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SPRING 2018
—
EDITION #18

THE BIG COMMUNICATION

Matching unprecedented clinical
advances in immuno-oncology with
transformative communication

switchedoncology.com

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INTRODUCTION

1. National Cancer Act of 1971. Available at: <https://bit.ly/2qMHvm4> Accessed: April 2018.
2. Here's a look at Keytruda, the drug Jimmy Carter says made his tumors vanish. Available at: <https://nbcnews.to/2GQhn4D> Accessed: April 2018.

Cancer. One of the most powerful words in the English dictionary. For many, ‘The Big C’ has somehow become a more palatable catch-all for this emotionally charged word. It’s BIG, scarily so. And it’s singular – one enemy to unite against many victims.

In 1971, Nixon famously declared his war on this singular, recalcitrant enemy, asking Congress for the “same kind of concentrated effort that split the atom and took man to the moon” to beat cancer.¹ Decades later, in a twist of presidential fate, 92-year-old fellow US President Jimmy Carter received his all clear from melanoma thanks to an entirely new way to treat The Big C.²

This new movement towards unleashing the body’s own defences against rogue cancer cells – so-called immuno-oncology (IO) – has reformed the community’s expectations and hopes for what’s possible in treating cancer.

Yet IO is still a story of two extremes. At one end of the spectrum comes the success. The ‘supersurvivors’. Immune-based drugs are controlling advanced cancers in a way that’s never before been possible.

But for every patient who has a supersurvivor response, there’s a handful more who don’t respond at all. And there’s no reliable way to predict this.

For those on the frontline of treating cancer, IO brings a whole new level of opportunity, but also unprecedented complexity and uncertainty. And for patients, the journey is very different.

Scans look different. Side effects can be devastating. Conversations and expectations are upended.

This rapidly evolving treatment modality has subverted the meaning of The Big C and the very language we use to talk about the disease, treatments and outcomes.

Big Communication is the vital link between cutting-edge science and everyday cancer patients. It will help to build trust and confidence in this uncertain new world.

Healthcare professionals (HCPs) need education, knowledge and support to tap in to the full potential of these new emerging treatments.

Patients need high-quality information about IO, honest conversations about potential treatment response and access to experts who are familiar with this new treatment modality at every healthcare touchpoint.

And the needs of carers – who play a critical and often unsung role in helping patients to navigate the complexity of cancer care – must be taken into consideration.

Communicating about The Big C has, in the past, been relatively simple. But with the age of IO, the need and complexity is far greater. To make IO a successful treatment for more patients right now, and to truly unlock its future potential, The Big C is now The Big Communication.

18

THE BIG COMMUNICATION

Matching unprecedented clinical
advances in immuno-oncology with
transformative communication

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RESPONDING TO THE TRANSFORMED VIEW OF CANCER

*"I never thought I'd live in this era. It makes me think any form of cancer is curable: glioblastoma, triple-negative breast cancer... and it's just the start."*³

Dr Tim Crook, BSc, PhD, MBBS, FRCP
Consultant Medical Oncologist

Breakthrough. Revolution. Game-changer. Words often overused in cancer, but words doctors are now eager to use when it comes to IO. After years of attempts to re-train the body's immune system to seek and destroy cancer cells, the first IO drug approval in 2010 represented a tipping point that transformed the oncology field and ushered in a new and fast-evolving era of cancer treatment.

A NEW REALITY

Ten years ago, as a registrar, Dr Tim Crook knew he wanted to be a melanoma physician. He liked a challenge. Back then, there were few treatments for metastatic melanoma. And none that were particularly effective. Patients would usually die within a few months. It was held up as the cancer you couldn't cure.

Now, thanks to IO, a third, maybe half of his patients look to be rid of the disease forever, and have a normal life span. "It's incredible," he says. "A totally new version of reality. I never thought I'd live in this era. It makes me think any form of cancer is curable: glioblastoma, triple-negative breast cancer... and it's just the start."³

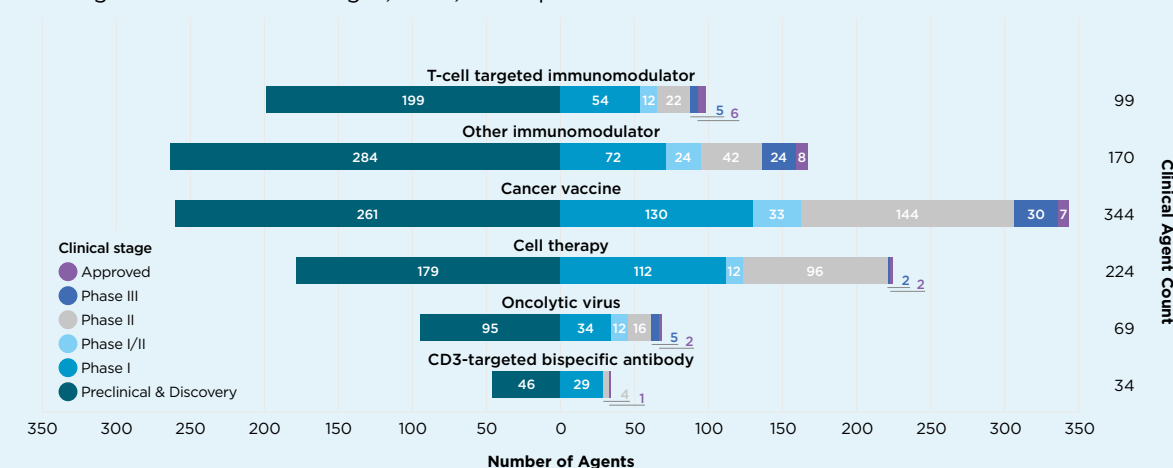
EXPLOSION OF INNOVATION

Crook isn't alone in his optimism. In 2017, for the second year running, the American Society for Clinical Oncology (ASCO) named immunotherapy its advance of the year, in recognition of the growing number of people benefitting from IO.⁴

The number of approved uses for IO is also set to balloon as there are more than 2,000 IO trials currently open – with new classes of IO drugs emerging thick and fast.⁵

2,004 IO AGENTS IN DEVELOPMENT⁵

940 agents are in clinical stages, and 1,064 in preclinical



Adapted from: There are 2,004 cancer immunotherapies crowding into the pipeline. Now what?
Available at: <https://bit.ly/2ACOLcw>. Accessed: April 2018.

SPOT LIGHT

IMMUNO-ONCOLOGY: THE NEXT FRONTIER IN CANCER TREATMENT



THE FIVE MAIN TYPES OF CANCER TREATMENT



Surgery (cutting)

The optimal treatment for early-stage cancers – the general rule is if you can cut it out, then get it out. Often combined with other treatment modalities to give the best chance of targeting all cancer cells in the body.



Targeted biologics (genetic tailoring)

Small-molecule or monoclonal antibodies that are designed to home in on unique molecular characteristics of cancer cells. Often considered more personalised than broad spectrum chemotherapy.



Radiotherapy (burning)

High energy radiation is used to obliterate cancer cells and slow tumour growth.



Chemotherapy (poisoning)

The treatment that's front of mind when many think of cancer; chemotherapies are systemic drugs that aim to kill cancer cells as they divide. Cancers that rely on hormones for growth can also be treated with hormone blocking drugs.



