



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
Wednesday 20220622

Cancer treatments

How Netflix-style algorithm may help in personalising cancer treatments
International team of researchers from the University College London (UCL) in the UK and University of California, San Diego (UC San Diego) in the US have built a similar algorithm that can one day enable doctors to look at a patient's fully sequenced tumour and customise their treatment, the Independent reported (The Tribune: 20220622)

<https://www.tribuneindia.com/news/science-technology/how-netflix-style-algorithm-may-help-in-personalising-cancer-treatments-405778>

How Netflix-style algorithm may help in personalising cancer treatments

Just as Netflix algorithm generates data to determine the shows one can choose to binge watch next, doctors will soon be able to predict how tumours can behave and thus offer personalised cancer treatments.

A typical Netflix-style algorithm analyses data on how frequently a type of programme or film is watched, and whether it's liked or not. Based on the data, new films and TV series are recommended next time.

An international team of researchers from the University College London (UCL) in the UK and University of California, San Diego (UC San Diego) in the US have built a similar algorithm that can one day enable doctors to look at a patient's fully sequenced tumour and customise their treatment, the Independent reported.

The study, published in the journal Nature, showed that the algorithm deployed Artificial Intelligence (AI) to follow the changes to DNA from the time a cancer starts to how it grows. The team believes the insights into the genetic traits that the tumour picks up as it grows, will help doctors understand how a cancer is likely to behave.

"Just as Netflix can predict which shows you'll choose to binge watch next, we believe that we will be able to predict how your cancer is likely to behave, based on the changes its genome has previously experienced," Dr Ludmil Alexandrov, UC San Diego, was quoted as saying.

“Armed with that information, we believe that doctors will be able to offer better and more personalised cancer treatment in the future,” he added.

The new algorithm can sift through thousands of lines of genomic data and pick out common patterns in how the chromosomes organise and arrange themselves. It can then categorise the patterns that emerge and help scientists establish the types of faults that can occur in cancer, the team explained.

Using the algorithm, the team looked for patterns in the fully sequenced genomes from 9,873 patients with 33 different types of cancer and identified 21 common faults.

These will now be used to create a blueprint researchers can use to assess how aggressive the cancer will be, find its weak spots and design new treatments for it.

Of the 21 signatures identified by the algorithm, the scientists found that tumours where the chromosomes have shattered and reformed were associated with the worst survival outcomes.

“To stay one step ahead of cancer, we need to anticipate how it adapts and changes. We’ve been missing the bigger picture of how vast swathes of genes can be copied, moved around or deleted without catastrophic consequences for the tumour,” said Dr Nischalan Pillay from the UCL. IANS

Health Care Services

Posts of specialist doctor vacant at Himachal's Thural hospital (The Tribune: 20220622)

<https://www.tribuneindia.com/news/himachal/posts-of-specialist-doctor-vacant-at-thural-hospital-405520>

Posts of specialist doctor vacant at Himachal's Thural hospital

The Civil Hospital, Thural, 26 km from Palampur, situated in the Sulah constituency, is crying for the attention of the authorities.

The Civil Hospital, Thural, 26 km from Palampur, situated in the Sulah constituency, is crying for the attention of the authorities.

This is the only hospital in the Changer area which caters to over 50,000 patients every year but it still lacks medical facilities. Around 300 patients visit the hospital daily.

Fullscreen

VDO.AI

At present, the posts of specialist doctor and paramedical staff are vacant, causing inconvenience to the public.

Information gathered by The Tribune reveals that the state government had upgraded the hospital from 25 beds to 100 beds in 2018 and the posts of doctor were also increased to 14. However, even after four years, the hospital has only 35 functional beds.

The posts of a radiologist and a paediatrician are lying vacant for a long time. Patients requiring ultrasound tests are referred to RP Medical College in Tanda. Ill children are suffering in the absence of a paediatrician and are referred to the Civil Hospital in Palampur or private hospitals.

The ultrasound machine available in the hospital is lying idle for the past one year in the absence of a radiologist. Likewise, the X-ray plant of the hospital has become obsolete and needs replacement.

Sat Pal, panchayat up-pradhan, who is also an Aam Aadmi Party leader, says, “There are no arrangements to cater to emergencies at the hospital. Doctors tell patients to either go to the medical college at Tanda or the Civil Hospital in Palampur. Likewise, most of the accident cases are also not attended to in the hospital. Despite repeated requests, the posts of radiologist and paediatrician have not been filled”.

