

INDUSTRY INSIGHTS



Minimizing The Effects Of Radiation Therapy

New research conducted at the University of Kansas Medical Center could make treatment for gastrointestinal cancers safer -- while also helping to mitigate the dangers of nuclear accidents and terrorist attacks. The research, led by Subhrajit Saha, Ph.D., assistant professor in the Department of Radiation Oncology at KU Medical Center, began more than five years ago when his team embarked on a quest to understand the biology behind radiation-induced gastrointestinal syndrome (RIGS) -- which is a serious risk for people being treated for stomach, pancreatic, colorectal and other cancers in the abdominal area. Because there is no drug treatment for RIGS, doctors must turn to radiation to treat their patients, which requires them to use extreme caution up to the point of compromis-

ing on the necessary treatment. This is of specific concern to cancer patients as more than half of patients treated with abdominal radiotherapy are affected by RIGS. "That's why when the colon is involved, doctors don't want to treat with radiation," said Saha. "And often they can't use aggressive doses of radiation even for other organs in the area because of the sensitivity of the epithelium. They have to be very, very careful." RIGS also occurs when people are subjected to radiation through a nuclear accident or a nuclear attack. "This is hugely significant -- the government has been investing in research for an effective countermeasure for terrorism involving radiation," said Saha. The researchers had read studies showing that WNT proteins -- a family of proteins that regulate the proliferation of cells, and related signaling

-- were very important for the intestinal stem cell renewal and proliferation. To learn more, the researchers set up a mouse model to halt the release of all 19 varieties of WNTs specifically produced by macrophages. They found that mice without macrophage-derived WNT were much more sensitive to radiation and had more severe intestinal injury from radiation compared to mice who had not been treated. Additional studies showed that damage could be repaired in mice treated with macrophages capable of releasing WNT proteins. Saha's team is currently working to develop small molecules that can modulate these macrophages to augment their role in regeneration. "We are confident that we can come up with an answer for the mitigation of acute radiation syndrome very soon," he said.

Spending To Fall 35% In Two Decades Under Senate Healthcare Bill

Senate Republicans' bill to repeal and replace Obamacare will cut federal Medicaid spending by 35% over two decades compared with current spending, according to a new Congressional Budget Office report. Democrats in the Senate had asked the nonpartisan agency to estimate outside the typical 10-year budget window, because the Better Care Reconciliation Act changes the growth rate for the per-capita cap in the ninth year. The CBO report may make it more difficult for GOP leadership to line up moderate votes to pass the bill, and they may have to scrap the bill's proposed change to a lower inflation rate in 2025 to ensure passage.

Until then, the cap for the federal contribution is expected to be higher than projected growth for the elderly and disabled, and lower than the growth rate for healthy children and adults. All groups would have the growth pegged to medical inflation, but the elderly and disabled would have medical inflation plus 1 percentage point. In 2025, that growth rate would be limited to general inflation, which the CBO projected would be 2.4% annually. "In later years, (the) gap would continue to widen because of the compounding effect of the differences in spending growth rates," the CBO report said. Disabled children are exempt from any cap in the bill.

The agency did not make an estimate of how the declining federal commitment to Medicaid would affect coverage, but said "enrollment in Medicaid would continue to fall." Sen. Ron Wyden (D-Ore.) said the bill would put states "in a budgetary vise, pushing them to choose between cutting Medicaid, raising taxes on the middle class, or cutting other important state spending like funding for schools." "This analysis makes clear that the massive cuts to Medicaid are only going to get worse," he said.



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