the degree of evidence that suggests they are clinically significant (i.e. the presence of tier 1 variants has strong clinical significance, whereas the presence of tier 4 variants is likely benign), which varies between tumour types. In addition, the tumour mutation burden is recorded for each patient as a marker of tumour cell immunogenicity for the prediction of response to treatment with immune checkpoint inhibitors. The Genomic Tumour Advisory Group reviews the pathogenicity and actionability of the findings from whole genome sequencing and decides, in the context of a patient's clinical status, on a course of action.

Dr Howard concluded by highlighting the potential of whole genome sequencing to identify key somatic findings that will influence the treatment and management of a patient, identify germline findings that may affect the patient's future care needs, allowing them to access preventative care earlier, expand our knowledge of cancer, drive research into novel treatments and improve the use of pharmacogenomics to personalise cancer treatment.

## How Should the SACT Database Support Clinical Practice?

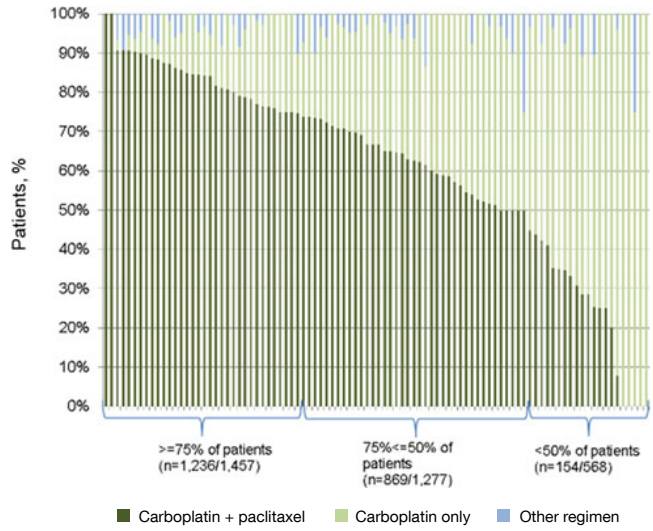
Prof David Dodwell (Consultant Clinical Oncologist, Nuffield Department of Population Health, University of Oxford) provided a summary of the key ways in which the Systemic Anti-Cancer Therapy (SACT) database should be used to support clinical practice. The SACT database is a powerful tool to improve our understanding of the therapeutic index of SACT in the treatment of cancer and thus improve decision-making. SACT data is intended for use by many different stakeholders, including clinicians, payers, patients, regulators and industry.

NHS Trusts are provided quarterly updates based on the period of activity in the previous six months. The data includes the number of patients receiving treatment for each tumour group, information on the number of treatment regimens used (stratified by treatment intent and tumour group), outcome summary data and treatment dosing schedules (including information on dose banding).

This data enables clinicians to identify variation between NHS Trusts and investigate causes and appropriate solutions. For example, the SACT database revealed that women diagnosed in England in 2015 with invasive ovarian, peritoneal or fallopian tube carcinomas were experiencing variation in administered chemotherapy based on which NHS Trust they were visiting. Some NHS Trusts administered carboplatin + paclitaxel to more than 75% of these patients, whereas other Trusts administered the same treatment regimen to less than 50% of these patients (Figure 4). In addition, the SACT database has highlighted that the use of chemotherapy varies by age and region, independently of other patient and tumour characteristics.

Prof Dodwell outlined the results of a population-based, observational study that investigated 30-day mortality after SACT in patients with breast cancer or non-small cell lung cancer (NSCLC).[3] The study identified several factors that were associated with increased 30-day mortality such as old

**Figure 4. Variation in chemotherapy by NHS Trust in patients with invasive ovarian, peritoneal or fallopian tube carcinomas.**




age, whether the patient had already received prior SACT treatments and poor general wellbeing. The study group identified NHS Trusts with 30-day mortality rates in excess of the 95% control limits (11 for breast cancer and 12 for NSCLC), which should promote review of clinical decision-making to improve patient care. Prof Dodwell noted that expanded SACT data for other tumour types such as acute myeloid leukaemia, colon cancer and upper gastrointestinal tract cancer are now available to further support improvements to care for patients with these tumour types.

Prof Dodwell concluded by highlighting the usefulness of the SACT data to supplement the data generated from randomised, controlled trials in advanced cancer, which are often underpowered, use surrogate endpoints such as progression-free survival, often exclude fragile patients with many comorbidities and do not emphasise the need for real-world outcomes.