Local MLA Vipin Singh Parmar, who is also the Speaker of the Assembly, says that he is well-versed with the situation. The new building of the Civil Hospital is under construction, budget allocations have already been made and efforts are on to complete the new complex at the earliest so that 100 beds could be made functional, he adds.

He says that the vacant posts of doctor will be filled as and when a new batch of doctors is available. “Hopefully, by the end of this month, these posts will be filled,” he adds.

Upgraded on paper

The state government had upgraded the hospital from 25 beds to 100 beds in 2018
The posts of doctor were also increased to 14
However, the hospital has only 35 functional beds
The posts of a radiologist and a paediatrician have been lying vacant since long in
the hospital

Covid infection

**Covid infection may increase risk of Parkinson's, mice study suggests
Parkinson's is a rare disease that affects 2 per cent of population above 55
years**

**The SARS-CoV-2 virus may increase the likelihood of the brain
degeneration found in Parkinson's disease, according to a study in mice. (The
Tribune: 20220622)**

<https://www.tribuneindia.com/news/health/covid-infection-may-increase-risk-of-parkinsons-mice-study-suggests-405461>

Covid patients commonly report symptoms such as brain fog, headaches, and insomnia, complications which are not new after a viral infection, the researchers said.

It took nearly a decade for patients to develop the neurological disease known as "post-encephalic parkinsonism" after the 1918 influenza pandemic, they said.

The study, published in the journal *Movement Disorders*, found that the SARS-CoV-2 virus could raise the brain's susceptibility to a toxin that causes the death of nerve cells seen in Parkinson's disease.

"Parkinson's is a rare disease that affects 2 per cent of the population above 55 years, so the increase in risk is not necessarily a cause for panic," said study first author Richard Smeyne, from Thomas Jefferson University, US.

"But understanding how coronavirus impacts the brain can help us prepare for the long-term consequences of this pandemic," Smeyne said.

The study expands on prior findings from the Smeyne lab indicating that viruses can increase the susceptibility of brain cells or neurons to damage or death.

In that study, the researchers discovered that mice exposed to the H1N1 influenza strain that caused the 2009 flu pandemic were more vulnerable to MPTP.

MPTP is a toxin known to cause some of the characteristic symptoms of Parkinson's disease, most notably the loss of neurons that express the chemical dopamine and increased inflammation in the basal ganglia, a brain region that is crucial for movement.

The latest study employed mice that were genetically altered to express the human ACE-2 receptor, which the SARS-CoV-2 virus utilises to get access to the cells in our airways.

These mice were infected with SARS-CoV-2 and then allowed to recover, the researchers said.

The dosage used in this research corresponds to a mild covid infection in people, with around 80 per cent of infected mice surviving, they said.

Thirty-eight days after the surviving mice had recovered, one group was given a modest dosage of MPTP that would not ordinarily trigger neuron loss.

The control group was given saline. The animals were sacrificed and their brains were examined two weeks later.

The researchers found that covid infection alone had no impact on dopaminergic neurons in the basal ganglia.

However, mice given a modest dosage of MPTP after recovering from infection demonstrated the classic pattern of neuron loss found in Parkinson's disease.

This increased sensitivity following covid infection was comparable to what was reported in the influenza trial, suggesting that both viruses might cause an equal increase in the risk of developing Parkinson's.

"We think about a 'multi-hit' hypothesis for Parkinson's -- the virus itself does not kill the neurons, but it does make them more susceptible to a 'second hit', such as a toxin or bacteria or even an underlying genetic mutation," Smeyne explained.

Both influenza and SARS-CoV2 have been found to cause a "cytokine storm" or an overproduction of pro-inflammatory chemicals.

These chemicals can cross the blood-brain barrier and activate the brain's immune cells – microglia.

The researchers found increased numbers of activated microglia in the basal ganglia of mice that recovered from SARS-CoV2 and received MPTP.

While the mechanism is not fully understood, they believe the increased microglia inflame the basal ganglia and cause cellular stress. This then lowers the neurons' threshold to withstand subsequent stress.

"We were concerned about the long-term consequences of viral infection," said Peter Schmidt, a neuroscientist from New York University in the US, who co-led the study.

The researchers are planning to determine whether vaccines can mitigate the experimental increase in Parkinson's pathology linked to prior SARS-CoV-2 infection.

They are also testing other variants of the virus, as well as doses that correspond to milder cases in humans.

