

Immunotherapy – a breakthrough

Recently the European Society of Medical Oncology (ESMO) held its summit in Cape Town where global experts, including South Africans, shared the latest therapeutic advances in cancer care.

Globally, one in six people currently die of cancer, with the incidence growing faster in developing countries through ageing and rapidly growing populations which are increasingly adopting unhealthy Western lifestyles. By 2030 an estimated 70% of cancers will be in developing countries. This has prompted urgent global scientific collaboration on therapies and drugs.

The advances in immunotherapy – a modality that reduces cancer's insidious ability to block the body's natural immune defences – emerged from such collaboration. Immunotherapy drugs help the body fight the disease naturally without incurring some of the debilitating side-effects that arise from other treatments.

Two cancers where immunotherapy excels at, or dramatically boosts more traditional treatments thereby possibly prolonging more lives, are advanced lung and skin cancer (melanomas). World-wide, lung cancer is the leading cause of cancer death. Each year, more people die of lung cancer than of colon, breast, and prostate cancers combined. Also, one in every three cancers diagnosed is a skin cancer.

Medical oncologist and Extraordinary Professor of Immunology at the University of Pretoria, Professor Bernardo Rapoport, says that by using immunotherapy drugs, up to 25% to 30% more of selected melanoma patients are now surviving up to eight years longer than with traditional treatments alone.

"With immunotherapy drugs, one in four melanoma patients sur-

Cruel NHS - more like Third World Care!

Forcing UK cancer patients to travel for two to three hours daily for up to seven weeks to receive routine treatment is "frankly cruel" and "more like Third World care", doctors and politicians have warned. Patients are having to make round trips of up to 100 miles for radiotherapy because the treatment is not provided locally.

Pat Price, a professor at Imperial College London and chairwoman of Action Radiotherapy, a charity working to improve treatment, said: "The thought of patients travelling for hours, often feeling sick and vomiting in cars, for radiotherapy every day for four or five weeks is more like Third World care. This time limit was recommended by the National Radiotherapy Advisory Group in 2017 but has never been implemented.

vives. Additionally, half of non-small cell lung cancer patients with a PD-L1 expression on at least 50% of tumour cells (a pathology test that predicts response to immunotherapy treatment) survives at least two years," said Professor Rapoport.

Founder of the Sandton Oncology Centre, Dr Daniel Vorobiof, said that in a trial of one immunotherapy drug registered in South Africa two years ago, a full 20% of patients with advanced malignant melanoma continued living for longer than five years.

"The median survival rate for patients with identical advanced disease using chemotherapy or radiation was less than 18 months. I have three or four (immunotherapy-treated) patients still alive after 10 years," said Dr Vorobiof.

A principal clinical investigator at the Mayo Clinic, Professor Alex Adjei, said that in a five-year study of advanced lung cancer using immunotherapy, 16% of patients were still alive after five years.

"With the best existing chemotherapy, almost all of them could be dead within five years," said Professor Adjei.

The trio of oncology experts say that immunotherapy has the potential to cure cancer, but caution that current research is focussed on understanding why some patients have dramatic benefits and others none. Immunotherapy candidates are assessed using biomarkers which reveal an individual's built-in propensity to respond favourably or not.

Asked to roughly quantify how widely immunotherapy is being used, either in clinical trials or expanded access programmes, Rapoport puts it at roughly 95% chemotherapy, radiation or surgery, versus 5% Immunotherapy. However, he believes that within 15 years, this equation will be reversed.

This article originally appeared in eHealth News <http://ehealth-news.co.za/immunotherapy-breakthrough-cancer-treatment/>

Gut feelings: bacteria in digestive tracts can affect your brain

"Gut feelings" may not be just a figure of speech. There's evidence that the bacteria living in our digestive tracts can affect our brains and behavior.

Research has suggested several ways in which bacteria may do this, says Dr. John Cryan of University College Cork in Ireland. One is by influencing the functioning of our immune systems. Bacteria also produce a wide variety of chemicals, some of which may affect how the nervous system operates. And they may affect the vagus nerve, an extremely long nerve that extends from the brain to the abdomen. Through all of these mechanisms, the bacteria that live in our intestines may have far-reaching effects on other parts of our bodies. See the video at www.youtube.com/watch?v=MQalic_fjNc&feature=youtu.be

Novartis must end bullying tactics, bribes and threats

The Treatment Action Campaign report that Swiss multinational company Novartis is facing pressure from activists globally demanding that they end the 'lies, threats and bribes' towards governments trying to improve access to medicines in their countries.

Protest actions took place at Novartis offices in the UK, South Africa and Malaysia demanding the company respects the rights of governments who want to protect public health and make medicines more affordable using international legal safeguards. The actions follow recently leaked letters sent from Novartis to threaten the Colombian government over the price of imatinib, a leukaemia medicine, in 2016.

The letter leaked by Public Eye show Novartis' then-CEO writing to the President of Colombia in 2016 to stop the government from exercising its legal right to make imatinib more affordable. Novartis had previously priced the medicine at nearly ZAR 178 000 (USD 15 000), twice the average person's income in Colombia.

The scandal is the most recent evidence of the undue pressure and threats that governments face when trying to tackle unaffordable medicine prices charged by international pharmaceutical companies. Under international trade law, governments are legally allowed to use certain flexibilities to improve access to affordable medicines. Yet countries that try to implement these flexibilities face enormous pressure by pharmaceutical companies, including Novartis, as well as rich country governments, to stop.

"We stand in solidarity with our comrades in Colombia who are facing pressure and threats from Novartis. It is totally unacceptable that Novartis thinks its profits are more important than the lives of the Colombian people. All governments must be allowed to use legal safeguards outlined in international law to protect public health. Using these legal safeguards is not even radical! Yet every time countries try, they face backlash from industry and rich governments. This bullying costs lives and cannot go on," said Anele Yawa, General Secretary of the Treatment Action Campaign (TAC).



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State of the art cancer fighting machines

According to the UK Northern Times, technology which could transform cancer care for patients across the UK could be built in the Scottish Highlands.

A small Highland-based engineering firm has developed a smaller and more efficient version of the huge 90-ton advanced proton beam therapy machines currently being fitted beneath NHS hospitals in Manchester and London.

And the pioneer behind the plan, Steve Hunt, director of the Elgin-based engineering company called Alceli, insists his machines can treat patients at a fifth of the price - and Thai investors are talking about investing \$300 million to build and lease the machines to hospitals.

The kit - hailed as a cancer treatment milestone - kills tumours without damaging surrounding tissue. It is particularly effective for brain cancer cases and children, who are still growing and more vulnerable to the long-term side effects of radiation exposure.

This month the Pharmaceutical Research and Manufacturers of America (PhRMA), of which Novartis is a leading member, requested that the US government considers trade retaliations against countries taking steps to put people's access to medicines ahead of intellectual property rights. And this week it was revealed that US trade representative, Robert Lighthizer, has written to the Colombian government to warn that "key stakeholders remain dissatisfied" with its policies on access to medicines. As part of the global actions, activists handed in a letter to the Novartis Chair of the Board calling on him to ensure the new CEO, Vasant Narasimhan, does not use these bullying tactics against governments that are trying to protect the lives of their people.

"Today Colombia is battling a number of issues, from the high prices of medicines and abusive pharmaceutical monopoly behaviour to recovering from 50 years of conflict and the devastating consequences of drug trafficking. We need big pharmaceutical companies to support our development and fulfil their social function. They should make medicines affordable and instead of bullying our government, they should respect and support the right of our government to use legal mechanisms to help people access the lifesaving medicines they need," said Andrea Reyes, Deputy Director of Misión Salud, Colombia.