## Questions for the Panel: Dr Emma Howard and Prof David Dodwell

An audience member asked how the NHS plans to review the large increase in genomics data gathered from whole genome sequencing to improve patient care. Dr Howard responded to say that this is a key challenge that, at this early stage in the introduction of whole genome sequencing, still needs to be optimised. To avoid unnecessary strain on finite resources it will be important to only bring the most complex cases to the multidisciplinary team for their review.

An audience member asked about the mechanism for evaluating AMP tiering changes for genomic mutations and how this will be communicated to the relevant stakeholders. Dr Howard noted that this mechanism isn't currently clear but is currently a hot topic for discussion amongst clinicians.

When asked whether the genomics data derived from whole genome sequencing will be linked to the SACT database, Prof Dodwell highlighted that it isn't currently, but that Public Health England are very interested in implementing this.

When asked about how clinicians should deal with unexpected mutations and how they should counsel patients for unexpected findings, Dr Howard explained that it is important that patients are provided with useful resources that help them understand the meaning of the findings, and emotional support systems should be signposted for patients to use as necessary. It will be critical to develop patient-friendly language to explain unexpected findings derived from genomics data.

## Update on Cell Therapies and Management in Clinical Practice

Dr Sophie Papa (Clinical Reader and Honorary Consultant Medical Oncologist, King's College London and Guy's and St Thomas' NHS Foundation Trust) opened the afternoon session and provided insights into the mechanisms of action underlying two novel technologies for the treatment of cancer; tumour infiltrating lymphocytes (TIL) and CAR-T therapy.

TIL therapy involves collecting TILs from a patient's tumour during a biopsy or surgical resection and propagating them in a laboratory by stimulating them with interleukin-2 (IL-2), a pro-inflammatory cytokine. Once successfully propagated, the TILs are infused back into the patient where they actively target cancer cells. In a multicentre, phase 2 study, TIL therapy (LN-144) in patients with metastatic melanoma demonstrated a 38% objective response rate with an adverse event profile that was generally consistent with the underlying advanced disease, the profile of lymphodepletion and IL-2 regimens.[4] However, despite the promising efficacy and safety of TIL therapy, none are approved in the UK.

CAR-T therapy involves taking a sample of blood from a patient and using apheresis to separate out the T-cells. These cells are then genetically engineered to target proteins on the surface of cancer cells with a much higher affinity. After genetically engineering the patient's T-cells and propagating them in the laboratory, they are infused back into the patient's bloodstream to target the cancer cells. Currently, two CAR-T therapies are approved in four indications (tisagenlecleucel is approved for the treatment of ALL and DLBCL, and axicabtagene ciloleucel is approved for the treatment of DLBCL and primary mediastinal B-cell lymphoma).

Cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS) are common adverse events after TIL or CAR-T therapy. To ensure that they are managed appropriately, a consensus grading system for CRS and ICANS was developed by experts in the field for use in clinical trials and commercially, with standardised reporting through the Centre for International Blood and Marrow Transplant Research to meet commercial Risk Evaluation and Mitigation Strategies requirements.

Dr Papa concluded by highlighting the curative potential of TIL and CAR-T therapies but emphasised the need for further education of the workforce to support patients who may be experiencing adverse events that differ from those associated with chemotherapy.

## Nurse-led interventions for patients receiving chemotherapy

Prof Mary Wells (Lead Nurse for Research, Imperial College Healthcare Trust) presented an overview of the benefits associated with nurse-led interventions for patients with cancer, which has recently been investigated as part of the Recognition of Cancer Nursing in Europe (RECaN) project. Phase 1 of the RECaN project comprised a systematic review of published cancer nursing trials using Cochrane methods to systematically identify the roles and types of intervention activities currently undertaken by cancer nurses and to determine the effectiveness and cost-effectiveness of cancer nurse-led interventions in improving the experience and outcomes of patients with cancer.