Health sub-centre

Kullu: Banjar health sub-centre sans staff for 3 years (The Tribune: 20220622)

<https://www.tribuneindia.com/news/himachal/health-sub-centre-sans-staff-for-3-years-405883>

People of Sharchi panchayat of the Tirthan valley in Banjar are deprived of basic health facilities as there is neither staff nor medicines at the health sub-centre in the village. The construction of the health sub-centre had started long back by spending lakhs of rupees for the

population of 800 people living in Sharchi, Jamala, Shalwad, Barigad, Badasari and Dughigad villages but the building has never been put to use.

Sharchi gram panchayat's former president Hari Singh Thakur said the construction of the health sub-centre building had started 15 years ago but the tardy pace of the work has delayed the functioning of the centre inordinately. He said there was no staff at the centre and the building was facing utter neglect due to non-maintenance.

Local residents said the health sub-centre, which was being run from a private building, has been non-functional for the past three years. They said earlier an employee was working here, but after his retirement the department didn't bother to fill the vacant posts.

The villagers have to go to Gushaini or Banjar even for cold and cough medicines. People are facing difficulties in getting treatment. There is anger among the people. They said the people would protest if the services at the health sub-centre were not restored.

AAP leader Puran Chand said people were struggling for basic facilities such as health, education and roads. There was no paediatrician and radiologist even in the Regional Hospital, Kullu. He said the claims of the government of providing door to door medical facilities were fake.

Coronavirus India Live Updates

Coronavirus India Live Updates: India records 12,249 fresh cases; active cases cross 81,000

Coronavirus India Live Updates: Daily covid cases continued to rise in states across the (The Tribune: 20220622)

<https://indianexpress.com/article/lifestyle/health/india-covid-cases-surge-new-live-updates-omicron-7983401/>

Coronavirus in India Live Updates: A health worker administers a dose of Covid-19 vaccine to a beneficiary, at district hospital in Noida. (PTI)

Coronavirus India Live Updates: India recorded 12,249 fresh Covid-19 cases in the last 24 hours ending at 8 am on Wednesday. With this, the total number of active cases crossed 81,000, according to the latest data released by the Union Ministry of Health and Family Welfare.

TB test kit

Cutting Edge: New TB test kit can detect latent infection

The home-grown Cy-TB is injected just under the skin on the arm which forms a bump. This is then measured two to three days later to see whether the person has the infection. The bump grows larger if they are carriers of the pathogen, says Anonna Dutt. (The Indian Express:20220622)

<https://indianexpress.com/article/lifestyle/health/cutting-edge-new-tb-test-kit-can-detect-latent-infection-7983000/>

The test, which will be manufactured and marketed as Cy-TB by the Serum Institute of India, is a slightly tweaked version of a century-old test. (Representational)

With India chasing the target of eliminating tuberculosis by 2025, five years ahead of the global sustainable development goal, Union Health Minister Mansukh Mandaviya recently announced a “Made in India” TB skin test to be used in the disease control mission.

The Indian Express

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Psoriasis

Expert busts some common myths about psoriasis

"How many times have you had to explain to someone that psoriasis isn't contagious? We're here to settle that," Ayurvedic expert Dr Nitika Kohli wrote on Instagram (The Indian Express:20220622)

<https://indianexpress.com/article/lifestyle/life-style/expert-busts-some-common-myths-about-psoriasis-7942392/>

psoriasis There are different types of psoriasis with very different symptoms (Source: Pixabay) Psoriasis is a skin condition that leads to itchy rashes and scaly patches, most commonly on the knees, elbows, trunk and scalp. It is a common, long-term disease with no cure, according to Mayo Clinic. While a lot is known about the disease, there are still several misconceptions about psoriasis.

The Indian Express

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International Day of Yoga

International Day of Yoga: Why yoga should be a part of your fitness regime According to an expert, when people club a personalised fitness approach with yoga, they are able to achieve their goals much faster and more effectively (The Indian Express:20220622)

<https://indianexpress.com/article/lifestyle/health/international-day-of-yoga-fitness-regime-health-benefits-7981459/>

yoga, yoga for fitness, health benefits of yoga, yoga for health, yoga and fitness, why you should do yoga, International Day of Yoga, indian express news Yoga can not only improve your flexibility, but also let you perform complex asanas. (Express photo by Nirmal Harindran) There are many things that people can do for their fitness, especially if they are looking to stay in shape. Yoga is one of them. Not only does it help a person stay healthy, it can also enable weight loss, overall mood-boost and flexibility.