Immuno-oncology (activating immunity)

The new kid on the block, IO upends the normal view of treating cancer, and instead focuses on unleashing the body's in-built defence system against rogue cancer cells.

*"In less than a decade, immunotherapy has gone from being considered a promising theoretical treatment to one that has become a standard of care that is helping extend or improve the lives of thousands of patients."*⁴

American Society for Clinical Oncology (ASCO)

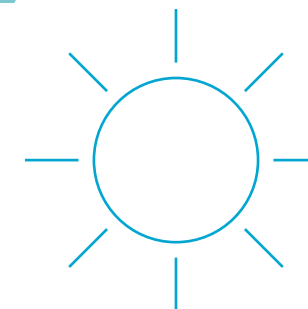


CONFIDENCE AND HOPE

Checkpoint inhibitors are perhaps the most well-known and widely used IO drugs. But the new-found confidence in harnessing the power of the immune system has galvanised efforts in other IO modalities too.

Chimeric Antigen Receptor (CAR) T-cell technology, where a patient's T-cells are removed, engineered to kill their cancer cells, and then returned to them, was long viewed as a 'boutique' activity but is now being revolutionised.⁶ Researchers are designing both universal 'off-the-shelf' and designer, patient-specific CAR T-cells.⁷ Next-generation sequencing also means that the evolving landscape of tumour neoantigens can be tracked and targeted with immune-based therapies.⁸ No avenue is left unexplored.

There is even renewed hope of a preventive cancer vaccine. Although vaccines exist for viruses that cause cancer, such as against the human papilloma virus that causes the majority of cervical cancer cases, it was widely thought to be impossible to develop a vaccine against constantly evolving tumour cells. But this is closer to the realm of possibility after IO treatment successes clearly demonstrate that the immune system can recognise tumour antigens and generate impressive clinical responses. As a result, the holy grail of developing a non-viral cancer vaccine has been launched as a Grand Challenge to researchers worldwide.⁹



A TRANSFORMED VIEW DEMANDS TRANSFORMATIVE COMMUNICATION

IO has changed the way that doctors view cancer, even down to how they measure treatment progress. Oncologists now need to understand how to power the immune system, not treat the cancer.

Many more IO treatments will emerge, and HCPs and patients must continue to adapt with the transformed view of cancer. To fully realise the promise of IO, every healthcare touchpoint a cancer patient encounters needs to be prepared and proactive, and not simply reactive. The system as a whole needs to be set up for success.

Crucial to this success will be transformative communication that provides much needed clarity through the inevitable uncertainty that comes with leading-edge treatment.

THE LIVER GUY¹⁰



Look through reports of early IO successes, and you'll soon come across the story of Tom Telford, a New York City teacher with stage 4 melanoma, who in June 2006 was enrolled in a study of an anti-CTLA-4 drug. He had four treatments, one every three weeks; but the treatment didn't work. After his last infusion, scans showed tumours in his liver were much larger.

His oncologist, Jedd Wolchok, chief of melanoma and immunotherapy at Memorial Sloan Kettering, got ready to give Mr Telford news that the drug wasn't working. But in the exam room, Mr Telford told him it was the best he'd felt in months. "I don't care what your scans say", he said, "I feel better."

Dr Wolchok told him to come back for another checkup in two months, and by this time, the tumours were getting smaller. In fact, less than a year later, his scans showed no evidence of cancer at all.

His incredible response was a pivotal moment in the history of IO, and Mr Telford became known in clinical circles as The Liver Guy. It prompted trial sponsors Medarex and Bristol-Myers Squibb (BMS) to change the primary measurement of the trial. Instead of looking at how long the therapy kept the tumour from progressing, they switched to the ultimate gold standard in oncology trials – overall survival.

In the end, fewer than 10% of patients met standard criteria for tumour shrinkage. But 23% survived at least three years, making the drug – approved in 2011 – the first to ever show a survival benefit in patients with advanced melanoma, a clinical endpoint Dr Tim Crook is now witnessing in his own clinic.

Mr Telford is just one of a handful of patients who've had spectacular responses to IO, coined the 'supersurvivors'. But these cases are still vastly outnumbered by the patients who do not respond. Immunotherapies currently only work for around a quarter of cancer patients who receive them.¹¹

What's clear is that there is an uncertainty about IO that is markedly different to conventional cancer treatments. The inevitable hype from powerful stories like Mr Telford's comes with the desperate hope of patients asking their doctors if IO may work for them. IO demands an entirely new approach to conversations about treatment access, prognosis and response.

THE
BIG
PICTURE



IOIO



10. How the Promise of Immunotherapy Is Transforming Oncology. Available at: <https://on.wsj.com/2l2m90c> Accessed: April 2018.
11. Immunotherapy – a promising weapon in the war on cancer. Available at: <https://bit.ly/2olRvwy> Accessed: April 2018.
12. Immunotherapy: The next frontier in cancer treatment. Available at: <https://bit.ly/2BQU3gw> Accessed: April 2018.

*" Sometimes you look in wonder and awe as if you were injecting liquid miracles. The worst part of that patient's week is getting a little needle in the back of their hand. Then at another time, with another patient, you think what the heck went wrong; it's not working at all. "*¹²

Dr Craig Gedye, BSc, MBChB, FRASP, PhD
Physician Scientist

RE-THINKING TREATMENT:
SWITCHING FROM THE GAS
TO THE BRAKE

Cancer immunotherapy is not a new idea – the late-19th century surgeon William Coley found that deliberately inducing bacterial infections in his patients could sometimes mysteriously eliminate cancer. But it's only in the past few years that we've finally had such success in harnessing the power of the immune system.

The breakthrough came when scientists re-thought their approach – when they moved away from trying to boost the 'gas pedal' of the immune system (the activated T-cell), and instead looked to suppress the 'brake pedal' (CTLA-4) to unleash its cancer-fighting effects.

INNOVATION?

TACKLING
UNCERTAINTY

IN THE
AGE
OF IO

12. Immunotherapy:
The next frontier in
cancer treatment.
Available at:
<https://bit.ly/2BQU3gw>
Accessed:
April 2018.

13. Immunotherapy
Brings Unique
Challenges for
Clinicians.
Available at:
<https://bit.ly/2GRIUHT>
Accessed:
April 2018.

Studies consistently show that patients want a sense of their future treatment outcome.¹³ But clinicians can find it hard to navigate this discussion, even with conventional treatments. With IO, the supersurvivors remain the luckiest outliers of treatment response. More than ever before, HCPs need to tread the line between genuine clinical excitement and uncertainty for what that means for individual patients.

CHANGING EXPECTATIONS, CHANGING CONVERSATIONS

Jennifer Temel, Clinical Director of Thoracic Oncology at Massachusetts General Hospital, Boston, rates the uncertainty of prognosis as one the biggest challenges in IO.¹³ She compares it to the days when, as a lung cancer specialist, there used to be four treatment regimens that gave virtually the same outcomes in metastatic disease.

Back then, it was generally possible to predict exactly where a patient would fall along the Kaplan-Meier survival curve, but today that is much more difficult. “The challenge is to balance our excitement and enthusiasm with this reality and be sure to communicate honestly and effectively with our patients.”¹³

So, while on the one hand, doctors are reporting career highs of now being able to extend the lives of patients who just three years ago would have had zero options, they are also standing on the edge of the unknown.

