

MUNICH
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ESMO

DAILY REPORTER

SECURING ACCESS TO OPTIMAL CANCER CARE

SATURDAY
20 OCTOBER 2018

**Today's
Top Picks**

04 *ALK/ROS1-*
rearranged NSCLC

Potential targeted therapies of the future for *ALK/ROS1*-rearranged NSCLC

08 EGFR TKIs in
advanced NSCLC

New insights into acquired resistance mechanisms to osimertinib

10 Big data in
healthcare

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combination
therapy in mCRPC

How will the latest data affect treatment recommendations?

Recognising excellence in oncology at the ESMO 2018 Opening Session



In an inspiring Opening Session yesterday, ESMO President Josep Tabernero welcomed delegates to ESMO 2018. Referring to the overarching Congress tagline, 'Securing access to optimal cancer care,' President Tabernero and Professor Solange Peters, ESMO 2018 Scientific Chair, highlighted that ESMO 2018 will be about innovation, integration and sustainability, always with the focus of caring for people with cancer in the best ways that we can. Professor Peters also gave us a taste of some of the very best cancer research that we can expect, emphasising the potentially practice-changing data that will be presented at Presidential Symposia. As a prime example of ESMO's drive towards enhanced integration, Master of Ceremonies and ESMO Executive Board member, Professor Emile Voest, welcomed Dr Lena Sharp, EONS President, as the EONS Congress takes place alongside ESMO for the first time.

The contributions of four outstanding professionals to the field of oncology were then recognised by ESMO awards. Professor Jean-Charles Soria, a pioneer in the development of treatments for lung cancer, and an ESMO member for more than 20 years,

received the ESMO Award for his instrumental role in 'bringing precision medicine to patients in a variety of forms.'

The need for researchers who can master the complexities of combining basic with clinical science was noted. As a co-discoverer of *EGFR* mutations in lung cancer, Professor Pasi A. Jänne received the ESMO Award for Translational Research. In his presentation, Professor Jänne provided examples of his work in the "circle of translational medicine."

The ESMO Women for Oncology Award went to Margaret Foti, co-founder of the American Association for Cancer Research's Women in Cancer Research group, for her outstanding contribution in fostering the career development of women in oncology and encouraging women's scientific achievements.

The ESMO Lifetime Achievement Award was presented to Professor Tony Mok who was described as a "complete oncologist who has advanced the field" based on his practice-changing contribution to lung cancer and fulfilment of responsibilities within the oncology community.

The Opening Session finished with much applause and anticipation for the 5 days of stimulating presentations and interactions to come.



From top to bottom: Professor Jean-Charles Soria of University of Paris-Sud, France and MedImmune, USA, recipient of the ESMO Award; Professor Pasi A. Jänne of Dana-Farber Cancer Institute, and Harvard Medical School, USA, recipient of the ESMO Award for Translational Research; Professor Tony Mok of the Chinese University of Hong Kong, recipient of the ESMO Lifetime Achievement Award; Margaret Foti, Chief Executive Officer of the American Association for Cancer Research (AACR), recipient of the ESMO Women for Oncology Award.