Prenatal yoga

When can women start with prenatal yoga, and what are its benefits? Prenatal yoga concentrates on positions that are especially meant for pregnant women, Dr Swati Gaikwad, consultant obstetrician and gynaecologist, Motherhood Hospital, Pune told indianexpress.com (The Indian Express:20220622)

<https://indianexpress.com/article/lifestyle/health/survey-pregnant-women-prenatal-yoga-benefits-7980480/>

yogaThe correct yoga poses and breathing techniques can soothe you down and help you to respond calmly (Source: Getty Images/Thinkstock)

Ahead of International Day of Yoga, a prenatal yoga survey conducted amongst 6,000 expecting and new mothers revealed that while 91 per cent said that prenatal exercise is healthy during pregnancy, only seven per cent actually practiced it. According to the Prenatal Yoga Survey conducted by Mylo, a full-stack D2C platform for expecting and new mothers, 85 per cent of the respondents said yoga is beneficial during pregnancy and also after childbirth.

The Indian Express

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Angioplasty

How angioplasty saved a 96-year-old Heart attack is a fatal condition in which the blood supply to the heart is suddenly blocked due to clotting. This condition is very common after the age of 50 years. (The Indian Express:20220622)

<https://indianexpress.com/article/lifestyle/health/how-angioplasty-saved-a-96-year-old-7983274/>

Angioplasty, heart diseaseThen an angioplasty was done, as part of which a wire is inserted through the groin all the way to the heart to clear the clots. This treatment is extremely safe even for elderly patients as it requires a very small incision.

Is it possible to perform an interventionist heart procedure on a 96-year-old who has had an acute heart attack? That was the question racing in Dr Bhusan Bari's mind. The consultant cardiologist at Manipal Hospital, Pune, was not too sure about an emergency angioplasty that was the only shot at saving the woman's life. And in the end, it did.

India reports 12,249 new COVID-19 cases

India reports 12,249 new COVID-19 cases, 13 deaths (The Hindu:20220622)

<https://www.thehindu.com/news/national/india-reports-12249-new-covid-19-cases-13-deaths/article65551654.ece>

Active coronavirus cases up by over 2,300

India reported 12,249 new coronavirus infections and 13 deaths, while active cases went up by over 2,300 in a 24-hour span, according to the Union Health Ministry data updated on June 22.

The latest updates pushed the country's overall Covid numbers to 4,33,31,645 cases, 5,24,903 deaths and 81,687 active cases, the data released at 8 a.m. showed.

Women

Women Uninterrupted | Podcast Series (The Hindu:20220622)

<https://www.thehindu.com/sci-tech/health/women-uninterrupted-podcast-series/article65549706.ece>

Women Uninterrupted is an inter-generational podcast bringing you different, difficult and uninterrupted conversations about being a woman

“I hate hearing my own voice.”

“My picture for the cover? You said it’s a podcast and I don’t have to show my face!”

Omicron

Omicron less likely to cause long COVID than Delta variant: Lancet study(The Hindu:20220622)

The researchers found that the odds of experiencing long COVID were between 20-50% less during the Omicron period versus the Delta period, depending on age and time since vaccination

The Omicron variant of the SARS-CoV-2 virus is less likely to cause long COVID than the Delta strain, according to a study published in The Lancet journal.

New Cases

India reports 12,249 new Covid-19 cases, 13 deaths in last 24 hours (The Times of India:20220622)

<https://timesofindia.indiatimes.com/india/india-reports-12249-new-covid-19-cases-13-deaths-in-last-24-hours/articleshow/92377870.cms>

India's active cases shot up to 81,687 with an increase of 2,374 cases, according to Union health ministry data updated on Wednesday morning. The active cases comprise 0.19 per cent of the total infections.

With 13 new fatalities officially reported in the last 24 hours, India's death toll related to Covid-19 climbed to 5,24,903 since the start of the pandemic in 2020.

With 9,862 recoveries from coronavirus in the last 24 hours, the overall recoveries since the beginning reached 4,27,25,055, while the national recovery rate was recorded at 98.60 per cent, the ministry press release said.

While the daily positivity rate is recorded at 3.94 per cent, the weekly positivity rate stands at 2.90 per cent.

The last 24 hours saw 3,10,623 coronavirus tests conducted across the country. India has conducted a total of 85.88 crore tests so far.

Since the beginning of the pandemic in India, 196.45 crore Covid-19 vaccine doses have been administered in the country under the nationwide inoculation drive.