"Pharmaceutical companies say that using the flexibilities of TRIPS is to 'ignore' or 'breach' the patent system. That's a lie. Licenses exist and can be used, as established by the legal regime of the subject. Meanwhile, health systems pay very high costs for medicines. It is a mistake to look at health issues in terms of the market. In the case of health, we are talking about the possibility of someone worsening their living conditions or even dying," said Francisco Rossi, Director of Fundación IFARMA, Colombia.

Novartis has also been implicated in a major corruption scandal in Greece this month for allegedly bribing senior politicians - eight former Ministers and two former Prime Ministers - in return for securing higher medicine prices in Greece and the rest of Europe. The company has also previously been fined for a number of documented cases of illegal kickbacks in the US and South Korea.

Anxiety and depression and prostate treatment

It's common for people to experience anxiety or depression due to prostate cancer; and it's not confined to only the man with the disease. Prostate cancer can have a negative psychological impact on the caregiver, wife or partner of the man with prostate cancer, as well as his family members and close friends. A cancer diagnosis of any type triggers a wide range of initial reactions and emotions. While in some instances, it can be relief, a more typical response may include sadness, loss, fear, guilt, stigmatisation, embarrassment, anger or disappointment.

The stress and anxiety associated with a prostate cancer diagnosis can be significant enough to influence a man's decision on treatment. In this situation, a man who could be a candidate for active surveillance might opt for treatment earlier than what might be necessary, resulting in what is often referred to as "over-treatment."

Treatment decisions must be appropriate to address whatever aspect of disease management is a priority for each man, after he has sufficient information on all treatment options, possible or probable side effects, and management of side effects. One man's priority could be to do everything he can to minimise the possibility that prostate cancer will metastasise; while another man's priority could be to do everything possible to maintain and maximise quality of life.

It is important for a man to recognise that once diagnosed with prostate cancer, the disease will unfortunately be a perpetual issue of concern and a potential source of anxiety, due to ongoing monitoring of PSA test results – at a minimum, regardless of the course of action that's taken. While active surveillance can be emotionally exhausting, over-treatment can result in decreased quality of life managing ED and incontinence, along with the potential emotional and psychological impact of having second thoughts about the choice of treatment, which can be likened to how a hasty purchase of merchandise can result in "buyer's remorse."

Men with prostate cancer who are under close medical surveillance reported significantly greater resilience and less anxiety over time after receiving an intervention of mindfulness meditation, according to a recently published pilot study from Northwestern Medicine.

This is an extract from "Anxiety and depression as related to prostate cancer". Read the full article at <http://www.ustoo.org/anxiety-and-depression>

Palliative care training



Throughout the year Hospice Wits host various short courses: the 5-day Introduction to Palliative Care, 2,5-Day Grief, Loss and Bereavement Workshop, 5-day Introduction to Paediatric Palliative Care, 3-day Non-Clinical Palliative Care, 3-Day Physical Assessment Workshop, as well as other client specific courses which they present on request.

For further details phone 011 483 9100 or email training@hospicewits.co.za.

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Biosimilars in oncology

Since the enactment of the Biologics Price Competition and Innovation Act (BPCIA) in the US in 2010, biosimilars have been developed and marketed as competitive, lower-cost alternatives to newer biologic treatments. Biosimilar was defined as a biologic product that is highly similar to a specific reference biologic product, notwithstanding minor differences in clinically inactive compounds, such that there are no clinically meaningful differences between the reference biologic product and the biologic product that has been licensed as a biosimilar pursuant to 42 USC section 262(k) in terms of safety, purity, and potency of the product. If you would like to learn more about this, an article on the website of the American Society of Clinical Oncologists (ASCO) - will be of interest.

http://ascopubs.org/doi/full/10.1200/JCO.2017.77.4893?et_cid=40070030&et rid=934717655&linkid=Bridging+the+Knowledge+Gap+for+Biosimilars+in+Oncology&

Avoid sipping your drinks!

Researchers from King's College London in the United Kingdom sought to find out which acidic foods and drinks are the worst for tooth erosion, and whether the way in which we consume them has an effect.

One leading cause of tooth erosion is acids in our foods and drinks, and soda and fruit juices are among the biggest offenders.

As part of the study, subjects were asked to report their frequency, timing, and duration of dietary acid consumption. Additionally, participants were asked to report any drinking habits prior to swallowing acidic drinks – for example, sipping hot drinks or swishing them in the mouth.

Unsurprisingly, the analysis revealed that acidic foods and drinks posed the greatest risk of tooth erosion.

The team found that the risk of moderate or severe tooth erosion was 11 times higher for adults who drank acidic beverages twice daily, particularly when they were consumed between meals, compared with those who consumed such beverages less frequently.

When acidic drinks were consumed with meals, the risk of tooth erosion was slashed by half.

"It was also observed that one or less dietary acid intakes a day was not associated with erosive tooth wear," the researchers note. "If a patient must go above one dietary acid intake per day, it would be prudent to advise them to consume the acids with meals."

Thank you to Netcare !

CanSurvive Cancer Support wish to thank Netcare for their continued assistance and encouragement.

We value the support and generosity of Netcare and their staff and their commitment to helping us to improve support for cancer patients and their families by providing a comfortable and accessible venue and refreshments for our meetings in Parktown and Krugersdorp.



You're in safe hands

Surgery is not an option

“When there’s no place for the scalpel, words are the surgeon’s only tool.”

–Paul Kalanithi, *When Breath Becomes Air*

Mrs. Jordan, a withered leaf of a woman, sits crumpled in the clinic exam chair. I introduce myself to everyone. Her husband, sister, and daughter are serious, substantial people who shake my hand firmly. The woman’s grip barely registers.

She has been through much over the past year. After her surgery, she received a combination of radiation therapy and chemotherapy for her aggressive tongue cancer. She tells me that she quit smoking, improved her diet, attempted to go for a daily walk, endeavored to be positive, enlisted prayer partners, and practiced self care for the first time in years. “I have been trying very hard.”

“That is great,” I respond. “So, how can I help you?” I know that she is visiting other centres after having learned that her cancer has recurred. Her prior surgeon has said that she is not a candidate for another operation. They want to see if surgery might still be an option to rid her of her disease.

“The doctors back home have her on chemo,” her husband tells me. “We’re in a holding pattern.” He looks at her and she nods back. “She wants to keep fighting.”

“I can see that she has been working very hard,” I say. The daughter picks up her pen. There are several questions written on her notepad and she fills in the blank spaces as we talk. They ask about the cancer and its treatment. What might we offer? What are the risks, given that she is so weak? How urgent is it? Her husband leans forward, attentive to every word, raising his eyebrows whenever I pause to frame my responses.

“Before I make any recommendations,” I say, “let me examine you.”

I put on a headlight and wash my hands, then roll across the floor toward her on the examination chair. She winces as I feel inside her mouth. “That’s okay, Doc. Do what you gotta do.” The mass is hard and fixed to the jaw. There are enlarged, firm lymph nodes in the upper neck. Her tongue does not move well. I look at her voice box with a mirror and can see that the cancer is creeping down the wall on the inside of her throat.

As I work through the exam, I am increasingly concerned about her cancer and what I would need to do in the operating room. The mass is large but could be removed. It would be a difficult, long procedure and the reconstruction would be complex. Healing might be a problem given her overall condition. She is, indeed, a poor candidate for surgery although it might still offer a slim chance for a cure.