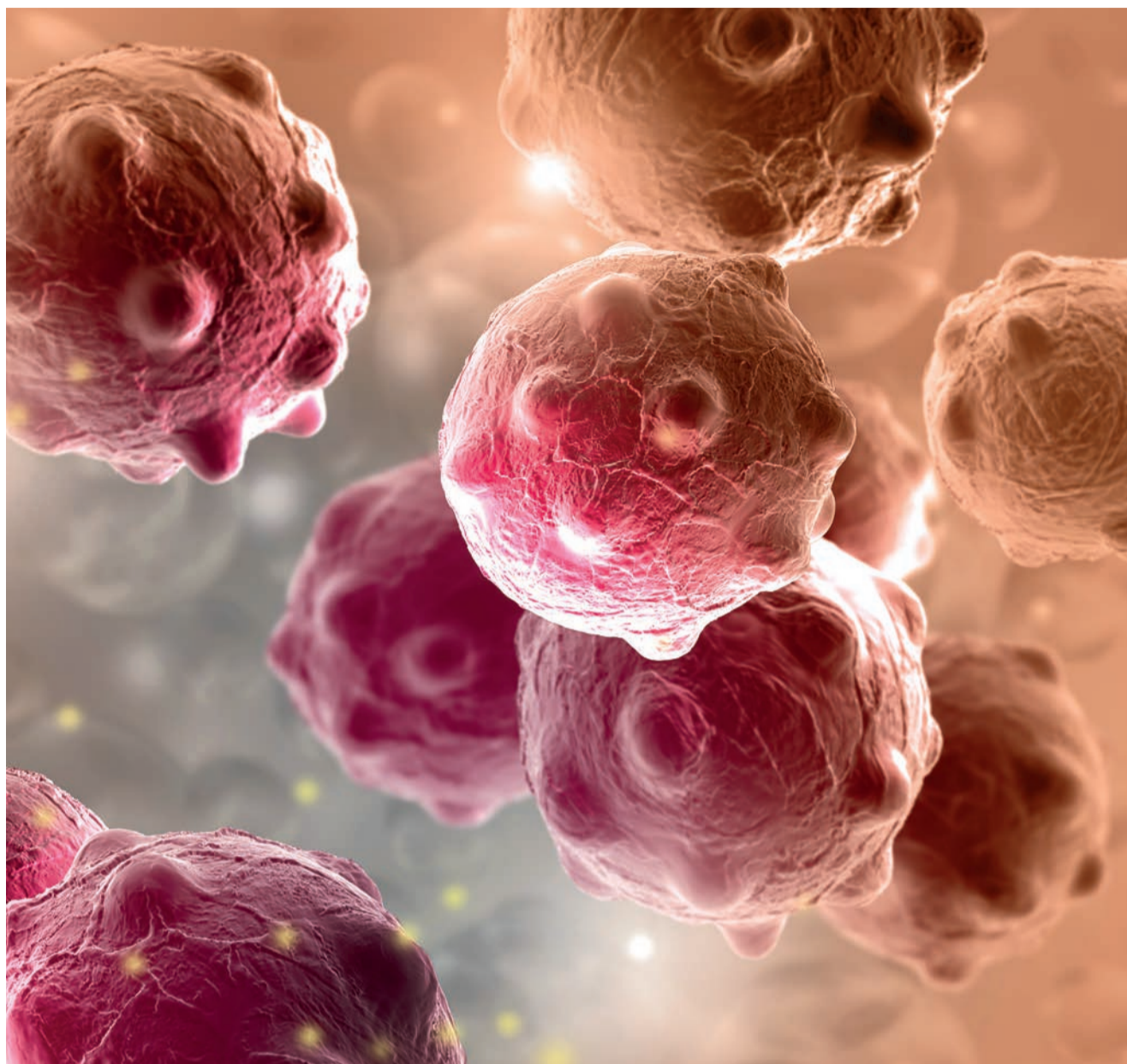
Upfront systemic therapy for brain metastases?

Approximately 20% of patients with metastatic cancer who develop brain metastases (BM) have asymptomatic or oligosymptomatic BM that are associated with a more favourable prognosis than symptomatic disease.¹ While symptomatic BM are typically treated with local therapies, systemic therapies are playing an increasingly important role in oligosymptomatic or asymptomatic disease to prevent neurological side effects. New targeted and immunomodulatory agents have demonstrated clinically relevant intracranial responses, particularly in those with targetable mutations, and first-line systemic therapy was recently introduced in selected patients.²

In a Controversy Session tomorrow moderated by Professor Matthias Preusser from Medical University of Vienna, Austria, experts make their cases for and against first-line systemic therapy for patients with oligosymptomatic BM without oncogene addiction.

Come along to tomorrow's Controversy Session to hear opposing views and vote on the question: 'Should oligosymptomatic brain metastasis patients without oncogene addiction receive upfront systemic therapy?' (Sunday, 21 October 08.00 – 09.00, Hall A1 – Room 15).

1. Berghoff AS, Preusser M. *Ther Adv Neurol Disord* 2018;11:1–14
2. Soffiotti R, et al. *Neuro Oncol* 2017;19:162–74



Preclinical insights: Molecular signalling and drug resistance in *KRAS* mutant CRC

KRAS mutations occur in 35–45% of colorectal cancers (CRCs) and are negative predictors of response to anti-EGFR therapy, linked to both primary or acquired resistance.^{1,2} “The key to overcoming drug resistance lies in understanding the molecular subtypes of CRC, the biological dependencies of each subtype and how they impact on treatment response, and ultimately the translation of these dependencies into drugability,” says Dr Rodrigo Dienstmann, ESMO 2018 *Daily Reporter* Associate Editor (Vall d’Hebron Institute of Oncology, Barcelona, Spain).

Understanding gene alterations and the dynamics of target inhibition related to EGFR resistance will help define future targeted treatment strategies in CRC.

This morning, Dr Alexandros Georgiou (Royal Marsden NHS Foundation Trust, London, UK) will show that *KRAS* mutant CRC cells exhibit significantly different changes in the EGFR signalling pathway following exposure to EGFR and phosphoinositide 3-kinase (PI3K) inhibitors as compared to *RAS* wild-type cells (Proffered Paper Session, ‘Basic science’, 11.00 – 12.30, Hall B3, Room 21; Abstract 10). In particular, exposure to the PI3K inhibitor, pictilisib, results in significantly greater pMEK upregulation in *KRAS* mutant cells than wild-type cells, which in turn is associated with greater resistance to pictilisib.