“Remember how smart I am, and remember how many degrees I’ve got on my wall, and remember how well I speak and how intelligent I am. But watch how I don’t know this patient’s cancer at a molecular level. I don’t know the mutations that are driving it, and I don’t know if the drugs will work. Watch as I do the very best I can... but how I have to take a big slice of humble pie into this room as I approach this patient to talk about immunotherapy.”¹²

Dr Craig Gedye, BSc, MBChB, FRASP, PhD
Physician Scientist

THE ‘SUCK IT AND SEE’ CHALLENGE³

“We’re entering a black hole now. What to do in patients who’ve had a great response to IO but either don’t want to keep doing it every three weeks for the rest of their lives, or are getting progressive immune toxicities when you’ve got a fabulous response on board.

“What should you do? Nobody knows. I ring up my friends in New York at Memorial Sloan Kettering... and I say ‘what should I do?’, and they say ‘why are you asking me? I haven’t got a clue.’

“Suck it and see’. That’s a constant challenge.

“You can hardly believe the patient you started treating a year ago is still in full remission. But they are. It’s a different world. It’s exciting, but it’s slightly scary.”

Dr Tim Crook, BSc, PhD, MBBS, FRCP
Consultant Medical Oncologist



SPOTLIGHT

3. Research interview with Dr Tim Crook, Consultant Medical Oncologist.

14. SWITCHED ONcology Patient Experience Focus Group, Havas Lynx. 2018. Available at: www.switchedoncology.com

ONGOING DIALOGUE

Doctors and patients are embarking on a new journey together into this unknown. And conversations about treatment response and future prognosis need to be an ongoing dialogue, not a one-time event.

These new conversations require a new level of openness and honesty by doctors about what they know and don’t know. Yet, this goes against the traditional uni-directional, paternalistic model of care, whereby the HCP unequivocally hands down their knowledge to passive patients.

HCPs are trained to instil confidence in their patients. They are trained to have a degree of certainty about what the results will be. Indeed, it’s only human nature to want to give people certainty in emotionally difficult times.

EMBRACING UNCERTAINTY

But we know that a degree of uncertainty is essential for innovation. With IO, the chance of unexpected outcomes is even greater. And it’s these unexpected outcomes that teach the most.

The challenge for the oncology community is to embrace this uncertainty, and to un-train certainty as a necessity from many HCPs’ minds.

“The feeling of control needs to shift with the doctor-patient relationship. I was trained to be confident, but with the new wave of treatment options people have to be OK with not knowing. Handling uncertainty is not part of the training and that needs to be addressed.”¹⁴

Dr Ben Harman-Jones
SWITCHED ONcology Faculty
Member & Medical Advisor,
Havas Lynx

14. SWITCHED ONcology Patient Experience Focus Group, Havas Lynx. 2018. Available at: www.switchedoncology.com

15. Smiles That Save Lives white paper. Havas Lynx. 2015. Available at: www.havaslynx.com

“I had suffered varying degrees of acid reflux and heartburn for many years. In 2009, after months of suffering and multiple prescribed medications from the GP, my wife persuaded me to have a gastroscopy. This led to the discovery of a 7cm tumour at the gastro-oesophageal junction.

“Treatment, with a view to surgery, commenced immediately and lasted 9 months. Following a laparotomy, I was informed the disease was more widespread locally than the imaging had shown and was deemed inoperable. Palliative care was the only option on offer and best case survival deemed to be 12 months.

“10 weeks later following a second opinion and under the care of a new multidisciplinary team and surgeon, I underwent radical surgery. Post-operative treatment lasted 9 months and 8 years on I am here to tell the story.”¹⁴

Purav Asher, Cancer Patient

PATIENT NEEDS¹⁵

INFORMATION

COMMUNICATION

EMOTIONAL
SUPPORT

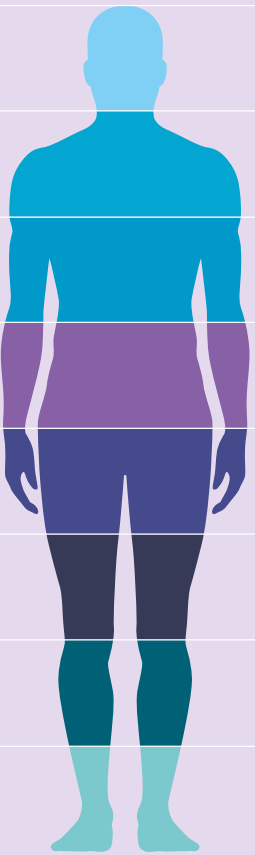
CONTROL

CONTINUITY

GOOD
ENVIRONMENT

STABILITY

TREATMENT



Outside of a patient’s clinical needs, there is a wide spectrum of holistic needs that are vital to a patient’s wellbeing, and should be considered as part of the treatment journey.¹⁵

For more information on subjective wellbeing, please see the 2015 Havas Lynx white paper, Smiles That Save Lives.

EDUCATING HCPs ON A

NEW

LEXI

CON

FOR CANCER

*"The oncologists are becoming
the new immunologists."*⁷

John Maher, Clinical Senior Lecturer/Honorary
Consultant in Immunology, King's College London

IO has exploded into the clinic at an unprecedented pace. And with it, a new and sometimes unfamiliar language has emerged. Communications that support better education and collaboration in IO will empower HCPs to fully embrace the potential of this life-changing new treatment.

A FOCUS ON THE IMMUNE SYSTEM

A new way to conceptualise and talk about cancer has emerged – and with it, a new lexicon. It has moved us from a tumour-centric view of cancer treatment to one that is more focused on what the immune system is doing rather than the tumour.

This poses an obvious challenge to HCPs. Immunology is a science in itself. Keeping up with the new lexicon of IO is paramount for HCPs to be able to serve their patients' needs.

And the concept of 'see one/do one/teach one' that informs other treatment modalities can't always apply in the more unpredictable world of IO. This unpredictability even manifests itself in new ways to define treatment success – patients can feel so much better despite tumour scans showing continued growth early in treatment (see The Liver Guy on page 09). HCPs need to be educated to handle the unpredictability that comes with treating the immune system.

TREATING THE IMMUNE SYSTEM, NOT THE TUMOUR TYPE



The reasons behind the widely variable responses to IO are largely unknown. But often, when pathologists examine the tumours of those who have exceptional responses, they find white blood cells in them as if the immune system were trying to attack. This finding is now leading to new clinical trials that aim to bolster the immune response towards any cancer.

In one such trial, led by Dr Padmanee Sharma of M.D. Anderson Cancer Center, researchers will look at pathology slides of patients' tumours to see if white blood cells are forcing their way into the cancers.¹⁶ If so, the patients will get an immunotherapy drug to help activate their white blood cells to attack the tumour. If there are few white blood cells in the tumour tissue, patients will get a combination of two immunotherapy drugs to help move more white blood cells into the tumour and help them attack.

SPOT LIGHT

*"The trial is written for all comers," Dr Sharma said. "If we have learned anything, it is that it is not the tumour type we are treating — it is the immune system."*¹⁶

Dr Padmanee Sharma, MD, PhD
M.D. Anderson Cancer Center

17. Research interview with Matthew Fowler, Advanced Clinical Nurse.
18. Stand Up To Cancer Releases Training Modules for Immuno-Oncology Nurses Administering New Cancer Therapies. Available at: <https://prn.to/2qNLQFP> Accessed: April 2018.