“The physicians at the other hospital ordered some new scans a couple of days ago,” the sister says. “Have you seen them?”

“No. Let’s pull them up and see what they can tell us.”

I log into the computer and pull up the images. The neck scan confirms what I already know. This is a large cancer but surgery is – barely – an option.

Next, I pull up the CT scan of the chest and review the report. “Oh, oh.”

I turn the screen toward the patient and her family. “These are her lungs on the scan. Unfortunately, there are several masses in the lungs that the radiologist believes are new and growing. These are a sign that the cancer has spread. I wish I had different news for you

Dr Bruce Campbell is a Head and Neck Cancer Surgeon. He has been a leader of the MCW Multidisciplinary Head and Neck Cancer Programme of the Froedtert Cancer Centre. He evaluates patients with tumours of the oral cavity, throat, sinuses, voice box, thyroid, and neck. Read his blog at <http://www.froedtert.com/HealthResources/ReadingRoom/HealthBlogs/Reflections.htm>



but when these cancers spread to other parts of the body, they are very dangerous. Surgery would not be helpful to her.”

The daughter puts down her pen. “What do you mean?” she asks. “No surgery?”

“Even with an operation, the cancer will continue to grow in these new places. We need an approach that addresses the rest of the body, not just the mouth.”

Surgeon Atul Gawande in his book *Being Mortal* offers guidance to physicians and families on how to navigate these difficult discussions. For years, my approach for patients with recurrent, non-resectable cancer was to send them off to the medical oncologist with an optimistic but noncommittal “perhaps chemotherapy will slow down or knock out the rest of the cancer.” I have told people about the occasional patient who has had an amazing response – wondrous, miraculous cures – with chemotherapy. I cling to these cases because they have been so delightful and memorable.

More often, though, cancers treated for a second, third, or fourth time become increasingly resistant to chemotherapy. Responses – and miracles – are short-lived and the effects of both the treatment and the cancer can become increasingly burdensome for both patient and family.

Of course, chemotherapy, targeted agents, and clinical trials are absolutely the right thing to recommend at times but I now know that my enthusiasm should be tempered with honesty and compassion.

Gawande quotes palliative care physician Susan Block MD who chides physicians for dwelling on statistics and endless courses of treatment. “We focus on the facts and the options. But that’s a mistake.” Our primary task during these discussions should be to help people negotiate their overwhelming anxieties. Different individuals face different struggles but the biggest issues might be dealing with death, avoiding suffering, protecting loved ones from worry, and avoiding financial ruin. When dealing with patients and families at these junctures, Gawande tells us, “you’re not determining whether they want Treatment X or Treatment Y...you’re trying to learn what’s most important to them under the circumstances.”

As I sit in the exam room with Mrs. Jordan and her family, I am acutely aware that we met only a little while ago and she is not really my patient. Yet, the words I have shared have opened a gaping chasm at their feet. So, I try steer toward topics that Dr. Block covers in these conversations:

What do you understand about your situation and your prognosis?

What are your fears and hopes?

What trade-offs are you willing to make and not make?

How do you want to spend time if your health worsens?

(continued on page 5)

Surgery is not an option

(Continued from page 4)

Who will make your decisions when you cannot?

Gawande hopes families like the Jordans will talk through the questions and decide what course of actions best serves their collective understanding.

On this day, we only scratch the surface. "Well, I knew when we came in here that the cancer was getting worse," Mrs. Jordan says. "But my hopes and dreams? I still hope to be cured of this! But, if not, my goal is to spend as much time as possible with my eight grandchildren. And I would love to see my sister in Florida." The family shares a couple of stories about the kids. Someone chuckles. It feels like a start.

Gawande writes, "we've been wrong about what our job is in medicine. We think that our job is to ensure health and survival. But really it is larger than that. It is to enable well being."

I like that. Attending to well being rather than survival requires me to listen and find out what makes life worthwhile for my patients. The discussions are not easy. But even we surgeons are capable of initiating these critical, pivotal conversations when surgery is not an option.

Alpha-brainwave time for health and happiness

by Dr Gary Epler

Imagine having the feelings of joy, creativity, and confidence. These are wonderful, soothing feelings that we need every day especially during a personal downturn, loss of income, stress, or pain. How can we do this? It's through meditation or what I call alpha-brainwave time.

What's alpha-brainwave time? It's day dreaming. It's meditation. It's time when you are experiencing alpha brainwaves. We have several brainwave frequencies. Beta brainwave activity occurs during our typical waking day. Alpha brainwaves and theta brainwaves occur during light and moderate sleep. We require 15 minutes of very slow delta waves for deep sleep every night. Gamma waves are fast and may occur during peak performance. Wake up and unlock the benefits of alpha brainwaves. You can also learn to be in a theta brainwave state while awake for even greater benefits.

How do you do alpha-brainwave time? The traditional way is with sitting, eyes-closed meditation, which continues to be the gold standard. I prefer new eyes-open meditation that you can do while sitting, walking in the woods, walking or slowly jogging on a treadmill, swimming or during yoga. The Norwegians have a term "Friluftsliv" which is the alpha-brainwave feeling that develops being outside in free air.

Five benefits from alpha-brainwave time. First, alpha-brainwave time decreases stress by lowering your blood adrenaline levels. You go from the flight-or-fight state to the stay-and-play state. Second, meditation releases feel-good neurotransmitters and hormones including endorphin, dopamine, and serotonin. Third, meditation balances your left and right side of the brain. We need the left brain to function in society, but it's rigid and dominant. Meditation shifts some of this activity to the right brain – the social and creative brain making a more enjoyable day. Fourth, people may depend on outside activities for pleasure and enjoyment, but this is an inside job – meditation brings that pleasure inside with no need for outside forces. Finally, science-based benefits of alpha-brainwave time include increasing mirror-neuron function that improves social interaction and increasing the life of telomeres at the end of your chromosomes for increased lifespan.

Take action: Learn everything you can about alpha-brainwave time and meditation. Learn the different ways and find one that is best for you. Give yourself 15 to 20 minutes of alpha-brainwave time every day and especially when you face the inevitable personal downturns and stress. Alpha-brainwave time will give you energy, confidence, and joy. If you wish, watch "Who Knew Life was so Easy?" (<https://www.youtube.com/watch?v=lxQZJPwn4Fw>)

Dr. Gary Epler is an internationally-known Harvard Medical School professor and thought leader on health, nutrition, peak performance, and executive health. He has impacted the lives of people throughout the world through his speaking engagements, books, and teaching. He has been called upon by individuals from around the globe who have a rare lung disease that he discovered. He has been a successful entrepreneur and CEO of his company. He is a sought-after speaker addressing audiences about health, fitness, happiness, and productivity at the workplace. www.eplerhealth.com



Rondebosch Group

Venue: Waiting Room, 4th floor Rondebosch Medical Centre, Klipfontein road.

Last Monday of each month (except Sept.)

Time: 18:00 – 19:30

Contact Linda Greeff: 0219443700 for more info

Panorama, Cape Town Group

Venue: Panorama Oncology, 1st floor, 43 Hennie Winterbach Street, Panorama

10:00 to 11:30

Contact: Emerentia Esterhuyse 0219443850, emerentia.esterhuyse@cancercare.co.za

Cape Gate Group

Venue: 51 Tiger Avenue, Cape Gate, 7560

10:00 - 12:00

Contact: Caron Majewski, 021 944 3807
caron.majewski@cancercare.co.za

Outeniqua, George Group

Venue: 3 Gloucester Avenue, George

10:00 - 12:00

First Wednesday of each month (except January)

Contact: Engela van der Merwe, 044 8840705,
engela.vandermerwe@cancercare.co.za

Counting the cost of cancer medication

By Lynne du Toit

The patient is often the loser in the race between original, clone and generic oncology medication producers. Big pharmaceutical companies tend to take advantage of privileged, 'first-comer' status to ensure maximum profits long after patents expire by creating clones of parent drugs, while generic producers wait to enter the market with more affordable alternatives for the patient.