In the same session, Dr Pietro Paolo Vitiello from University of Campania Luigi Vanvitelli, Naples, Italy, will present preliminary evidence that *KRAS* mutant CRC cell lines resistant to anti-EGFR and MEK inhibitors show consistent hyperactivation of the PI3K pathway, coupled with activation of multiple receptor tyrosine kinases (RTKs; Abstract 20).

Co-operative PI3K and RTK activation plays a key role in acquired resistance to combined anti-EGFR and MEK-inhibitor therapy.

Encouraging preliminary findings supporting the combination of a PARP inhibitor with chemotherapy for *KRAS* mutant CRC will be presented by Dr Vitiello on Sunday (Poster Display Session, 12.45 – 13.45, Hall A3; Abstract 18P). In *KRAS* mutant cell lines, niraparib shows particularly strong synergistic activity in combination with the irinotecan active metabolite, SN38.

“Although further studies are needed to take these findings beyond the preclinical setting, they provide hope for future treatment strategies for the many patients with *KRAS* mutant CRC,” commented Dr Dienstmann. “That niraparib shows synergism with selected chemotherapeutics across all four consensus molecular subtypes of CRC is particularly exciting,” he added.

1. Sforza V, et al. *World J Gastroenterol* 2016;22:6345–61
2. Tan C, Du X. *World J Gastroenterol* 2012;18:5171–80

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Measuring tumour response with liquid biopsies

Tissue biopsies of tumours are often costly, painful or even potentially risky for the patient. Liquid biopsies may present a non-invasive means of detecting tumours and monitoring disease progression. In particular, serial analysis of circulating tumour DNA (ctDNA) could potentially allow real-time monitoring of molecular changes in the tumour. However, there are challenges to developing and validating liquid biopsy tests for different tumour types.^{1,2}

Today, Dr Laura Bonanno from Istituto Oncologico Veneto, Padova, Italy, will present interim findings of the MAGIC-1 trial suggesting that changes in plasma levels of *KRAS* mutation significantly correlate with radiologically assessed disease progression in patients with advanced non-small-cell lung cancer (NSCLC) receiving chemotherapy or immunotherapy (09.15 – 10.45, ICM – Room 14b; Abstract 18300). The study also suggests that, in patients receiving immunotherapy, early reduction in fractional abundance of the mutated allele may predict favourable outcome.

Encouraging results for the use of liquid biopsies in patients with gastroesophageal adenocarcinoma (GOA) will be shown in a poster this afternoon by Dr Mark Openshaw (University Hospitals of Leicester, UK) (12.30 – 13.30, Hall A3; Abstract 1870P). In a pilot study of 37 patients receiving either curative or palliative treatment for GOA, tracking ctDNA levels in plasma provided valuable clinical information on disease progression and response; ctDNA levels decreased with treatment response and increased prior to disease relapse.

“ Presence of ctDNA is generally a poor prognostic sign. Measuring ctDNA levels in plasma may help define patients with minimal residual disease at high risk of relapse after surgery, ” concludes Dr Openshaw.

1. Karachaliou N, et al. *Ann Transl Med* 2015;3:36
2. Cheung AH, et al. *J Thorac Dis* 2018;S1645–51



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References: 1. Suominen MI, Fagerlund KM, Rissanen JP, et al. Radium-223 inhibits osseous prostate cancer growth by dual targeting of cancer cells and bone microenvironment in mouse models. *Clin Cancer Res.* 2017;23(15):4335-4346. 2. Data on file. Bayer Pharma AG, 51368 Leverkusen, Germany, 2018.



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ALK/ROS1 alterations in NSCLC: A focus for future progress in targeted therapy?

ALK and ROS1 rearrangements define important molecular subgroups of advanced non-small-cell lung cancer (NSCLC); approximately 2–6% of NSCLC patients exhibit ALK-positive NSCLC¹ and 1–2% of NSCLC patients harbour ROS1 alterations.² Together with mutations in the EGFR gene, ALK, ROS1 and BRAF V600E rearrangements represent the four oncogenic drivers in NSCLC for which approved targeted therapies are now available.

Alectinib has replaced the first-in-class ALK/ROS1/MET inhibitor crizotinib as standard, first-line therapy for ALK-positive advanced NSCLC.³ After an initial response to treatment, however, resistance develops and patients invariably progress.¹ Several other next-generation ALK inhibitors that are more potent and brain-penetrable than crizotinib are in development or have been approved for ALK-positive NSCLC, including brigatinib, ceritinib and lorlatinib. Strategies to optimise the sequencing of these agents remain hotly debated.

In terms of ROS1 rearrangement, crizotinib is the only agent currently indicated for the treatment of ROS1-positive advanced NSCLC, while entrectinib has shown promising response rates and progression-free survival in ROS1-inhibitor naïve patients.⁴ It is hoped that findings from these and other ongoing studies will help with currently unanswered questions around how best to treat patients with ALK/ROS1-rearranged NSCLC.