AN EXPLOSION IN EDUCATION IS REQUIRED

Matthew Fowler, an Advanced Clinical Oncology Nurse, says IO just exploded into the clinic: “There was no two-step change. It was just here. It’s been approved. You’ve got to start using it. You’ve got to start prescribing it. I felt like I could definitely have done with more support at the start.”¹⁷

Things aren’t slowing down either. With the explosion in IO advances comes a greater need to equip those like Mr Fowler with more effective information.

A corresponding explosion in education in IO is required: “If I’m prescribing this treatment, I need to understand it. I make sure my patient’s safe and I know what to look out for in terms of side effects, but when it comes to the actual tumour biology and immunobiology – I feel that I need to increase my knowledge there.”¹⁷

Fowler is calling for more dedicated workshops for HCPs with regards to IO, and a formal qualification that would encourage HCPs to do more research and be assessed – a recognised qualification that would mean you were safe to prescribe immunotherapy.

13. Immunotherapy Brings Unique Challenges for Clinicians. Available at: <https://bit.ly/2GRiUHT> Accessed: April 2018.
19. Immuno-Oncology: Transforming the Delivery of Cancer Care in the Community. Available at: <https://bit.ly/2He9lCa> Accessed: April 2018.

CROSS-DISCIPLINE COMMUNICATION

In a survey of multidisciplinary teams at US community cancer centers, 83% of respondents said that care coordination and communication with non-oncology specialists is a major challenge, and affirmed the need for ongoing educational support.¹⁹

“Our cancer center has a very interdisciplinary practice and patients tell different parts of their story to different clinicians, particularly about the side effects they are experiencing; so clinicians need to be able to communicate with each other in order to get the full story.”¹⁹

Kelsey Finch, PharmD, Oncology Pharmacist, Columbus Regional Health

THE EDUCATED PATIENT

Just as we need to address an education gap in HCPs, it is also imperative that patients and their carers are well educated about signs of serious immune adverse events.

There are still many misconceptions about IO; patients can leave their oncologist’s office expecting either chemotherapy-type side effects, or no side effects at all. Either way, their expectations often do not match their experience.

THREE EFFECTIVE STRATEGIES TO PUT INTO PLACE:¹⁹



Provide accessible, real-time, constantly updated education resources



Create opportunities for real-time, clinician-to-clinician conversations about optimising IO patient care



Identify champions and frontline staff to help manage patients being treated with immunotherapy

“People say they love these drugs because they don’t cause side effects. That’s not true. The traditional side effects are less, but there are other toxicities we cannot ignore, such as endocrinopathies, pneumonitis, and colitis.”¹³

David Spigel, MD, Oncologist
Director of the Lung Cancer Translational Research Program,
Sarah Cannon Cancer Center

CASE STUDY

SU2C STANDS UP FOR BETTER NURSE TRAINING¹⁸



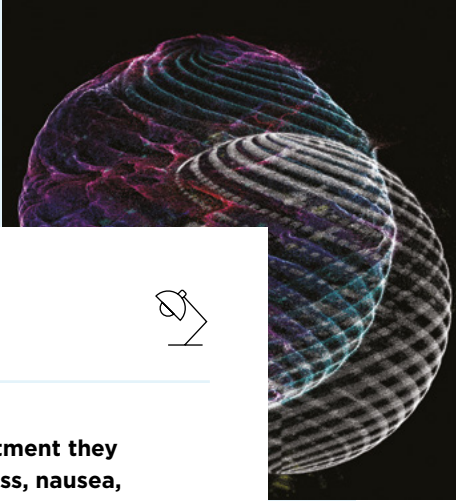
The US charity Stand Up To Cancer (SU2C) joined forces with experts from Boston College William F. Connell School of Nursing to launch an educational toolkit about IO specifically tailored for nurses.

The toolkit was developed in recognition that an essential part of bringing these cutting-edge therapies to patients is the effective dissemination of information about the treatments.

Three modules address the specific challenges of providing care for cancer patients receiving immunotherapy: education on immunology and related pathophysiology; symptom management; and nursing interventions to reduce symptom distress and promote wellness.

“IO makes me nervous. But that’s a good thing, I think. It commands a lot of respect.”¹⁷

Matthew Fowler,
Advanced Clinical
Oncology Nurse



NOT YOUR ‘TYPICAL’ SIDE EFFECTS²⁰



When patients think about the side effects of cancer treatment they often jump to horror stories they have heard about hair loss, nausea, and vomiting, associated with cytotoxic chemotherapy.

And although it is true that IO drugs do not have these same side effects, significant toxicities can still occur. Because the goal of IO drugs is to ramp up the immune response against cancer, it can also trigger unwanted autoimmune or inflammatory responses.

Common side effects associated with IO are diarrhoea, rashes, and fatigue; additionally, IO agents have been known to cause toxicity in the liver, thyroid, lung, and colon.

SPOT
LIGHT

- 3. Research interview with Dr Tim Crook, Consultant Medical Oncologist.
- 14. SWITCHED ONcology Patient Experience Focus Group, Havas Lynx. 2018. Available at: www.switchedoncology.com
- 20. Patient Navigation in Immuno-Oncology. Available at: <https://bit.ly/2GPtItJI> Accessed: April 2018.

A GROWING NEED

“IO will disseminate into all cancer types in due course”, says Dr Tim Crook, who was one of the first doctors to prescribe ipilimumab for melanoma, and those doctors will have to go through the same learning process he did – all those years ago.

“I think for less experienced immunotherapy doctors – workshops, educational evenings are good – we’d have really loved that ten years ago. There was no database, there was no core of knowledge then – you didn’t have those things, so you learned about it at conferences, and from colleagues who’d used these drugs.”³

As IO is increasingly adopted in other cancers, he hopes there will be access to the information he would have liked ten years ago: simple treatment algorithms, and guidance on how to recognise immune toxicity and what to do about it.

There is a considerable and far-reaching opportunity for better education and information about IO – within and between HCP, patient and carer communities. This is most urgently felt at the interface between different specialisms and healthcare touchpoints.

“We are at a time of fundamental change in our understanding around the disease – the way we assess it, categorise it and the way we think about it. Has the language kept up? That’s the question that I have.”¹⁴

Dr Vernon Bainton, MBChB, BMedSci, SWITCHED ONcology Faculty Member & Chief Medical Officer, Havas Lynx

CASE STUDY

CROWDSOURCING FOR CLARITY
THROUGH THE INFORMATION DELUGE



There’s a seemingly unstoppable pipeline of immune targets coming from the lab and new insights emerging all the time from the clinic. For pembrolizumab alone, there are more than 1,000 trials open under the umbrella of the Keynote Oncology Clinical Trials initiative.²¹

As this new evidence emerges, HCPs are having to keep on top of an ever-changing picture. One of the biggest challenges is going to be which of these drugs to use and when.

Faced with a growing number of IO treatments, and unpredictable patient responses, Dr Ira Mellman and Dr Dan Chen from Genentech have founded an initiative to crowdsource the factors involved in the variable response to IO.²² Its goal? To define all of the things that influence patient variability, to gain a better understanding of how IO treatments work and how to improve their effectiveness.

Knowing that there were many more factors involved in an individual’s response to IO than they could think of on their own – they turned to the crowd. They established an interactive framework for understanding cancer immunology, and are asking their colleagues, particularly the immunology community, to contribute.