Pharmaceutical companies invest significant resources in researching and developing medications, with their investments protected by patents that let them charge what they need to over a specified period of time to recover their outlay, and to reap the profits of the risk they take.

However, once those patents expire, generic medication producers can procure dossiers of these medications from specialist dossier developers, acquiring the information needed to research, develop, test and produce less expensive generic versions.

There's a third way to produce a particular medication, used by pharmaceutical companies to continue making maximum possible profits after patents expire. They create clones of their own products, sometimes manufactured at their own factories, but under a different name. This gives the pharmaceutical companies two revenue streams off what is, effectively, one product in two different packagings – and a first- and second-to-market advantage over generics, who come in at an obstacle-ridden third place.

Local DA members support CansaShavathon

On Saturday, 24 February 2018 Member of Parliament for Joburg South, Manny de Freitas MP and a few other DA members were at The Glen Shopping Centre where they supported the Cansa Shavathon.

The Shavathon is an annual event run nationally by CANSA where members of the public are able to shave their hair, stencil their hair or spray their hair. This is done in solidarity with cancer survivors and sufferers who often lose their hair during treatment. Manny been involved with CANSA for many years and continues to serve as a governor of CANSA

These obstacles include doctors having established relationships with original products, which provide an easy bridge to clone products, and many doctors prefer to prescribe clones rather than generics because they are already familiar with the parent brand. Generic producers need to build those relationships, investing significant time and money in marketing and advertising initiatives.

Clone producers already hold all the pharmaceutical information and have a longer lead time to process their product through the erstwhile South African Medicines Control Council, now replaced by the South African Health Products Regulatory Authority. Generic producers, once they have procured the product dossiers, still need to complete research and product development, and then meet the demands of the authority before they can introduce their products into a market as third-comers.

Generic producers are often local companies intending to produce local, premium quality versions of international medications, and must import many molecules, which also places them at the mercy of fluctuating exchange rates.

Clones are produced in large production facilities, or even in the original producer's facilities, meaning that they can benefit from large scale manufacturing efficiencies, reducing their costs, while generics are often produced by smaller businesses wanting to bring more cost-effective solutions to patients.

Even though the regulatory body controls the pharmaceuticals introduced to market, it does not control pricing, which means that original and clone producers can set pricing without regard to market forces – while generic producers are forced, by their third-comer status, to compete more aggressively on price.

What does this mean for the patient

In most cases, patients either have to pay for treatment themselves, or have to pay in for treatment once their medical aid funding has been completely absorbed by expensive original medication.

To provide an idea of how pricing works, a typical original oncology medication would cost R1,780. Its clone would sell for R774. Eurolab's generic version of that product sells for R245.10 - an 86% saving compared to the original product and a 68% saving compared to the clone product.

Pharmaceutical companies have valid cause to recover the tremendous costs associated with research and development, trials and testing, but they do engage in questionable practices to extend their exclusivity over a product, such as releasing different formats of a medication to extend the life of a patent. This includes tricks such as releasing a different strength or formulation change, just before the patent on the original product expires.

There's also no doubt patent-holding pharmaceutical companies are overcharging for their products. For example, Thalidomide was a cheap product in its first iteration in the 1960s before it was withdrawn but is now one of the most expensive oncology drugs available – well beyond the means of most South Africans. This is the same drug, used for a different purpose – but with a ridiculously inflated price.

The exorbitant prices in the oncology pharmaceutical market pose the question: who is profiting from oncology patients, and who is focusing on bringing the costs of oncology treatment in South Africa down?

<http://www.bizcommunity.com/Article/196/398/173892.html#more>





Wings of Hope on the move

Wings of Hope have been very busy this year - raising funds with their mountain bike race, helping at the CANSA Shavathon in Cape Town and raising cancer awareness with Wings of Hope Racing (Cape Town).

Look out for an announcement of the official launch of their new Cape Town branch!



Guidance on managing immunotherapy side effects

Immunotherapy with immune checkpoint inhibitors is the first of a new generation of immunotherapy treatments, revolutionising treatment for many different types of cancer. By unleashing the body's immune system to attack cancer, these treatments can send even the most hard-to-treat cancers into lasting remission.

Patients who receive immune checkpoint inhibitors, however, may experience a unique set of side effects. These side effects can involve multiple organs of the body, and although they are typically mild, sometimes severe, irreversible, or even life-threatening reactions can occur. Given that these therapies have entered the clinic fairly recently, few clinicians are experienced in recognising and treating associated side effects.

New guidelines developed collaboratively by the American Society of Clinical Oncology (ASCO) and the National Comprehensive Cancer Network® (NCCN®) offer clinicians much needed recommendations for assessment and management of side effects related to immune checkpoint inhibitors.

Patients can find information about side effects of immunotherapy at Cancer.Net, or download an infographic at [NCCN.org/infographic](https://www.nccn.org/infographic). An educational video is available at <https://youtu.be/BTrlDgaNjyQ>.



Kovsies Aquatic raise funds for breast cancer awareness

"My hope for Reach for Recovery is that when a new patient is diagnosed with breast cancer, she would already have known about Reach for Recovery and it would be her first port of call," says Dr Ilse de Wit, Chairperson of Bloemfontein Reach for Recovery. "The more visible we are, the more people will notice us and know us. Sport events are a great platform to reach many people at the same time".

On 21 January 2018 Reach for Recovery took their first step in that direction in Bloemfontein. Kovsie Aquatics Swimming Club hosted a Midmar Mile qualifying open water event and every swimmer that entered was given a pink branded Reach4Recovery swimming cap. With the help of generous sponsorship we were able to make this possible. The river at Maselspoort was a sea of pink, it was beautiful to see.

Four volunteers dressed in the lovely pink Reach for Recovery shirts handed out water and medals to the finishers. We were referred to as the pink ladies. There was also an opportunity to say something about our great organisation. What is so nice about the swimming caps is that Reach for Recovery will still be visible as the caps will be worn by swimmers at different places.

We hope to have this as an annual partnership with Kovsie Aquatics. For more pictures of the event, please visit Kovsie Aquatics Facebook page.

Reach for Recovery supports World Cancer Day

#WeCanICan Support Others

Because of this crucial point, we do what we do. We are here to support you! Ask for support if you're facing breast cancer or if you're dealing with this in your family.

Maintaining social support networks and talking about cancer can be important strategies for coping with the social and emotional impact of cancer, both in the short and long term....

#WeCanICan Inspire Action and Take Action

The first step in driving progress around cancer is to push for actions that we know will improve survival rates and give cancer patients a better quality of life.

We can all call on governments to step up their response to cancer by pushing for actions that we know will reduce premature deaths, improve quality of life and increase cancer survival rates.

#WorldCancerDay#Reach4Recovery

#WeCanICan Promote Early Detection

Diagnosing cancer isn't always easy – not all cancers show early signs and symptoms and other warning signs appear quite late when the cancer is advanced.

Power of Pink campaign raises R560 000!