Further research will clarify the best management for patients with ALK- or ROS1-rearranged NSCLC, particularly in patients who progress on first-line kinase inhibitor.

1. Mok TSK, et al. *Cancer Treat Rev* 2017;55:181–9
2. Zhu YC, et al. *Thorac Cancer* 2018;9:652–5
3. Peters S, et al. *New Engl J Med* 2017;377:829–38
4. Doebele RC, et al. *IASLC 19th World Conference on Lung Cancer*, 23–26 September 2018; OA02.01

ANNALS OF ONCOLOGY

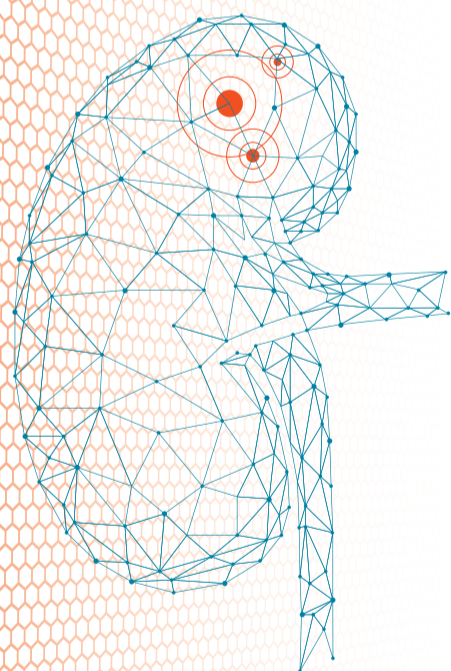
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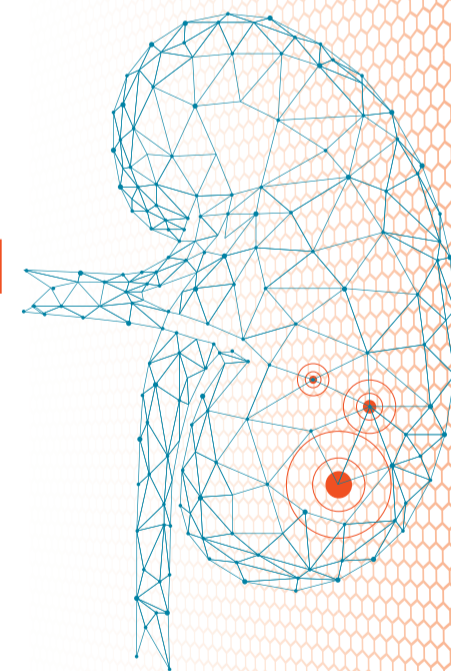
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▶ 1ST LINE TREATMENT:
DEFINING THE RIGHT TREATMENT
FOR THE RIGHT PATIENT IN aRCC

▶ BEYOND CLINICAL TRIALS:
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CBZ-AT-000487
August 2018

Reference centres reduce relapse and death rates from sarcoma

Treating patients with sarcoma in a reference centre significantly reduces the risk of disease relapse and death, according to NETSARC study findings presented yesterday (Abstract 1601O) by Professor Jean-Yves Blay (Centre Léon Bérard, Lyon, France), leader of the NETSARC network of reference centres for sarcoma treatment in France and co-ordinator of the European Reference Network for Rare Adult Solid Cancer (EURACAN), a virtual network of healthcare providers across Europe focussing on optimising the management of complex, rare solid cancers.

The NETSARC study reported on over 35,000 patients from 26 sarcoma reference centres. It also identified previously unreported prognostic factors associated with worse overall survival and progression-free survival, including male gender, age, tumour size and depth, grade 3 tumour, neurofibromatosis type 1 and having received previous radiotherapy.

These findings highlight the importance of reference centre networks for the management of rare cancers.

“Traditionally, rare cancer patients have been recommended for treatment in dedicated multidisciplinary reference centres,” said



Dr Anna Maria Frezza from Istituto Nazionale Tumori, Milan, Italy, the centre co-ordinating the sarcoma domain within EURACAN. “However, the price of such centralisation is health migration and resource rationing. Collaborative health networks are an obvious alternative option and are also crucial to research.”

“In the EU, European Reference Networks (ERNs), including EURACAN, are invaluable. With a core remit of teleconsultation—providing multidisciplinary second opinions for the management of complex cases—they should also promote medical and patient education and foster research and epidemiological surveillance. EURACAN’s ultimate aim is to bring innovation and expertise from

centres of excellence to the patient, independent of the point of access. This can only be achieved by turning ERNs into a ‘network of networks’, by establishing national networks and encouraging close collaboration between EU member states,” she concluded.

Rare Cancers Europe (RCE), an ESMO-led multi-stakeholder initiative, is a key partner for EURACAN, advocating to place rare cancers firmly on the European policy agenda.