India's Covid-19 tally had crossed the one-crore mark in December, 2020. The country crossed the grim milestone of two crore in May, last year and three crore in June, 2021. The four crore mark was breached in January, this year.

Healthy Life (Dainik Bhasker:20220622)

<https://epaper.bhaskar.com/detail/1414993/40307068263/mpcg/22062022/194/image/>

भास्कर खास • जो लोग संतुलन नहीं बना पाए, वे अधिक उम्र और अधिक वजन वाले थे, उन्हें डायबिटीज भी थी 10 सेकंड तक एक पैर पर संतुलन बनाकर खड़े हो पाएं तो यह अच्छी सेहत का संकेत, ऐसा कर लेने वाले लोगों के अधिक जीने की संभावना

एजेंसी | तदन

आम तौर पर खिलाड़ियों की फिटनेस जांचने के लिए फ्लैमिंगो बैलेंस टेस्ट यानी एक पैर पर खड़े होकर संतुलन जांचने के लिए कहा जाता है। इससे मांसपेशियों की क्षमता पता चलती है। अब शोधकर्ताओं ने इसे अंधेड़ और उम्रदराज लोगों की सेहत जांचने का माध्यम बनाने की भी बात कही है। उनका कहना है कि आप 10 सेकंड तक एक पैर पर संतुलन बनाकर खड़े रह सकते हैं तो आप स्वस्थ हैं। अंधेड़ और उम्रदराज लोगों के मामले में यह छोटा सा टेस्ट बताता है कि आपका शरीर और कितने दिन चलने में सक्षम है।

अमेरिका, यूके, ऑस्ट्रेलिया, फिनलैंड और ब्राजील के विशेषज्ञों समेत ब्रिस्टल मेडिकल

शोधकर्ता बोले-फ्लैमिंगो जैसा बैलेंस टेस्ट रूटीन हेल्थ चेकअप में शामिल हो



शोधकर्ताओं का कहना है कि मध्य आयु में फ्लैमिंगो की तरह खड़े रहने का टेस्ट रूटीन हेल्थ चेक-अप में शामिल किया जाना चाहिए। उनके मुताबिक, यह टेस्ट सुरक्षित है और इसे रोजमर्रा के अभ्यास में आसानी से शामिल किया जा सकता है क्योंकि इसमें एक या दो मिनट से भी कम समय लगता है।

स्कूल के अंतरराष्ट्रीय समूह ने अपनी तरह की इस स्टडी को हाल ही में पूरा किया है। उन्होंने इसमें 12 साल तक संतुलन और मृत्यु दर के संबंधों की जांच की। शोधकर्ताओं का कहना है कि यदि आपको संतुलन बनाने में परेशानी होती है तो यह गंभीर लक्षण हो सकता है। अंधेड़ उम्र और उम्रदराज लोग संतुलन नहीं बना सकते तो 10 साल के भीतर उन्हें

जीवन का खतरा रहता है। शोधकर्ताओं का कहना है कि शोध में स्पष्ट कारण सामने नहीं आए हैं, लेकिन नतीजे चौंकाने वाले हैं। शोध को ब्रिटिश जरनल ऑफ स्पोर्ट्स मेडिसिन में प्रकाशित किया गया है। शोध के दौरान टीम ने 51 से 75 साल के 1702 लोगों के डेटा का अध्ययन किया। पहले हेल्थ चेक-अप किया गया। इसके बाद उन्हें 10 सेकंड एक पैर पर

संतुलन बनाने को कहा गया। उन्हें तीन बार संतुलन बनाने की कोशिश करने को कहा गया। इस दौरान देखा गया कि पांच में से एक व्यक्ति (20%) इस टेस्ट में पास नहीं हो पाए। 71 से 75 साल वाले 54% बुजुर्ग संतुलन नहीं बना पाए, जबकि 51 से 55 साल वाले ऐसे लोगों की संख्या महज 5% रही। 56 से 60 साल वाले 8% जबकि 61 से 65 साल वाले 18% लोग ही एक पैर पर खड़े हो पाए। जो लोग टेस्ट में असफल रहे, उनके बुजुर्ग होने, अधिक वजन होने और डायबिटीज होने की आशंका अधिक थी। इन लोगों पर सालों तक नजर रखी गई। औसत 7 साल में 123 लोगों (करीब 7%) की मौत हो गई। इससे पहले हुए ऐसे ही शोधों में संतुलन न बना पाने पर स्ट्रोक और डिमेंशिया का खतरा बताया गया था।