“The immune set point is intended to be a unifying theory for how the human immune system interacts with cancer,” says Chen. “We create a framework to understand cancer immunology. We create a community that is willing to contribute to it. And overall, our expectation is that over time, that will help accelerate discoveries in this field.”

“As the IO clinical landscape and volume of information evolves, establishing effective education and strong lines of communication become even more important.”¹⁹

Association of Community Cancer Centers (ACCC) report

SUPPORTING THE NEW COMMUNITY OF IO PATIENTS

Breast cancer, bowel cancer, blood cancer: for decades patients have identified themselves in ‘tribes’ that sit under the all-encompassing Big C. But IO brings a new perspective on cancer that breaks away from this tumour-centric view. New online and offline communities of patients and carers are forming, not necessarily just around tumour type, but also around treatment type and experience. There is significant need (and opportunity) to facilitate and augment the experience of these communities and their HCPs through Big Communication.

23. Generation Now. The Impact of the Millennial Healthcare Professional. Havas Lynx. 2016. Available at: www.m-hcp.com

24. SWITCHED ONcology Carer Experience Focus Group, Havas Lynx. 2018. Available at: www.switchedoncology.com

A UNIQUE AUDIENCE

A new cancer community is forming. That of the IO users. Patients and carers are seeking advice and support from others who have been treated with IO before them. Helping to fill the well-documented gaps in information and providing real-time, on demand support.

This emerging community presents a unique audience to clearly communicate with about IO and offer much-needed support, in formats and channels that are suitable for this biologically, demographically and geographically diverse new group.

THE SUPERSURVIVOR COMMUNITY

IO is changing the perception of treatment success for this community. We are moving towards the very real possibility of being able to control even the most advanced cancers. Does this lead to real belief that The Big C is cured in some IO patients?

“This concept of libraries of books that were written based on research that took 5-10 years for scientists to publish, is not the reality of disease and how treatment works or indeed how knowledge is shared.”²³

Dr Jack Kreindler, BSc, MBBS, Doctor and Med Tech Entrepreneur, Speaker and Academic Faculty Chair, SWITCHED ONcology

For more information on millennial healthcare, please see the 2016 Havas Lynx white paper, Generation Now. www.m-hcp.com

“I was told [I had cancer] in a language that I didn’t understand. It was a total shock. We had access to a network of people who had more experience. We spent time emailing people for case studies and what we could do. But I don’t know if other patients would be able to do that, or would do that?”²⁴

Marje Isabelle, Founder and CEO, Fertile Matters

14. SWITCHED ONcology Patient Experience Focus Group, Havas Lynx. 2018. Available at: www.switchedoncology.com

25. The 5 Diseases Americans Fear the Most. Available at: <https://bit.ly/2GQ5go3> Accessed: April 2018.

26. Cancer Britons most feared disease. Available at: <https://bit.ly/2qnSbs5> Accessed: April 2018.

IS IT TIME TO RE-BRAND THE BIG C?

Cancer reigns supreme as the public's most feared disease.

This is despite much progress – survival rates for cancer as a whole have steadily increased globally. Some types of cancer are eminently treatable and curable. But The Big C stubbornly persists as a fearful foe for many.

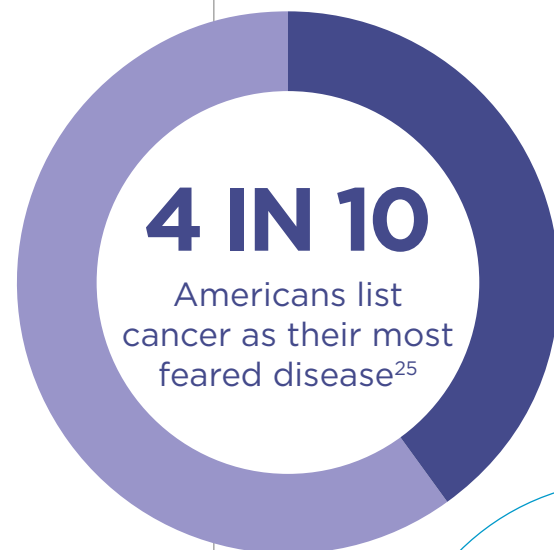
It makes sense. Treatment for many cancer types can involve painful surgeries, radiation and chemotherapy that can lead to debilitating side effects, and very low success and survival rates for some of the most hard-to-treat advanced cancers.

Yet IO is bringing rays of hope through the darkness of fear. New unprecedented responses to this burgeoning treatment show even some such advanced cancers can be foiled.

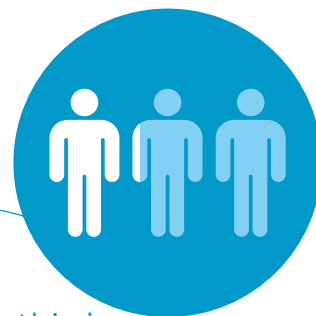
Does the age of IO create an opportunity to shake off the shackles of the 'Big C' label, and could Big Communication help?

*"If cancer was just cancer then I wouldn't be here."*¹⁴

Purav Asher, Cancer Patient



More than a third of people in the UK fear cancer more than other life-threatening conditions – such as Alzheimer's, stroke and heart disease²⁶



*"When looking at all the information I was supplied at the time of diagnosis, it was overwhelming. I was given information I didn't need."*¹⁴

Katie Atkinson, Cancer Patient

14. SWITCHED ONcology Patient Experience Focus Group, Havas Lynx. 2018. Available at: www.switchedoncology.com

THE SUPPORT-SEEKING COMMUNITY

Online forums and social media groups have long been used by people with cancer to find answers and get support. Thanks to the buzz about IO, and the ability to post comments and ask questions against any new online content generated about it, there is a wealth of information, experience and insight on the internet.

This is a potential boon for new IO patients wanting to learn more than the patient information they've been given in a consultation.

But, people can be confused by the sheer volume of information available. This makes it hard to differentiate between information that is high quality and evidence-based, and that which is not.

Marje Isabelle was told about her illness in a language she didn't understand, but she had access to a network of people who had more experience.¹⁴

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ANALOGY AND THE UNIVERSAL PATIENT LANGUAGE²⁸



BMS wanted to find a more consistent way to talk about IO to patients. Their solution? Co-creation.

As part of their Universal Patient Language (UPL) project, BMS worked with patients, carers, advocates, healthcare providers and communication experts to come up with a verbal and visual analogy to describe the mechanism of action of IO.

The result is an analogy-based explanation of cancer treatments that compares the body to a garden, with both healthy cells (plants) and cancer cells (weeds). While chemotherapy is like spraying weed killer indiscriminately, IO is like adding weed-control fertiliser to the soil. It enriches the garden's existing soil.

SPOTLIGHT

THE METAPHOR MENU²⁷

27. May I take your metaphor? – how we talk about cancer. Available at: <https://bit.ly/1LbF8K8> Accessed: April 2018.

28. The Universal Patient Language. Available at: <https://bit.ly/2qmdoCO> Accessed: April 2018.

Drawing on a dataset of 1.5 million words collected from interviews and online forums, Professor Elena Semino's team from Lancaster University in the UK examined how metaphors are used in different groups of people affected by cancer – cancer patients, family carers and HCPs – and how these metaphors affected their experience of cancer.

