

A summary of general medicine news that affects your patients, your practice, and you.

Cancer Vaccines Show Potential in Phase 3 Trials

Vaccines for prostate cancer, melanoma, and lymphoma have achieved positive results in phase 3 clinical trials, according to a report in the *Los Angeles Times*.

At the annual meeting of the American Society of Clinical Oncology, researchers reported that a vaccine against follicular lymphoma called BiovaxID (Biovest International, Inc.), prolonged remission after chemotherapy by more than 1 year, on average, and that a melanoma vaccine caused tumors to shrink in twice as many patients as those receiving a standard US Food and Drug Administration (FDA)-approved therapy. Investigators at this year's American Urological Association meeting reported that the vaccine sipuleucel-T (Provenge, Dendreon Corporation) extended the lives of men with metastatic prostate cancer by 4 months, on average.

Currently, vaccines for hepatitis B and genital human papillomavirus have received FDA approval. Both are

potentially cancer-preventive, targeting viruses that can lead to cancer.

The newer vaccines are therapeutic, not preventive. Patients with cancer are vaccinated in an effort to energize their immune systems. Researchers are hoping that this immune boost might also ward off cancer recurrences.

The three vaccines have not been shown to be effective in all patients. In the melanoma vaccine trial, only patients with certain tissue types were included. In the lymphoma vaccine trial, only patients who responded to chemotherapy and remained in remission for at least 6 months were eligible to receive the vaccine.

According to the report in the *Los Angeles Times*, some investigators claim that the recent successes with therapeutic cancer vaccines are promising because the results suggest that, with combination therapies and careful patient selection, the vaccine strategy could work to fight cancer.

Reprogramming Technique Yielded Live Mouse Offspring from Skin Cells

Two independent groups in China have reprogrammed mature skin cells of mice to an embryonic-like state and used the resulting cells to create live mouse offspring.

Qi Zhou, PhD, at the Chinese Academy of Sciences in Beijing injected induced pluripotent mouse stem cells into early-stage embryos. Of 37 stem-cell lines created by the reprogramming, three yielded 27 live offspring, according to a study in *Nature*. One of the male pups mated with a female and produced young of its own. According Dr. Zhou, some of the offspring mice were as much as 95% genetically identical to the adult mouse whose cells were originally reprogrammed.

Shaorong Gao and colleagues at the National Institute of Biological Sciences in Beijing also used induced pluripotent stem cells to produce four live births, with one mouse pup reaching healthy adulthood. Their results were published in the journal *Cell Stem Cell*.

The use of these induced pluripotent stem cells for reprogramming may bring scientists one step closer to creating medically useful stem-cell lines for treating human disease without the cloning and embryo-destroying techniques

traditionally used to derive true embryonic stem-cell lines, said a report in the *Wall Street Journal*.

Health Officials Prioritize H1N1 Vaccine Recipients

An Advisory committee to the Centers for Disease Control and Prevention has recommended a strategy to ration the H1N1 flu vaccine among 159 million Americans, or about half the population, in the likely event that there will not be enough vaccine to immunize every American in time for the anticipated escalation in cases this fall and winter.

Pregnant women, parents and caretakers of young children, all health care workers, people between the ages of 6 months and 24 years, and people ages 25 to 64 with medical problems such as asthma, diabetes, or heart disease should be first in line to be vaccinated, the committee suggested. The vaccine is also recommended for people caring for infants less than 6 months old to prevent them from infecting the babies; infants are at high risk but are too young for the vaccine to work. The last to be eligible for the vaccine will be healthy people over 65, who are reportedly least likely to contract swine flu.

More than 1 million Americans have already been infected with H1N1, more than 5,000 have been hospitalized since the outbreak began, and 302 have died, according to a report in the *New York Times*. The virus continues to spread globally.

Zicam Associated With Loss of Smell

Zicam Cold Remedy Nasal Gel, Zicam Cold Remedy Nasal Swabs, and Zicam Cold Remedy Swabs, Kids Size (Matrixx Initiatives, Inc.) are associated with anosmia—long-lasting or permanent loss of smell—according to a public health advisory from the US Food and Drug Administration (FDA). These products, which were discontinued in June 2009, are zinc-containing nasal cold remedies used to reduce the duration and severity of cold symptoms.

Since Zicam Cold Remedy Nasal Gel was introduced in 1999, the FDA has received more than 130 reports of anosmia associated with the use of Zicam products. The loss of sense of smell may be long-lasting and even permanent in some people. The FDA recommends that consumers who may still have the products in their homes stop using them and throw them away. This advisory does not concern oral zinc tablets and lozenges taken by mouth.

Sleep Deprivation and Hypertension Linked

Middle-aged adults who routinely get fewer than 7 to 8 hours of sleep a night may be at risk for developing hypertension, according to study in the *Archives of Internal Medicine*.

For 5 years, Kristen L. Knutson, PhD, and colleagues at the University of Chicago, recorded blood pressure readings and sleep duration of 578 adults aged 33 to 45 years at baseline. The researchers found that adults who slept fewer hours than other study participants were significantly more likely to have higher blood pressure readings. Additionally, for every hour less of sleep, the odds of developing hypertension rose an average 37% over 5 years, and for every 2 hours less of sleep there was an average 86% increased risk of developing high blood pressure over 5 years.

Tourette Syndrome More Common in Children Than Realized

Tourette syndrome occurs in three out of every 1,000 school-aged US children, or approximately 150,000, and is more than twice as common in white children compared with blacks or Hispanics, according to a study conducted by the Centers for Disease Control and Prevention. The data suggest that the condition is more common than previously believed.

Researchers interviewed parents or guardians via telephone in more than 91,000 households. Interviewees were asked if a doctor had ever diagnosed their child with

Tourette syndrome and about diagnoses of depression, attention deficit hyperactivity disorder, and other behavioral problems or developmental disabilities.

Investigators found that the Tourette rate in white children was about four per 1,000, while the rate for both blacks and Hispanics was about 1.5 per 1,000. The study also showed that most cases of Tourette syndrome were mild, but one in four were, in the parent's opinion, moderate or severe. Boys were three times more likely to have the condition than girls. Additionally, about 80% of the children with Tourette's had been diagnosed with another mental illness or developmental disability.

Electronic Devices Behind Trend in Lack of Sleep Among Teens

Many teenagers who use electronic devices such as computers, cell phones, and televisions do not get adequate sleep on a daily basis, according to a study in *Pediatrics*.

The study, conducted by Mark Hamer, PhD, of the University College London, United Kingdom, and colleagues, included 100 participants aged 12 to 18 years. Participants filled out a questionnaire about their multitasking habits and how much time they spent after 9 pm using various electronic devices. Parents filled out a separate form with demographic information.

On average, participants engaged in four technology activities, with watching television, being online, taking on the phone, and listening to an MP3 player the most common activities. The average multitasking rating was the equivalent of a teen doing one activity for 5.3 hours or doing four activities for 1 hour and 20 minutes each, the study authors said.

Teenagers who slept 8 to 10 hours per night tended to have a lower multitasking index. Teenagers with a high multitasking index also drank more caffeine. Of the 85% of adolescents who reported drinking caffeine, 11% reported drinking the equivalent of four espressos a day.

Only 20% of participants obtained the recommended 8 to 10 hours of sleep. Those who got inadequate sleep were more likely to fall asleep during class, the researchers said. Although caffeine consumption tended to be lower in the group getting a full night's sleep, that correlation did not reach statistical significance. ■

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