The study found that there was a statistically significant improvement across all European Organisation for Research and Treatment of Cancer – core quality of life questionnaire – version 3.0 (EORTC-QLQ-C30) quality of life domains for patients receiving nurse-led interventions compared with no treatment, usual care or attention control comparators. In addition, nurse-led interventions resulted in a statistically significant benefit in all quality of life domains (global, physical function, emotional function, social function, cognitive function and role function), common cancer symptoms (fatigue, pain, nausea and vomiting and constipation) and on anxiety, depression and mood. These results were recently published in two key review publications (Campbell P et al. *J Adv Nurs* 2017;73(12):3144–53 and Charalambous A et al. *Int J Nurs Stud* 2018;86:36–43).[5,6]

Prof Wells concluded by highlighting that nurse-led interventions during chemotherapy can significantly reduce symptoms, improve adaptive coping and self-efficacy and reduce utilisation of other health services. In addition, Prof Wells noted that recent developments in personalised medicine and immunotherapy has increased the requirement for skilled and adaptable chemotherapy nurses who can conduct nurse-led research that is of primary importance to patients with cancer.

## Questions for the Panel: Dr Sophie Papa and Prof Mary Wells

An audience member asked the panel whether they were aware of recent research that demonstrated the lack of efficacy of CAR-T therapy for the treatment of solid tumours. Dr Papa responded that she was aware of this research and noted that it was disappointing to see the lack of efficacy but highlighted that this could have been due to the different tumour microenvironments between liquid and solid tumours.

A comment was provided by an audience member that measurements of quality of life should not be overlooked

in clinical trials or in real world studies. There are a vast number of validated tools to measure the various aspects of quality of life, which will become more important to measure as cancer survival rates continue to increase.

When asked about whether the relatively low volume of research into the effectiveness and cost-effectiveness of nurse-led interventions presents an opportunity for nurses to put themselves into the spotlight, Prof Wells agreed and speculated that cancer care will be increasingly nurse-led in the future, so further evidence to support the effectiveness of nurse-led interventions is vital.

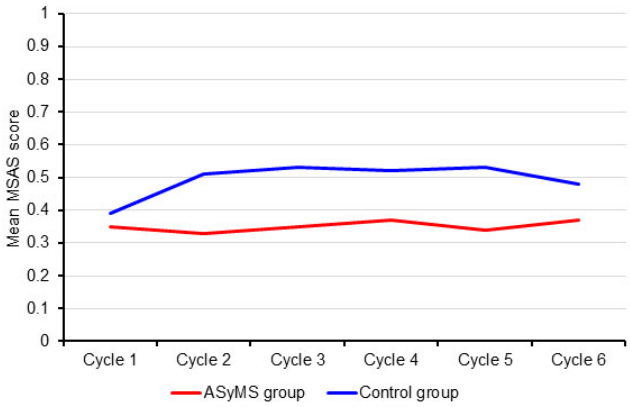
## Technology and Toxicity Management (eSMART)

Dr Jo Ames (Reader in Cancer Care and Lead for Digital Health, University of Surrey) provided a presentation on how technology continues to permeate the delivery of healthcare in the UK and how it can assist with toxicity management.

Dr Ames was part of a study group that conducted a randomised, controlled trial comparing electronic symptom management using the Advanced Symptom Management System (ASyMS) with standard care for patients undergoing adjuvant chemotherapy.[7] The ASyMS requires patients to use their mobile phone to complete an electronic patient-reported outcome questionnaire each day and whenever they feel unwell. The data is then transferred to a secure server and is subject to a clinical risk algorithm that determines the severity of the symptoms and notifies clinicians accordingly. The clinicians can then log on to a website to review the notifications and contact the patient to discuss the appropriate management of their symptoms. Of the 840 randomised patients, 415 analysable patients were included in the ASyMS group and 414 were included in the control group, stratified by clinical site and cancer type.

For the primary endpoint of symptom burden measured by the Memorial Symptom Assessment Scale (MSAS), the ASyMS group demonstrated reduced symptom burden across all cycles of adjuvant chemotherapy compared with the control group (Figure 5), which was maintained over the 12-month follow-up period.

**Figure 5. Comparison of MSAS scores between patients receiving adjuvant chemotherapy who used the ASyMS and those that received standard care.**




ASyMS, Advanced Symptom Management System; MSAS, Memorial Symptom Assessment Scale.

Dr Ames concluded by providing some reassuring patient quotes that demonstrated the convenience and functionality of the ASyMS, which should be used to enhance communication about toxicity management between patients and clinicians.

## Effective Communication of Risk and Toxicity with Chemotherapy

Professor Dame Lesley Fallowfield (Professor of Psycho-oncology at Brighton and Sussex Medical School, University of Sussex and Director, Sussex Health Outcomes Research and Education in Cancer [SHORE-C] Group) provided a thought provoking final presentation on the importance of clear communication about risk and toxicity for patients receiving chemotherapy. Owing to

the complexity of the therapy area, medical terminology is nuanced, and even HCPs can find it difficult to communicate effectively. This may mean that lay populations with life-threatening disease are making decisions about their care based on suboptimal information.