She found that 'violence' metaphors (of battles, wars, etc.) and those of 'journeys' are most common, but that ultimately everyone is different – no single metaphor is more appropriate than others. While one person may feel empowered by a battle metaphor, the next may feel disempowered.

Semino is currently collaborating with oncologists to create a 'metaphor menu' to help doctors and patients pick a way of talking that works best for them.

THE POWER OF LANGUAGE IN CANCER

Language matters. And how different language helps or hinders a cancer patient's understanding of their condition is a focus in both academia and industry.

Two examples that stand out from the crowd are linguist Professor Elena Semino's work looking at the use of metaphor in cancer, and BMS' work on a UPL.^{27,28} Both projects demonstrate the value of looking beyond the purely clinical to help improve patient experience.

*"The metaphors we choose
can affect how we experience
a particular phenomenon"*²⁷

Professor Elena Semino, Head of Linguistics
and English Language, Lancaster University



29. Research interview with Sunil Upadhyay, Consultant Oncologist.

30. 'This is not the end': Using immunotherapy and a genetic glitch to give cancer patients hope. Available at: <https://wapo.st/2GQCRyt> Accessed: April 2018.

THE WANNABE COMMUNITY

The very fact that doctors and patients are debating the word 'cure' in cancers that were death sentences only a few years ago is phenomenally exciting. And this excitement inevitably leads to an expectation among the wider community of cancer patients and their carers.

Sunil Upadhyay, a Consultant Oncologist specialising in breast and lung cancer, told us: "Many of these patients have already talked to people who have been on IO for a long time. One patient came to me and discussed his management because he had a friend who I treated and they had responded really well for quite a long time. So he was also expecting that he would get a similar prolonged response. I had to warn him that the chance is that you will, but don't be surprised if you do not."²⁹

Oncologists also worry that publicity and advertising has the potential to mislead patients and add to the difficulty of guiding them along the optimal treatment paths.

*"Oncologists can barely keep up," she said. "My sister found a trial I was a perfect candidate for, and my doctors didn't even know it existed."*³⁰

Stefanie Joho, Colon Cancer Patient

THE PATIENTS RESEARCHING THEIR OWN IO³¹



Faced with the option of a stem cell transplant, Jenny – a college student whose Hodgkin lymphoma returned, researched her own treatment.

"I think you definitely have to be your own advocate in your cancer care. Being able to do your own research and bring those options to your oncologist can really be life-changing. My oncologist didn't mention clinical trials. It was my mom doing her own research and bringing up the idea of immunotherapy as a clinical trial option."

To save her life, Stefanie Joho also had to step outside the normal path of cancer patients. She had to rely, not on what she was told was possible, but what she herself, with indispensable help from her family, discovered to be possible.

What this means in reality is that "oncologists can barely keep up", as Stefanie Joho's story breathtakingly shows. Her bowel cancer was spreading out of control. But refusing to give up, her sister found an immunotherapy trial at Johns Hopkins University, and a few days later, Joho got a call from a cancer geneticist, Luis Diaz, leading the study: "Get down here as fast as you can!" he said. "We are having tremendous success with patients like you."

THE
BIG
P
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31. Be Your Own Advocate: Immunotherapy Trials for Lymphoma. Available at: <https://bit.ly/2IKlcUg> Accessed: April 2018.

CREATING CLARITY FOR THE NEW IO COMMUNITY

As much as HCPs need clarity on the rapidly emerging new IO drugs to be able to make the best treatment decisions, the IO patient community needs better, faster evidence-based information about the potential IO holds for them.

This community is diverse – demographically, geographically, biologically – and has different information demands and preferences. They will differ in their compliance to treatment, their anxiety in the face of the new and uncertain, and ultimately in their response to IO.



ADDRESSING THE ELEPHANT IN THE IO ROOM: VALUE

*"Recent progress in the field has resulted in an era where cancer immunotherapy now needs a distinct value proposition."*³²

The Value of Cancer Immunotherapy Summit 2016

While momentum around IO continues to build, the high cost of these treatments brings another key stakeholder to the IO conversation: the payer. Just as HCPs need to keep ahead of the emerging clinical applications of IO, public and private payers need to ensure their coverage policies and perceptions of value align with real-world cancer care.

TROUBLE KEEPING UP

In 2017, when the US Association of Community Cancer Centers (ACCC) surveyed their members about cost and reimbursement issues, 57% reported that their cancer programs experience coverage reimbursement barriers related to IO agents, and 65% view these barriers as a consequence of the struggle of payers to keep up with rapid FDA approvals and National Comprehensive Cancer Network (NCCN) recommendations for IO agents.¹⁹

This means that there is either no specified coverage policy for some types of IO, or policies that define indications for drugs more narrowly than regulators, leaving physicians without the flexibility they need.

³². The Value of Cancer Immunotherapy Summit at the 2016 Society for Immunotherapy of Cancer 31st anniversary annual meeting. Available at: <https://bit.ly/2tFrwuF> Accessed: April 2018.

¹⁹. Immuno-Oncology: Transforming the Delivery of Cancer Care in the Community. Available at: <https://bit.ly/2He9lCa> Accessed: April 2018.

19. Immuno-Oncology: Transforming the Delivery of Cancer Care in the Community. Available at: <https://bit.ly/2He9lCa> Accessed: April 2018.
33. Immuno-Oncology: There's more to discover. ICLIO white paper. Available at: <https://bit.ly/2GP9lc9> Accessed: April 2018.

CAPTURING THE REAL-WORLD VALUE OF IO

Overshadowing all of these conversations is the unavoidable high unit cost of IO. Payers may be cautious about covering these expensive treatments, and the ACCC reports that established payment models represent an obstacle, because they tend to rank low cost over innovation.¹⁹

Newer alternative value-based payment models that are emerging could offer some relief, according to research carried out by ICLIO.³³ These models focus more on managing the cost of care while maintaining or improving care quality, linking payment to enhanced services, quality metric performance, and cost control.

But while many think IO will fit well within these models, the same report also highlights a need to weigh up the supplementary care that may be required as patients progress through treatment.

Yet IO could have the potential to be cost-saving compared with other cancer treatments – now and in the future. It can be given quickly and often less frequently than chemotherapy, requiring fewer hospital visits and less time in the clinic.

It is well tolerated compared to chemotherapy and seems likely to cause fewer sick days and, although serious, severe toxicities are rare, so IO may require fewer hospital admissions overall.

Conventional cytotoxic cancer treatments also come with a list of potentially debilitating and long-term side effects or secondary illnesses. And although it's too soon to speculate on the long-term side effects of IO, its very mode of action – using the body's natural defence system – suggests that the cost of cancer survivorship on the healthcare system might also be reduced.

“There is a clear need for additional educational efforts to ensure that oncology providers in the community are prepared for the workflow, technical and clinical changes necessary for success in value-based payment models.”¹⁹

Association of Community Cancer Centers (ACCC) report

SPOTLIGHT

GIVE ME QUALITY OF LIFE, NOT JUST TIME³⁴



In the CheckMate 025 trial, a phase III study of nivolumab versus everolimus in previously treated patients with advanced or metastatic renal cell carcinoma, investigators included a patient-reported outcome (PRO) measure of kidney cancer-specific symptomatology.

In patients taking nivolumab, symptom improvement was shown at four weeks that continued through two years of follow-up, illustrating that nivolumab may improve the quality of survival, in addition to the time-based overall survival benefit reported.