The Mushrooms Farmers Association of SA handed over a cheque for a whopping R560,000 to Stephné Jacobs, Chairperson of the Board of Management of Reach for Recovery. The money was raised during the Power of Pink campaign – a campaign run in October each year by selling pink punnets of mushrooms at all Pick n Pay stores. R1 for each punnet sold is donated to Reach4Recovery's Ditto Prosthesis Support Project.

We are so thankful for this wonderful amount of money which will again enable us to provide subsidised silicone prostheses to women who had a mastectomy and no financial means to buy a prosthesis. We would like to thank the South African Mushroom Association and Pick n Pay for their continued support!

Reach for Recovery supports Lace Up For Cancer walk

On Sunday, 4 February, volunteers from #Reach4Recovery Peninsula joined hundreds of other supporters in a 5km or 10km walk in support of those who have lost their loved ones or fought against cancer.

The Peninsula Belles dressed in their pink outfits – they are all breast cancer survivors who provide practical and emotional support to newly diagnosed breast cancer patients and their families. The Belles enjoyed a fun-filled day with many supporters in crazy outfits. They enjoyed the company of Benni McCarthy who was, coincidentally, also dressed in a pink shirt.

However, for a number of cancers, increasing awareness of signs and symptoms and the importance of timely treatment has been shown to improve survival from cancer. We aim to promote early detection through our Breast Health Education Programme. Our volunteers are hard at work educating men and women about doing regular breast self-examinations and how best to seek professional help. In this way, we can make sure that people -sooner than later.

#WeCanICan Support Others

This is the primary function of #Reach4Recovery. We aim to support those in need whether by way of hospital visit, encouraging phone calls, resources and wisdom or through our Ditto Project, a prosthesis. Together we can support many more people.

If you'd like to be a part of the volunteer support team, you can let us know by following this link: www.reach4recovery.org.za/sign-up/

#WeCanICan Join Forces to Make A Difference

Joining forces to create innovative and multisectoral partnerships is a key step in mobilising civil society, strengthening advocacy efforts and making governments accountable.

By uniting around common goals and aspirations, the global cancer community can leverage the complementary skills, knowledge and spheres of influence of each partner to increase investment in cancer prevention measures, to address inequities in access to quality affordable cancer treatment and care, and reduce premature deaths from the disease. #WorldCancerDay #Reach4Recovery

Against medical advice?

I have been practicing medicine for very many years and the great secret is that it just keeps getting better. No day goes by without an important learning moment, a unique observation or just the satisfaction of making a difference. Today I had one of those moments of revelation that will slightly change all days which follow.

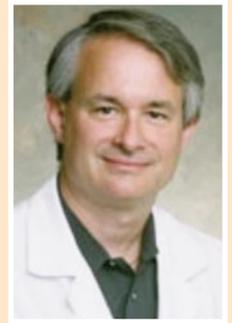
Stan is a 57-year-old man with curable colon cancer who requires surgery. Unfortunately, that surgery will result in a colostomy. Without that specific operation, there is an increased risk the cancer will spread. Stan is smart, aggressive and independent. He wants us to modify the treatment to avoid the colostomy. However, such a compromise is outside standard of care, and not supported by what modern medicine understands about colon cancer treatment.

In my office, Stan and I talk at length and he poses a challenging question. He says, "Doc, if I was a friend of yours what would you recommend?" After a moment of thought, I decide that is easy. I would give a recommendation that makes cure most likely. Hundreds of thousands of patients live active lives with colostomies, but very few live such lives with active colon cancer. Therefore, I would tell my friend to have the surgery, accept the colonoscopy, giving the most compassionate support I could muster.

However, then I had a conversation inside my own head. I asked me, Jim Salwitz, not Dr Salwitz, what I would do if it was my belly threatened with a colostomy. To my surprise, I had a moment of bright light insight and intuition. I might very well accept the risk of

James C. Salwitz, MD

Dr. Salwitz is a Clinical Professor at Robert Wood Johnson Medical School. He lectures frequently in the community on topics related to Hospice and Palliative Care and has received numerous honours and awards, including the Physicians Leadership Award in Palliative Care. His blog, Sunrise Rounds, can be found at <http://sunriserounds.com>



colon cancer recurrence, nary even death, and not get the colostomy. I was stunned! Patient Jim overrides Dr Jim.

Is this the right, reasonable or intelligent decision? Probably not. It is one thing to recommend a higher risk to a patient and another to accept that for oneself. Nonetheless, it seems to me that each patient should have the opportunity to understand each choice, even if some of those choices may put him or her at risk. It may be very hard for patients to make an informed decision as most patients have not seen the downside of bad medical events, and may chose a higher risk alternative based on the false assumption that complications can be corrected. If doctors are going to help patients to have such freedom of choice, it requires extensive education, patience and personal insight. This is a tough area of health communication as there is security and clarity in data, but some patients may need to explore the unknown.

I told Stan about my personal "decision." I told him that although the data was unclear, it was likely he was taking a higher risk of cancer recurrence and death if he did not have the colostomy. I emphasised that a full life was possible with a colostomy. However, I told him that from a standpoint of risk verses perceived quality of life, I might personally choose to avoid the surgery.

This is a difficult area in medicine, when patients decide "the best" is not for them. It is doubly hard when the doctor himself can clearly see and empathise with the patient's conflict. In the end, Stan's choice is not supported by research, data, my personal experience, nor by experts in the field.

CanSurvive CANCER SUPPORT

Let's talk about cancer!

Join us at a **CanSurvive Cancer Support** group meeting for an interesting and informative talk, refreshments and a chance to chat with other patients and survivors .

Upcoming meetings:

PARKTOWN Hazeldene Hall (opposite Netcare Parklane Hospital) - 10 March 09:00

PINEHAVEN, WEST RAND

- 17 March, Netcare Pinehaven Hospital

CHARLOTTE MAXEKE Radiation Department, Level P4 - 21 March

CHARLOTTE MAXEKE Radiation Department, Level P4 - 4 April

Enquiries: 062 275 6193

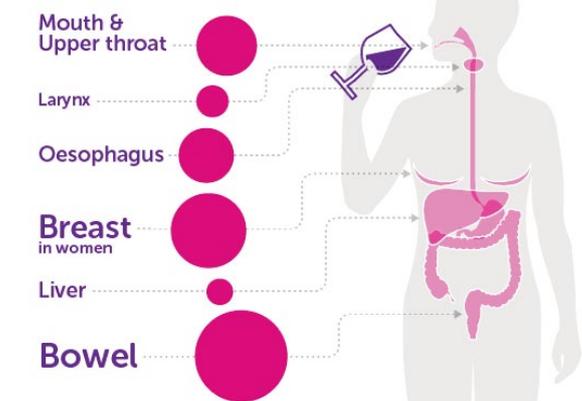
or email cansurvive@icon.co.za

www.cansurvive.co.za

www.facebook.com/cansurviveSA

The Groups are free and open to any survivor, patient or caregiver.

ALCOHOL CAN CAUSE 7 TYPES OF CANCER



Larger circles indicate cancers with more UK cancer cases linked to drinking alcohol

LET'S BEAT CANCER SOONER
cruk.org



Meet the Breast Health Foundation Community Education team

From left to right: Ntokozo Dlodla (Senior Community Educator-National); Nosi Dumzele (Community Educator-Western Cape); Jeanette Nkabinde (Community Educator- Johannesburg); Nathi Molefe (Community Educator-KZN); Barbara Hlatshwayo (Community Educator- Johannesburg); Ouma Mamatela (Community Educator- Johannesburg)



Fighting the toxic effects of radiation on cancer patients

Galera Therapeutics of Philadelphia, US, has granted breakthrough therapy designation for an intravenous drug that might mitigate the toxic effects. Essentially, when patients undergo radiation, their bodies are overwhelmed by a compound called superoxide, which is deployed by the immune system to kill invaders. Normally, the body can break down superoxide, converting it to hydrogen peroxide and molecular oxygen. But when undergoing intense radiation, the body can't keep up.