To make informed decisions about their care, patients need to understand the probabilities of harm, understand the consequences of receiving or not receiving treatment and compute risk in the context of personal preferences. However, clear communication about risk in medicine can often be difficult owing to lack of information regarding the true efficacy and safety profile of treatments, which may be due to insufficient data from robust studies, imprecision of measurement or reliance on clinician-reported adverse events. Prof Fallowfield noted that framing (e.g. an adverse event experienced by 10% of the population versus an adverse event that 90% of the population did not experience) can heavily influence patient opinion and choices, particularly in less numerate patients.

Prof Fallowfield explained that verbal descriptors such as ‘common’ or ‘rare’ often produce widely differing estimates by patients, and percentages may also confuse less numerate patients. To avoid confusion, Prof Fallowfield suggested that combining a descriptor with a frequency may be clearer for patients (e.g. rare, affects fewer than 1 in 1,000 people).

Prof Fallowfield concluded by highlighting that cancer management is complex which leads to the use of terminology that may be confusing for patients, particularly in those with lower numeracy levels. In addition, HCPs should be mindful of unconscious biases and misunderstandings when communicating with patients and should seek to develop improved communication repertoires to enable patients to make informed choices about their treatment.

## Questions for the panel: Dr Jo Armes and Professor Dame Lesley Fallowfield

The panel were asked about how the various healthcare apps should be standardised. Dr Ames responded to say that in this early phase of the integration of mobile apps into healthcare we currently do not have a standardisation process. Prof Fallowfield noted that these apps must be registered and approved by regulatory bodies, which should introduce some level of standardisation as part of the review process.

An audience member noted that they had investigated the use of a digital healthcare system similar to the ASyMS about 10 years ago but did not have enough staff to review all of the alerts. They asked how this was addressed during the implementation of the ASyMS. Dr Ames noted that the acute oncology service provided the staff to review and respond to the ASyMS notifications, with the rationale that this service would likely have had contact with the patients anyway if they experienced a symptom. In addition, Dr Ames noted that the clinical risk algorithm screened out many of the notifications if they were not deemed severe enough to warrant discussion with an HCP.

The panel were asked whether they would recommend a standardised test for HCPs to examine their communication skills. Prof Fallowfield responded to note that all HCPs communicate slightly differently which is part of the human element of patient care. However, there are a basic set of communication skills that should be mandatory. In addition, following the implementation of multidisciplinary teams, it is important for HCPs to communicate effectively with other HCPs to optimise outcomes for patients.

## Conference Close

Dr Board closed the meeting by thanking the speakers and attendees for their participation in another engaging and insightful Commissioning Chemotherapy Services Conference.

## References


1. Health Education England. Cancer workforce plan. Available at: https://www.hee.nhs.uk/our-work/cancer-workforce-plan. Accessed: January 2020.
2. Demetri GD et al. Efficacy and safety of entrectinib in patients with NTRK fusion-positive tumours: Pooled analysis of STARTRK-2, STARTRK-1, and ALKA-372-001. *Ann Oncol* 2018;29 (Suppl 9): abstract LBA4.
3. Wallington M et al. 30-day mortality after systemic anticancer treatment for breast and lung cancer in England: a population-based, observational study. *Lancet Oncol* 2016;17(9):1203–16.
4. Sarnaik A et al. Safety and efficacy of cryopreserved autologous tumor infiltrating lymphocyte therapy (LN-144, lifileucel) in advanced metastatic melanoma patients who progressed on multiple prior therapies including anti-PD-1. *J Clin Oncol* 2019;37(Suppl 15): abstract 2518.
5. Campbell P et al. Recognizing European cancer nursing: Protocol for a systematic review and meta-analysis of the evidence of effectiveness and value of cancer nursing. *J Adv Nurs* 2017;73(12):3144–53.
6. Charalambous A et al. A scoping review of trials of interventions led or delivered by cancer nurses. *Int J Nurs Stud* 2018;86:36–43.
7. Maguire R et al. The eSMART study protocol: a randomised controlled trial to evaluate electronic symptom management using the advanced symptom management system (ASyMS) remote technology for patients with cancer. *BMJ Open* 2017;7(5): doi: 10.1136/ bmjopen-2016-015016.