Clinical Practice Guidelines sessions tomorrow

ESMO Clinical Practice Guidelines 1

Sunday, 21 October
10.45 – 12.45, Hall A1 – Room 15

Covering gastroenteropancreatic neuroendocrine tumours, mantle cell lymphoma, rectal cancer and metastatic NSCLC

ESMO Clinical Practice Guidelines 2

Sunday, 21 October
14.30 – 16.30, Hall A1 – Room 15

Covering early HER2-positive breast cancer, soft tissue sarcoma, cancer cachexia and prostate cancer



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WOMEN FOR ONCOLOGY

An ESMO Initiative

Sharing the power between men and women in oncology could be the solution to create a diverse, inclusive work environment and to foster gender equality. This was the theory discussed in yesterday's Women for Oncology (W40) Forum, which included personal experiences and perspectives from both male and female oncologists.

ESMO President-Elect and W40 Committee Chair, Professor Solange Peters (University of Lausanne, Switzerland), welcomed delegates to the forum and highlighted the vision that drives W40, introducing the concept of 'sharing the power'. She added, "Although we cannot change the balance of men and women in a matter of 2–3 years, we can start by altering gender perception."

Senior Advisor for Medical Applications, CERN and UN representative for Graduate Women International (GWI), Dr Manjit Dosanjh posed the question 'Oceans apart or bridging the gap?' in her presentation. She stressed the importance of implementing a multifaceted approach to gender balance and why it is important to face the challenges as a collective, including involving male advocates of equality. Dr Dosanjh also explained how 'education is key in achieving equity, equality and development'. Furthermore, she challenged participants to drive gender equality discussions beyond the workplace.

Providing important male input, Professor Francesco Panese (University of Lausanne, Switzerland) discussed the various challenges and opportunities that might arise through the feminisation and recomposition of professional hierarchies. He described how we need to challenge gender stereotyping in order to share the power, adding that, "Stereotypes are classifying machines that shape us, often in degrading ways. We need to shift the stereotype classification machine to a stereotype rectification machine using reality, equality and respect."

Power sharing improves the work environment for all: Highlights from the ESMO W40 Forum



As a representative of the German Society for Haematology and Medical Oncology (DGHO) Women's Working Group, Dr Anne Letsch (Charité - Universitätsmedizin Berlin, Germany) discussed the need for continued reporting on gender parity as the data are still worrying. Greater teamwork, networking and enhanced visibility of female excellence are needed to achieve the goal of sharing the power.

This was followed by the experiences of two other national groups—Italy and Greece—presented by Dr Marina Chiara Garassino (Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy) and Dr Helena Linardou (Metropolitan Hospital, Athens, Greece). Dr Garassino discussed how they discovered the power of sharing through acknowledging their diversities, while Dr Linardou described how education and awareness

at all levels were key to changing perceptions. This included raising public awareness, increasing lobbying activities for cancer patients, and providing a network where women oncologists could address problems and discuss solutions.

In a step towards encouraging inclusive and collaborative dialogue, participants formed groups to discuss the points raised in the Forum and identify ways to implement the sharing concept in the oncology field. As summarised by Professor Peters, "We have many excellent ideas from today's discussions. Two areas we could work on immediately are discussing increasing the number of women speakers in satellite symposia—where they are currently woefully under-represented—and reaching out more to younger oncologists."



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Striking the right balance in Hodgkin lymphoma