"Our drug mimics the effect of that natural enzyme, and does it potently," Galera's president and CEO Mel Sorensen says.

First, Galera is tackling a severe side effect of radiation that afflicts head and neck cancer patients. These patients often develop a condition called severe oral mucositis, or SOM, which happens when sensitive tissue in the mouth is subjected to excessive superoxide generated during radiation treatment. This breaks down the epithelial cells that line the mouth, causing patients to suffer from severe pain, ulcerations, and bleeding of the mouth. It's often so bad that the patient can't eat or drink.

"The problem isn't just the immediate effect of the pain, soreness, and lack of nutrition, but also the residual effects," Sorensen said. "It can cause dry mouth for years after treatment."

In patients with head and neck cancer, radiation is a mainstay, and about 70 percent of patients receiving this treatment develop SOM.

Although starting with SOM, Sorensen said Galera's drug might have applications in many different cancers. Hydrogen peroxide, the byproduct Galera's drug creates when breaking down superoxide, happens to be toxic to tumour tissue, Sorensen said.

The FDA has granted breakthrough therapy designation for Galera's drug, coined GC4419, based on the data from a 223-patient, double-blind, randomised, placebo-controlled Phase IIb clinical trial in patients with head and neck cancer. In the trial, GC4419 reduced the duration of SOM from 19 days to 1.5 days (92%), the incidence of SOM by 34%, and the severity of patients' oral mucositis by 47%.

<https://tinyurl.com/ybxs73br>



You are cordially invited to join us at our public meetings where breast cancer patients and their friends and families have an opportunity to mix with other patients and survivors, as well as to listen to talks on issues related to breast cancer.

**Next meeting dates: 17 March, 9:30 for 10:00am
at Hazeldene Hall, 13 Junction Ave, Parktown, Johannesburg,**

FREE ENTRY, Enquiries: louise@mybreast.org.za / 0860 283 343
Stay informed with The Breast Health Foundation:
Facebook: <https://www.facebook.com/BreastHealthFoundation/>
Twitter: <https://twitter.com/BreastBhf>
Instagram: <https://www.instagram.com/breasthealthfoundationa/>
Website: <http://www.mybreast.org.za/>

Bosom Buddies is a support initiative brought to you by The Breast Health Foundation.

WANT TO SUPPORT OR VOLUNTEER FOR BREAST HEALTH FOUNDATION?

Check out their needs on ForGood at:
www.forgood.co.za/cause/profile/the-breast-health-foundation

CALENDAR

March 2018

- 10 CanSurvive Cancer Support Parktown Group, Hazeldene Hall, Parktown 9:00
- 10 Wings of Hope, German International School, 11 Sans Souci Road, Parktown. 9:30 for 10.00
- 13 Reach for Recovery West Rand, Kruijnpark Restaurant 13:30 for 14:00
- 15 CANSA Pretoria support group, 32 Lys Str., Rietfontein
- 17 CanSurvive West Rand Group, Pinehaven Hospital, Krugersdorp. 09:00
- 21 CanSurvive Charlotte Maxeke Group, Radiation Floor P4.
- 24 Bosom Buddies, Hazeldene Hall, 13 Junction Rd, Parktown

April 2018

- 4 CanSurvive Charlotte Maxeke Group, Radiation Floor P4.
- 14 CanSurvive Cancer Support Parktown Group, Hazeldene Hall, Parktown 9:00
- 19 CANSA Pretoria support group, 32 Lys Str., Rietfontein
- 21 CanSurvive West Rand Group, Pinehaven Hospital, Krugersdorp. 09:00
- 24 Wings of Hope, German International School, Parktown. 9:30 for 10.00
- 17 CanSurvive Charlotte Maxeke Group, Radiation Floor P4.

May 2018

- 2 CanSurvive Charlotte Maxeke Group, Radiation Floor P4.
- 8 Reach for Recovery West Kinglets and Queenies, Ruimsig, 13h30 for 14h00
- 12 CanSurvive Cancer Support Parktown Group, Hazeldene Hall, Parktown 9:00
- 16 Reach for Recovery (R4R) : Johannesburg Group. Meetings: Lifeline offices, 2 The Avenue, Cnr Henrietta Street, Norwood 14:45 for 14:00
- 16 CanSurvive Charlotte Maxeke Group, Radiation Floor P4.
- 17 CANSA Pretoria support group, 32 Lys Str., Rietfontein
- 19 CanSurvive West Rand Group, Pinehaven Hospital, Krugersdorp. 09:00
- 19 Wings of Hope, German International School, Parktown. 9:30 for 10.00
- 19 Bosom Buddies, Hazeldene Hall, Parktown, 9:30 for 10:00

June 2018

- 4 **World Cancer Survivors Day**
- 6 CanSurvive Charlotte Maxeke Group, Radiation Floor P4.
- 9 CanSurvive Cancer Support Parktown Group, Hazeldene Hall,
- 9 Bosom Buddies, Hazeldene Hall, Parktown, 9:30 for 10:00
- 16 CanSurvive West Rand Group, Pinehaven Hospital, Krugersdorp. 09:00
- 20 CanSurvive Charlotte Maxeke Group, Radiation Floor P4.
- 21 CANSA Pretoria support group, 32 Lys Str., Rietfontein
- 30 Wings of Hope, German International School, Parktown. 9:30 for 10.00 – Birthday celebration.

CONTACT DETAILS

CanSurvive Cancer Support
Parktown and West Rand Group ;
Contact: 062 275 6193 or cansurvive@icon.co.za

Charlotte Maxeke Group: Contact Duke Mkhize 0828522432
Jabulani Group: Contact Sister Bongwiwe Nkosi: 0835760622

CancerCareSupport Group, 4th Floor, Rondebosch Medical Centre. Contact: linda.greeff@cancercare.co.za or phone 0219443700 for more info

CancerCare Cape Gate Support group: 10h00-12h00 in the Boardroom, Cape Gate Oncology Centre.
Contact: Caron Caron Majewski, 021 9443800

CancerCare Outeniqua, George Support Group. Contact: Engela van der Merwe, 044 8840705,
engela.vandermerwe@cancercare.co.za

Cancersupport@centurion: Marianne Ambrose 012 677 8271(office) or Henriette Brown 072 8065728

Bosom Buddies: 011 482 9492 or 0860 283 343,
louise@mybreast.org.za
Venue: Hazeldene Hall, 13 Junction Ave, Parktown, Johannesburg. www.bosombuddies.org.za.

More Balls than Most: febe@pinkdrive.co.za,
www.pinkdrive.co.za, 011 998 8022

PinkDrive: www.pinkdrive.co.za, Johannesburg:
febe@pinkdrive.co.za, 011 998 8022;
Durban: Janice Benecke: 031 201 0074/082 557 3079
janice@pinkdrive.co.za

Cape Town: Ebrahim Osman: 021 697 5650
ebrahim@pinkdrive.co.za

Prostate & Male Cancer Support Action Group,
MediClinicConstantiaberg. Contact Can-Sir: 079 315 8627 or
Linda Greeff: linda.greeff@cancercare.co.za, phone 0219443700

Wings of Hope Breast Cancer Support Group
Contact wingsofhopecancersa@gmail.com.