34. Nivolumab versus Everolimus in Advanced Renal-Cell Carcinoma. Available at: <https://bit.ly/1Jx3lLg> Accessed: April 2018.
35. Basch E, Deal AM, Dueck AC, et al. Overall survival results of a randomized trial assessing patient-reported outcomes for symptom monitoring during routine cancer treatment. J Clin Oncol. 2017;35:(suppl; abstr LBA2).
36. Code. Collaboration for Oncology Data in Europe. Available at: <https://bit.ly/2Ag3rdE> Accessed: April 2018.

Many patient advocacy groups are now developing their own quality measures based on what patients say is important to them, such as disruption to work, childcare and transportation to treatment.

But we also know that patients' treatment experience can actually influence their outcome – a more conventional measure of value.

Data presented at ASCO 2017 showed that patients being treated who used a web-based patient-reported outcomes (PROs) tool to

monitor symptoms had significantly better overall survival compared with usual care monitoring (31.2 months vs 26 months).³⁵ If this intervention was a drug, it would likely be a billion dollar blockbuster.

Tools, channels and technologies that support the collation and communication of these outcomes, experiences and measures will forge the way for a more holistic view of the real societal value of cancer care that incorporates innovative treatments like IO.

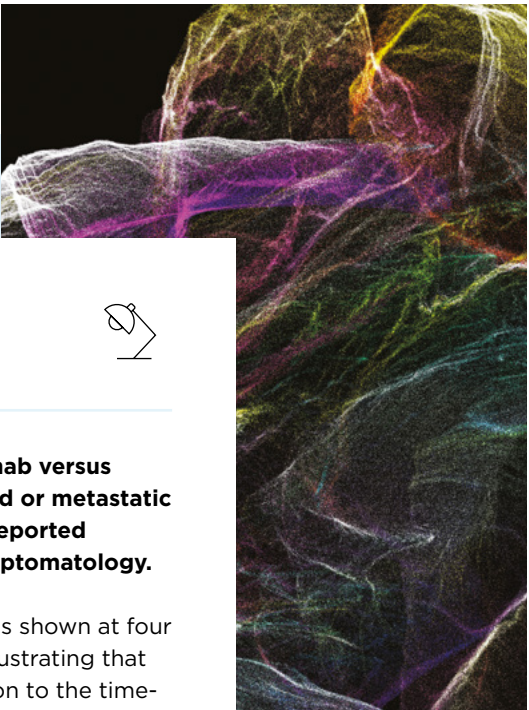
CASE STUDY

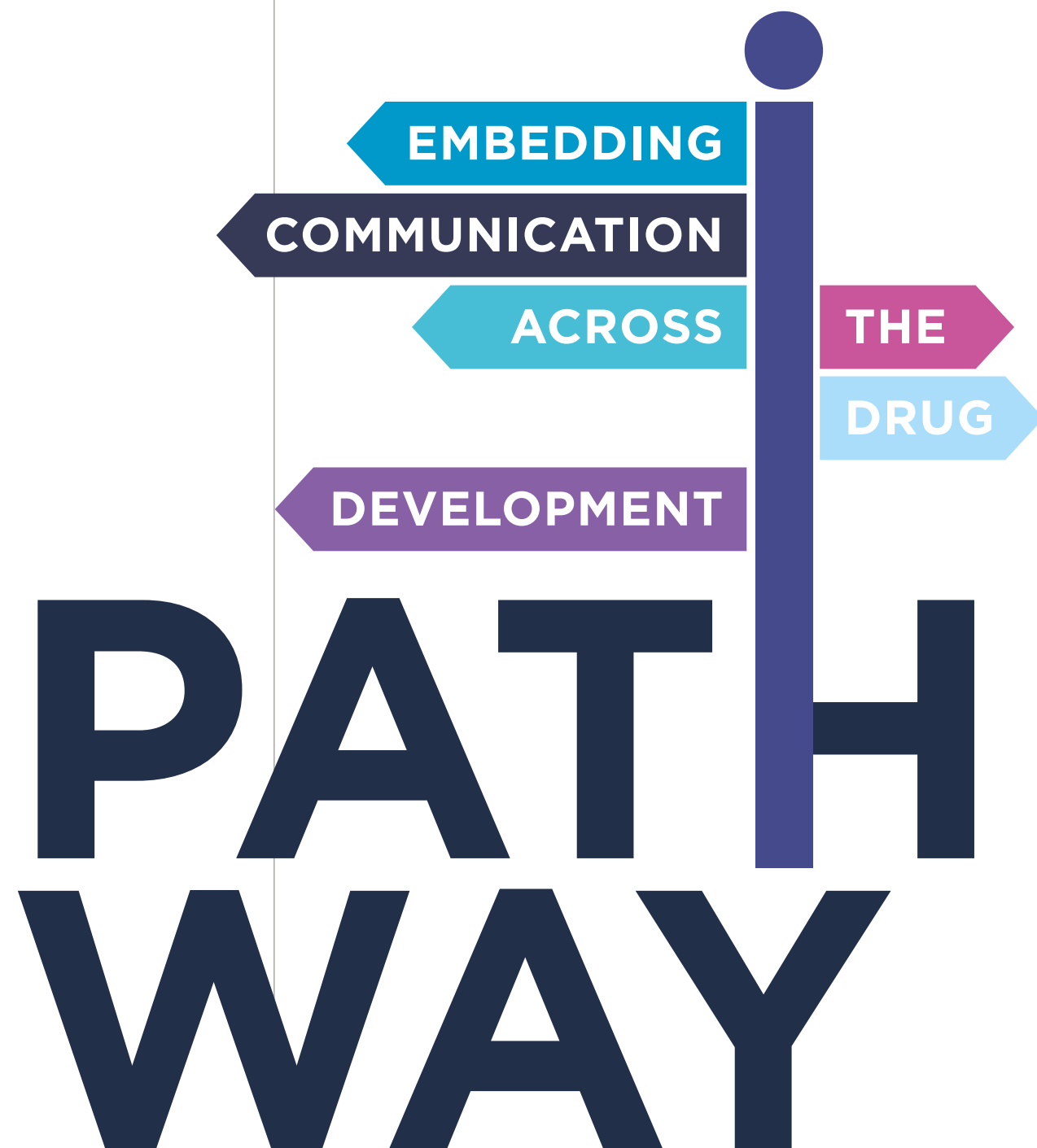
COLLABORATION FOR ONCOLOGY DATA IN EUROPE (CODE)³⁶



This pharma-backed technology platform aims to collaborate with 200 cancer treatment centres across Europe to collate comprehensive, up-to-date and validated data on how anti-cancer medicines are used.

The goal? To provide the oncology community with near real-time information about how anti-cancer medicines are being used, enabling healthcare systems to maximise the value of cancer treatment, while facilitating access to innovative new therapies.





*"Only between 3 and 8 percent of patients who are eligible to enrol in clinical trials ever do."*³⁷

Brian Brewer, Director of Marketing and Communications
Cancer Research Institute

The full potential of IO will only be achieved if communication needs are met across the entire pathway of IO drug development. This means from the earliest engagement with patients about potential trials, right through to the effective delivery of IO in the clinic.