Alden Moccia
Oncology Institute of Southern Switzerland,
Bellinzona, Switzerland

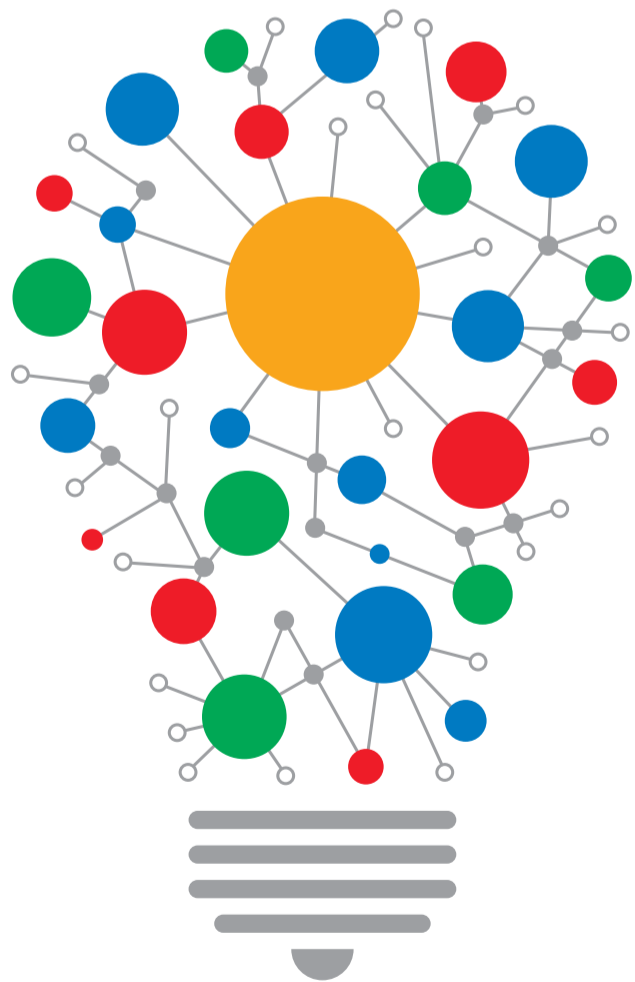
Today, Hodgkin lymphoma—particularly early-stage disease—is one of the most curable malignancies, thanks to improvements in risk-adapted approaches using combined treatment modalities and, more recently, positron emission tomography (PET).¹ While there has been an increase in tumour control with first-line therapy, there has also been increased awareness of treatment-related toxicities, which pose a significant long-term morbidity and mortality burden.¹ Since Hodgkin lymphoma is most frequently diagnosed among young adults, the latter is a major issue² and hence, attention has turned to reducing treatment-related toxicities.

Achieving the optimal balance between minimal treatment toxicity and maximal tumour control is a key goal of any cancer management strategy, but is particularly pertinent to Hodgkin lymphoma, where the long-term impact of radiotherapy and chemotherapy is substantial, including secondary neoplasia, cardiovascular and pulmonary diseases, as well as fertility-related problems.^{1,3} While combination doxorubicin, bleomycin, vinblastine and dacarbazine (ABVD) therapy has been the mainstay of Hodgkin lymphoma therapy for several decades, risk-adapted approaches have helped to tailor the use of this combination according to risk factors and disease stage.²

After decades of chemotherapy-only management of Hodgkin lymphoma, new treatments including immunotherapy and antibody–drug conjugates such as brentuximab–vedotin have finally materialised and must be included in treatment algorithms.

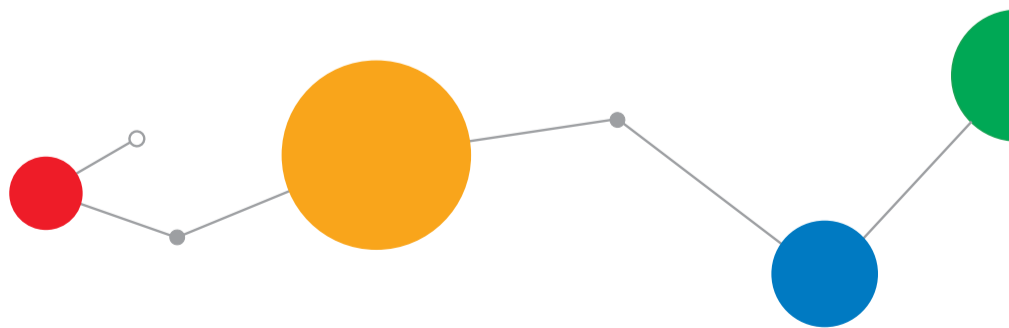
1. Bröckelmann PJ, et al. *Blood* 2018;131:1666–78
2. Shanbhag S, Ambinder RF. *CA Cancer J Clin* 2018;68:116–32
3. Bhakta N, et al. *Lancet Oncol* 2016;17:1325–34

Don't miss the Special Symposium
'How to balance efficacy and toxicity in Hodgkin lymphoma'
Today, 11.00 – 12.30 in Hall B3 – Room 19.



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Understanding acquired resistance to osimertinib in advanced NSCLC

Although osimertinib, a third-generation EGFR tyrosine kinase inhibitor (TKI), is effective in treating non-small-cell lung cancer (NSCLC) harbouring the *EGFR T790M* mutation, patients often develop drug resistance and experience disease progression within approximately 10 months of starting treatment.¹ Understanding the mechanisms behind acquired drug resistance is integral to identifying therapeutic strategies that can overcome this issue.

Exciting new insights into the acquired resistance mechanisms to first-line osimertinib in patients with advanced NSCLC were provided in a Late-Breaking Abstract presentation by Professor Suresh Ramalingam from Winship Cancer Institute of Emory University, Atlanta, GA, USA (Abstract LBA50). The preliminary data are from a subgroup analysis of paired plasma samples from patients who had progressed on first-line osimertinib or standard-of-care EGFR TKI during the phase III FLAURA study and harboured detectable *EGFR* mutations. For patients in the

osimertinib arm, *MET* amplification (15%) and *EGFR C797S* mutation (7%) were the most common resistance mechanisms, with no evidence of acquired *EGFR T790M*. This contrasted with an incidence of 47% for *EGFR T790M* in patients in the standard-of-care arm. Interestingly, further analysis of these cohorts is still ongoing.