CHOC: Childhood Cancer Foundation SA; Head Office:
086 111 3500; headoffice@choc.org.za; www.choc.org.za

CANSA National Office: Toll-free 0800 226622

Netcare Clinton Support Group 10:00 Netcare Clinton Oncology Centre, 62 Clinton Rd. New Redruth. Alberton. Second Friday each month.

CANSA Pretoria: Contact Miemie du Plessis 012 361 4132 or 082 468 1521; Sr Ros Lorentz 012 329 3036 or 082 578 0578

Reach for Recovery (R4R) : Johannesburg Group, 011 869 1499 or 072 7633901. Meetings: Lifeline offices, 2 The Avenue, Cnr Henrietta Street, Norwood

Reach for Recovery (R4R) : West Rand Group. Contact Sandra on 083 897 0221.

Reach for Recovery (R4R) Pretoria Group: 082 212 9933

Reach for recovery, Cape Peninsula, 021 689 5347 or 0833061941 CANSA offices at 37A Main Road, MOWBRAY starting at 10:00

Reach for Recovery: Durban, Jenny Caldwell, 072 248 0008.t

Reach for Recovery: Harare, Zimbabwe contact 707659.

Breast Best Friend Zimbabwe, e-mail bbzfim@gmail.com

Cancer Centre - Harare: 60 Livingstone Avenue, Harare
Tel: 707673 / 705522 / 707444 Fax: 732676 E-mail:
cancer@mweb.co.zw www.cancerhrc.co.zw

News in brief

Huntington's 'super assassin' molecule could kill cancer

Scientists probing the reason why cancer is far less common in individuals with Huntington's disease have revealed that the gene responsible for the fatal brain condition produces a molecule that is deadly to cancer cells.

In a recent paper published in the journal EMBO Reports, scientists from Northwestern University in Chicago, IL, note exactly how they tested the molecule in human and mouse cancer cells, as well as in mice with ovarian cancer.

"This molecule," explains senior study author Marcus E. Peter, who's a professor of cancer metabolism, "is a super assassin against all tumour cells. We've never seen anything this powerful."

He and his colleagues hope that the discovery will lead to a short-lived treatment that can target and destroy cancer cells without triggering the progressive brain damage that occurs alongside Huntington's disease.

Huntington's disease is a fatal and inherited disorder that destroys nerve cells in the brain, causing a progressive decline in mental and physical ability. Symptoms will typically emerge between age 30 and 50 and progress over a period that lasts 10–25 years

<https://tinyurl.com/y8b3d7gt>

The updated stethoscope

As technology advances, the old standbys tend to get lost in the shuffle. For instance, many caregivers simply submit patients to X-rays, EKGs, and other devices, rather than pull out their trusty stethoscope. The machines take more accurate readings and maintain a record for easy reference. The stethoscope is now getting an update to compete. New advances in technology will let specially designed stethoscopes record vitals and send them to a computer or smartphone. Utilising Bluetooth technology, the data is sent to a designated cloud storage account, where it can be saved and retrieved at any time from any device.

Taking blood without a needle

Startup company, Loop Medical, is working on a needleless device to take pain-free blood samples at home. The company has just

signed a partnership agreement with Cerba HealthCare, a European leader in medical biology, to develop this unique product and bring it to the market.

In the near future, you may be able to take your own blood painlessly in the comfort of your home and the timing is perfect given that diagnoses from blood tests are increasingly common. "Currently, 70% of medical decisions are based on those analysis," says Arthur Queval, CEO of Loop Medical. "And with the rapid development of personalised medicine, this trend is likely to gain momentum."

This is good news for people who require regular blood tests – and for anyone who shies away from needles. The palm-sized device is designed to allow users to take their own blood at home without the help of a health-care professional. After being positioned on the user's arm, it will draw a sufficient amount of blood in roughly the same amount of time required for a traditional blood sample.

The samples will then be sent to a specialised lab through an established delivery protocol. Despite the development of portable diagnostic systems, blood samples still need to be tested in the lab. For Queval, "decentralised devices generally offer a limited number of tests, and it's difficult to make the cost competitive with those practiced in the laboratory."

The company will not reveal how its blood-sampling device works, but it does say that it will be internet-connected. This means that samples will be traceable from the moment blood is drawn until the results are delivered, thereby reducing the scope for errors that could lead to a misdiagnosis.

<https://tinyurl.com/y7sc5bdb>

Time is up for clinical trials that fail to publish results

For several years AllTrialsCampaign has been asking the FDA to censure sponsors who break the law in failing to report clinical trial results. The FDA has assured them, publicly and privately, that new clarifying rules - the FDAAA Final Rule - will help them do so but though there are trials on ClinicalTrials.gov whose results are years overdue, to date they have not issued a single fine, despite the power to levy up to \$10,000 per day.

So they have sent an open letter to the FDA telling them that today is the launch of an online tracker (FDAAA.trialstracker.net) so that everyone can see who is late according to the FDA's own registry data. It is 13 months since the FDAAA Final Rule that made it crystal clear who needs to report results within a year of a trial ending.

Kicking life into the immune system to fight cancer

The activation of the immune system to attack and eliminate cancer cells and tumours is proving to be an effective strategy for treating cancer. In a collaboration led by Dr. Youcef Mehellou from Cardiff University and Prof. Ben Willcox from the University of Birmingham, a series of compounds have been discovered that are able to selectively target and activate one type of immune cells, which is thought to be important in fighting cancer in humans. This activated sub-type of immune cells was then shown to be effective in eradicating bladder cancer cells.

The research was based on a naturally occurring molecule in bacteria, which is known to activate the immune response in humans. However, this molecule has poor drug-like properties. To make this

Palliative care training

Throughout the year Hospice Wits host various short courses: the 5-day Introduction to Palliative Care, 2,5-Day Grief, Loss and Bereavement Workshop, 5-day

Introduction to Paediatric Palliative Care, 3-day Non-Clinical Palliative Care, 3-Day Physical Assessment Workshop, as well as other client specific courses which they present on request.

For further details phone 011 483 9100 or email training@hospicewits.co.za.



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naturally occurring compound have improved drug-like properties, Dr. Mehellou, designed and made a series of prodrugs of this naturally compounds, which they called "ProPAgens". These showed potent activation of the immune response, which led to the elimination of bladder cancer cells.

Dr. Youcef Mehellou, who co-lead the study, said: "The compounds we discovered are very promising starting point in developing new immunotherapeutic drugs against many diseases like cancer and tuberculosis. The potency of these compounds in eradicating cancer cells is quite impressive and we are currently optimising them further with the view of studying their efficacy and safety in cancer models very soon"

<https://pubs.acs.org/doi/10.1021/acs.jmedchem.7b01824>

Trojan horse to deliver chemo to cancer cells

A research team at the University of California, Riverside has discovered a way for chemotherapy drug paclitaxel to target migrating, or circulating, cancer cells, which are responsible for the development of tumour metastases.

Until now, paclitaxel has only been used to target rapidly dividing cancer cells. The team was successful in getting the drug to piggy-back on 123B9, an agent they devised to target an oncogene called EphA2 (ephrin type-A receptor 2). EphA2 spreads cancer by allowing malignant cells to migrate from the primary tumour into circulation and eventually to adhere to other tissues.

"Once this novel tumour-homing agent binds to the EphA2 receptor, the oncogene functions as a cancer-specific molecular Trojan horse for paclitaxel, carrying the drug inside the cancer cell, killing the cell, and thwarting metastasis," said Maurizio Pellecchia, a professor of biomedical sciences at UCR's School of Medicine who led the research. "Without the targeting agent, paclitaxel cannot hitch a ride on EphA2."