37. Immunotherapy Summit Highlights Future of Cancer Treatment. Available at: <https://bit.ly/2HcYwA1> Accessed: April 2018.

17. Research interview with Matthew Fowler, Advanced Clinical Nurse.

STANDING OUT FROM THE CROWD

The need to consider communication at the heart of IO's success doesn't just apply to its use in the clinic. It starts with the earliest stages of IO drug development, and with one of the greatest challenges – the sheer number of IO drugs and studies.

With so many clinical trials recruiting from the same pool of patients, industry will need to figure out how to make the latest in a long line of studies stand out – not to mention the challenge of avoiding research duplication.

We've also heard that HCPs would appreciate more support when it comes to finding information about IO trials.

"There are trial options for some patients, and I have personally cared for patients who have been referred for IO trials at the larger cancer centres," Matthew Fowler, an Advanced Oncology Nurse told us. "I do think there needs to be a greater awareness and encouragement of patients accessing trials as well as greater access to IO trials locally."¹⁷

38. The Study Manager's Guide to Cultivating Positive Site and Patient Relationships. Available at: <https://bit.ly/2qMOZ8C> Accessed: April 2018.

ONGOING ENGAGEMENT

Although patients are widely known to be queuing up for IO, ensuring their ongoing engagement and compliance with new treatment protocols is also paramount.

BUILDING POSITIVE TRIAL EXPERIENCES

According to research with patients on trials, a great experience can leave patients with a positive lasting impression of the product and sponsor, and also has a longer-term halo effect for clinical research.³⁸

Patients who have a positive experience are also more likely to endorse a trial publicly through word of mouth, online communities, social media and, increasingly, forums like blogging.

But this can also be a challenge – as they are highly likely to influence other patients' perceptions of the study, and to pass on information about side effects and their own treatment experience. This is especially challenging with IO, where responses are so markedly different and treatment is often given less frequently, reducing touchpoints with healthcare professionals.

39. Ten things clinical research sites told us. Available at: <https://bit.ly/2GN3wfk> Accessed: April 2018.

40. Comprehensive analysis of the clinical immuno-oncology landscape. Available at: <https://bit.ly/2HuhuPo> Accessed: April 2018.

41. Research interview with Havas Lynx.

RESEARCH STAFF ENGAGEMENT

It's not only patients who will benefit when trial information is delivered in a way that is clear, concise and engaging. For overworked oncologists running several trials already, the subtleties between different treatments and new indications can be easily lost.

How can industry ensure that their trial communications cut through to the busy, time-deprived oncologist audience?

One oncologist told us that it's almost impossible to keep up with so many trials. But that this doesn't matter, because the number of indications we have now is where things are likely to stay.⁴¹

Whether this is an accurate prediction of the future of IO, or reflects a more cautious view of the advantages of so many trials, what's clear is that to attract and engage clinicians with the 'next best' trial, will require a compelling communication strategy.

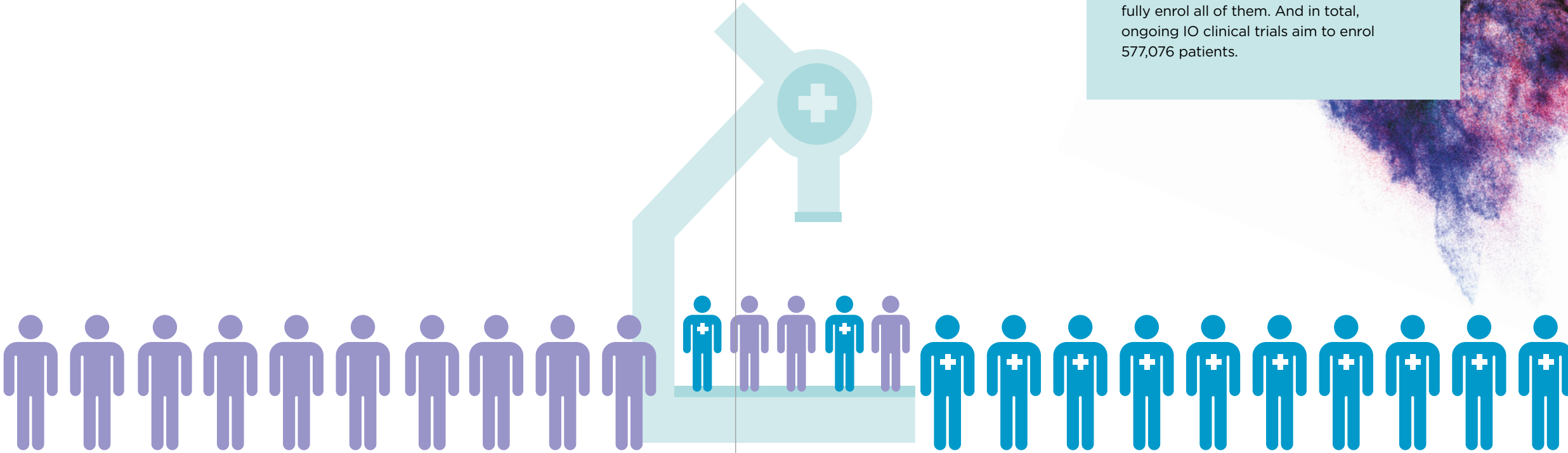
The need to ensure that study staff understand and comply with new protocols is also more important than ever with IO. Yet, a survey of trial site staff revealed that in the absence of official information documents they will often create their own.³⁹ This is a sobering thought when you consider the complex new lexicon now required for IO.

Ensuring trial staff are well informed and supported is key to providing an excellent trial experience at study sites.

Ultimately, the experience and engagement of patients and study staff can make the difference between the success and failure of a treatment getting to patients. IO demands we do better. Industry is well placed to make the trial experience a better one.

TOO MUCH OF A GOOD THING?⁴⁰

There were 469 new PD-1/L1 cancer checkpoint studies launched in 2017 alone. They require 52,000 patients to fully enrol all of them. And in total, ongoing IO clinical trials aim to enrol 577,076 patients.



THE TIME FOR BIG COMMUNICATION IS Now

IO has changed the very language we use to talk about cancer. New clinical endpoints, new value propositions, new treatment analogies. But as IO moves from an exciting new treatment phenomenon to an established option for greater numbers of patients, communication will be the catalyst for greater success.

*"To truly realise the transformative potential of immuno-oncology, we must step up and create equally transformative Big Communication across every healthcare touchpoint."*²⁴

David Hunt, CEO Havas Lynx Group

²⁴ SWITCHED ONcology Carer Experience Focus Group, Havas Lynx. 2018. Available at: www.switchedoncology.com

KEEPING UP ISN'T ENOUGH

Big Communication isn't a 'nice-to-have'. It's a must-have.

Potentially life-saving treatments are coming thick and fast. And patients need better. Better understanding. Better support. Better outcomes. The key? Communication that informs understanding, adoption and true needs-based support.

Big Communication starts at the earliest stages of IO drug development and encompasses every healthcare touchpoint. From clinical trials to the hospital clinic, and from research nurses to patients and carers, communication should be part of the DNA of IO delivery across the healthcare system, and cater to the needs of every individual a patient encounters.

The IO revolution will continue to gather pace. Communication can't simply strive to keep up but must actively help to drive innovation. True leadership in IO will necessitate embedding truly transformative communication.

The opportunities to unlock better patient experiences and outcomes in IO hinge on such Big Communication.