Similar findings were observed in a Late-Breaking Abstract presentation that studied progression after second-line osimertinib treatment (Abstract LBA51). In the phase III AURA3 trial, patients with *T790M*-positive advanced NSCLC whose disease progressed on or after first-line EGFR-TKI therapy were randomised to osimertinib or platinum-based doublet chemotherapy. Paired plasma samples were analysed from those patients (n=73) who subsequently progressed on osimertinib. Professor Vassiliki Papadimitrakopoulou from University of Texas MD Anderson Cancer Center, Houston, TX, USA, explained that a diverse mixture of resistance mechanisms was detected, with *MET* amplification (~19%) and *EGFR C797S* (14%) most common. No unexpected resistance mechanisms were observed following second-line osimertinib treatment.



New insights into the mechanisms of acquired osimertinib resistance will aid future treatment strategies.

1. Tang ZH, Lu JJ. Cancer Lett 2018;420:242-6

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ESMO Patient Guides to support women with cancer



ESMO is committed to ensuring patients receive the medical information they need to understand and participate in the management of their disease. As part of this, ESMO develops Patient Guides, which provide information on the nature of different types of cancer and available treatment options in a language understandable to patients, their relatives and caregivers. The information is based on ESMO Clinical Practice Guidelines and can facilitate patient-physician treatment-related discussions.

Today at 12.30 on the Vesalius stage, Ground Floor of the ICM, ESMO will launch new patient guides specifically for women with breast cancer, cervical cancer and ovarian cancer. These add to the previously published guides available in many languages. All Patient Guides can be found via the ESMO website (www.esmo.org/Patients/Patient-Guides).

Why not let your patients know about the ESMO Patient Guides? They could help patients share the decision-making process during cancer management.



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Harnessing the power of big data to optimise cancer management



Alessandra Curioni Fontecedro

University Hospital of Zurich, Switzerland;
ESMO Press and Media Affairs Committee

Recent years have seen an enormous increase in the generation of data in healthcare. Such data includes information on the genetic alterations of cancer, with the potential for using such alterations as biomarkers for the early detection and monitoring of specific cancers, as well as to design individualised treatments. Data collected may also include patient characteristics and germline pharmacogenomic markers, which provide information on drug metabolism and availability at the target site.¹ Repositories of these data facilitate the construction of models that predict the outcome of different treatments—including drug-induced adverse events—and therefore the prospect of providing precision medicine based on the genetic characteristics of a patient and their tumour.

Lung cancer is an extraordinary example of the value of molecular tumour profiling, resulting in ongoing sub-classification and ‘orphanisation’ that has paved the way for more individualised systemic treatment and ultimately, dramatically improved the prognosis of lung cancer patients harbouring driver genetic alterations such as *ALK*, *ROS1*, *EGFR*, *cMET*, *BRAF* and *NTRK*. While these examples may be the ‘low hanging fruits’, big data offers the hope for increased understanding of tumours with more complex oncogenic pathways that may also, in due course, be targeted with drug combinations or newer approaches, including immunotherapy.

While collecting data is all very well and good, the essential aspects of big data are in its analysis and the interpretation of findings. Considering the huge amount of data available and the enormity of the task of integrating patient and genetic characteristics with treatments and outcomes, it is no surprise that machine learning and artificial intelligence have emerged as unique means of deciphering such complex and vast information. In order to gain the greatest benefit from big data, collaboration between research groups would likely give rise to the biggest leaps in knowledge. Maintaining patient confidentiality and the legal implications of data sharing are key considerations, but existing regulation and technology are aligned in order to guarantee anonymisation and patient privacy.

1. Low SK, et al. Cancer Sci 2018;109:497–506

Expanding access with biosimilars— is it working?

ESMO Colloquia are innovative new sessions that bring together experts to discuss evolving areas of interest to the oncology community. Complementing ESMO’s position paper on biosimilars in oncology from 2017,¹ an ESMO Colloquium tomorrow will discuss their current use.

We will hear about how biosimilars are being used successfully in supportive care (e.g. growth factors and epoetins) and also about challenges surrounding the uptake of oncology biosimilars based on results from an ESMO survey. The UK experience of switching patients from a biological to a biosimilar will be discussed and we will hear about the state of play with regards to biosimilar monoclonal antibody use in Europe.

1. Schiestl M, Krendyukov A. ESMO Open 2017;2:e000245

Don't miss the ESMO Colloquium
‘Are biosimilars the key to access, in practice?’
Sunday, 21 October 18.30 – 20.00,
Hall A1 – Room 16.