Pellecchia said the road to a therapeutic for human trials is still long and includes the iterative design and synthesis of more potent and selective agents.

The University of California, Riverside

Published data cannot always be trusted

Tianjing Li, PhD, an associate professor of epidemiology at the Johns Hopkins Bloomberg School of Public Health, argued in a recent BMJ editorial that "information in the public domain cannot be trusted at face value" because companies can downplay adverse events and switch outcomes.

For example, a 2000 examination of 12 clinical trials of the drug gabapentin (brand name Neurontin) concluded that in eight of the studies researchers changed the primary outcome from what was stated in the original trial description, most often to indicate a more favorable result for the drug.

<https://tinyurl.com/y9cenbzw>

MyTherapy helping patients with medication adherence

MyTherapy, a free to use medication reminder app, is helping over 500,000 global patients adhere to their medication and get the best out of their treatment plans.

The app, which is available for free for iOS and Android devices, was launched in 2013 by smartpatient – a health software development



CHOC KIDS CYCLE EVENT
24 March 2018

PROUDLY SPONSORED BY CRICKLEY DAIRY

WHERE: GONUBIE BEACH FRONT
WHEN: SATURDAY 24 MARCH 2018
TIME: 14H00

HOW TO ENTER: CONTACT YOUR TEACHER OR CHOC LIMITED TO 500 ENTRIES
EL@CHOC.ORG.ZA OR CALL 043 748 5315 TO ENTER

company based in Munich, Germany. The MyTherapy app can be used by anybody taking regular medication, for any purpose, for any length of time. It is also designed to help users maintain a healthy lifestyle by setting health goals and encouraging users to log daily physical activities.

New mesothelioma treatment combines immunotherapy and targeted radiotherapy

Memorial Sloan Kettering in New York is now recruiting relapsed mesothelioma patients into a safety and efficacy study of stereotactic body radiotherapy (SBRT) and the immunotherapy drug avelumab. The new trial is based on the idea that radiotherapy may boost the immune system's anti-mesothelioma response and that avelumab may enhance the effect.

The new trial is based on the idea that radiation may boost the immune system's anti-mesothelioma response and that avelumab may enhance the effect.

"The combination of radiation therapy and immunotherapy may be more effective against mesothelioma than either treatment alone," writes lead researcher and radiation oncologist Andreas Rimmer, MD, in a summary of the new study.

Immunotherapy is widely believed to be one of the most promising new approaches to cancer treatment and it is currently the subject of multiple mesothelioma studies around the world. Avelumab alone is the focus of dozens of cancer trials.

Avelumab (Bavencio) works by blocking a protein on tumour cells called PD-L1. PD-L1 is one of the primary mechanisms mesothelioma cells use to avoid detection by the immune system.

The idea behind this and other immunotherapy trials is that block-

ing this protein can improve the body's ability to naturally fight off cancer. Other PD-L1 blockers include pembrolizumab (Keytruda) and nivolumab (Opdivo).

<https://survivingmesothelioma.com/new-mesothelioma-treatment-combines-immunotherapy-targeted-radiation/>

Electronic cigarettes may not be as safe as we may think

Several recent studies have suggested that electronic cigarettes may not be as safe as we may think, and a new study now adds that these popular devices leak harmful metals — some of them highly toxic.

Instead of smoke, e-cigarettes release aerosols, or “vapours,” which is why users of e-cigarettes are often referred to as “vapers,” and the act of “smoking” using this device is dubbed “vaping.”

Now, a team of scientists from the Johns Hopkins Bloomberg School of Public Health in Baltimore, MD, concludes that e-cigarette vapours could also be harmful. Senior study author Ana María Rule and team surmise that the danger may arise from the toxic content of e-cigarette heating coils.

“It’s important for the FDA [Food and Drug Administration], the e-cigarette companies, and vapers themselves to know that these heating coils, as currently made, seem to be leaking toxic metals - which then get into the aerosols that vapers inhale.”

In a previous study, Rule and colleagues identified a series of toxic metals - cadmium, chromium, lead, manganese, and nickel - in e-cigarette liquids. The new research took these findings and went further, testing the e-cigarettes of actual users in order to try to understand how exposed people were to these toxic substances, and under what circumstances.

Rule and team worked with 56 participants who used e-cigarettes on a daily basis. The researchers tested the participants’ e-cigarettes, verifying the presence of 15 metals in the refilling dispensers, the vaping liquids “loaded” into the e-cigarettes, and the vapors that resulted from the liquids’ heating.

<https://tinyurl.com/ydfdq34>

“Newer breast MRI may be more accurate and easier

In a study in Germany, the new technique reduced false-positive findings by 70 percent. The scan was also able to detect 98 percent of breast cancers correctly, according to researchers.

“This more advanced imaging technique is very good at distinguishing things that might be invasive cancer and things that are likely not cancer,” said Dr. Otis Brawley, chief medical officer for the American Cancer Society.

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Ghana scales up telemedicine

The Novartis Foundation and the Ghana Health Service have announced the successful integration and scale-up of a telemedicine service, with national coverage expected to be possible by 2019.

The telemedicine service started as a pilot model in the Amansie West District of the Ashanti Region in 2011, covering 30 communities of around 35,000 people.

The Novartis Foundation worked with local and international partners including the Millennium Promise at Columbia University; the Ghana Ministry of Health; Ministry of Communication; National Health Insurance Agency; and National Ambulance Service; St. Martin’s Hospital; MedGate; Ericsson and Airtel.

The telemedicine service uses mobile technology to connect community health workers with specialist health professionals via 24-hour teleconsultation centres. Doctors, nurses and midwives in the centres coach community health workers and advise on the treatment of their patients, particularly in emergency care.

The new test is known as diffusion kurtosis imaging. To create it, the researchers altered another special type of MRI. Then they combined the new scanning technique with software that decides whether a suspicious breast lesion is benign (harmless) or malignant (cancerous).

The new MRI “basically maps the movement of water molecules in the tissue. If a malignant tumour grows in the tissue, it disrupts the healthy tissue structure, which changes the movement of water molecules in this area,” explained the study’s lead researcher, Dr. Sebastian Bickelhaupt. He’s the head of the Breast Imaging Research Group at the German Cancer Research Centre in Heidelberg.

Currently, MRI scans are used as part of screening for women with a particularly high risk of breast cancer. The problem is that MRIs currently finds a lot of areas in the breasts that are deemed suspicious.

Along with reducing the need for unnecessary biopsies due to false positive findings, the benefits of the new MRI type include no contrast agent, the researchers said. The new test also has a shorter imaging time. Bickelhaupt said the test only takes about 10 minutes. And unlike mammography or CT scans, there is no exposure to radiation.

<https://tinyurl.com/y9mmfdkz>

Surge expected in cancers diagnosed in Australia

The number of Australians living with or beyond cancer is expected to increase by a staggering 72% in the next 22 years Cancer Council has revealed today, in a report released ahead of World Cancer Day (4 February).

The report shows that the increase in the number of Australians living with and surviving cancer will lead to almost 1.9 million Australians living with a personal history of cancer by 2040. That’s an increase from 1 in 22 Australians today, to 1 in 18 in the next 22 years.

Experts say this rise in the number of Australians living with or beyond cancer can be attributed to the country’s growing and ageing population, as well as increasing cancer survival rates thanks to better prevention, early detection and research.