Day 1: In pictures



ESMO Designated Centres of Integrated Oncology and Palliative Care

Initiated in 2003, the ESMO Designated Centres of Integrated Oncology and Palliative Care accreditation programme recognises cancer centres for achieving a high standard of medical oncology supportive and palliative care as part of their routine care. The ESMO designation is valid for 3 years following which centres can reapply for re-designation. Find out more about applying for ESMO Designated Centre accreditation at www.esmo.org/Patients/Apply-to-Become-an-ESMO-Designated-Centre

Certification of the new centres receiving ESMO Designated Centre status will take place during the 5th ESMO Designated Centres Community Session.

Don't miss

Discover the new 2018 ESMO Designated Centres
Sunday, 21 October,
16.30 – 18.30, ICM – Room 14a.

Disappointing findings in mCRPC trial of radium-223 combination therapy

Eagerly awaited data from a primary analysis of the phase III ERA 223 trial were reported yesterday (Abstract LBA30). Radium-223 plus abiraterone acetate and prednisone/prednisolone (AAP) was associated with shorter median symptomatic skeletal event (SSE)-free survival (22.3 months versus 26.0 months; primary endpoint) and an increased fracture rate (26% versus 10%) compared with placebo plus AAP. Median overall survival (OS) was also lower in patients who received radium-223 plus AAP than in those treated with placebo plus AAP (30.7 months versus 33.3 months, respectively). The study investigated the two regimens in 806 asymptomatic or mildly symptomatic patients with chemotherapy-naïve, bone-predominant metastatic castration-resistant prostate cancer (mCRPC).

The radium-223 plus AAP arm was previously unblinded (December 2017) because of increased reports of fractures and deaths compared with the AAP arm.¹ The finding was unexpected, as radium-223 in combination with best standard of care (BSC) had increased OS and time to first SSE compared

with placebo plus BSC in a phase III study,² while retrospective studies³⁻⁵ looking at the combination of radium-223 plus AAP had not reported any new safety signals.

Commenting on the data, session Co-Chair Professor Silke Gillessen (The Christie NHS Foundation Trust, Manchester, UK) said, "Given that radium-223 plus AAP did not show any survival benefit and led to a higher fracture rate compared with placebo plus AAP, the combination cannot be recommended for this patient population. Bone health is an important issue in patients on androgen deprivation therapy: we need to learn much more about it and we have to take care of the bone health of our patients as it is crucial for their quality of life."

The addition of radium-223 to AAP did not improve SSE-free survival or OS and was associated with a higher fracture rate compared with AAP alone.

1. [www.investor.bayer.de/index.php?id=145&L=1&tx_news_pi1\[news\]=2173](http://www.investor.bayer.de/index.php?id=145&L=1&tx_news_pi1[news]=2173)
2. Parker C, et al. N Engl J Med 2013;369:213-23
3. Alva A, et al. Prostate 2017;77:479-88
4. Hague C, Logue JP. Ther Adv Urol 2016;8:175-80
5. Saad F, et al. Lancet Oncol 2016;17:1306-16

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Care. Compassion. Science.
It's Our Obligation.

ESMO 2018 Industry Satellite Symposium

HER2 Expression in Metastatic Breast Cancer: A Paradigm Shift?

- 13:00** Introduction
Fatima Cardoso (Portugal) - Chair
- 13:05** HER2 metastatic breast cancer: Biology, clinical experience and unmet medical need
Aleix Prat (Spain)
- 13:30** Can next generation antibodies fill the gap?
Matthias Peipp (Germany)
- 13:55** Latest clinical findings and future plans
Peter Fasching (Germany)
- 14:20** Panel discussion and conclusion
Fatima Cardoso and Chris Twelves (UK) - Co-Chair



ESMO 2018 Industry Satellite Symposium organised and funded by Daiichi Sankyo Oncology Europe GmbH

**ESMO
YOUNG
ONCOLOGISTS**



Young Oncologists track sessions not to miss today!

YO Session for Medical Students and New Physicians
15.00 – 16.00, ICM – Room B11, Mezzanine level

A session especially dedicated to the ESMO-ESO Student Course on Medical Oncology, chaired by ESMO Educational Committee chair Andrés Cervantes. This involves a poster walk to view and comment on some of the posters presented at the Congress. There are a limited number of seats, so get there early to avoid disappointment.

YO Brunch
11.00 – 11.45, ICM – Room 14c

A late morning brunch slot to share practical, personal and professional development tips for YOs. Today's topic is 'Fertility and pregnancy in cancer', which will be presented by Dr Fedro Peccatori (European Institute of Oncology [IEO], Milan, Italy). With a relaxed and friendly atmosphere, this session offers the opportunity to ask questions and take part in discussions. A snack will be provided.

A tool to assist in the prioritisation of medicines in cancer care

Evidence-based standards for patient care

ESMO-MCBS

ESMO-Magnitude of Clinical Benefit Scale

Promoting clear and evidence-based communication about the benefit of cancer treatments