21% of those deaths overall (29% of cancer deaths in high-income countries and 18% in low/middle-income regions). Alcohol use caused about 5% of global cancer deaths, as did low fruit and vegetable intake.

“These results clearly show that many globally important types of cancer are preventable by changes in lifestyle behaviors and environmental interventions,” said senior study author Majid Ezzati, Assistant Professor of International Health at the Harvard School of Public Health.

Other experts agree. “What’s interesting is that even without the potential benefits of early detection and treatment, at least one-third of cancer deaths are preventable,” said Michael Thun, MD, MS, Vice President of Epidemiology and Surveillance Research at the American Cancer Society.

The findings highlight areas where the United States has made considerable progress in reducing the cancer burden. For instance, the impact of unsafe sex on cancer deaths (through transmission of human papilloma virus [HPV], which can cause cervical cancer) is higher in low- and middle-income regions of the world than it is in high-income regions like the United States, where screening for cervical cancer through Pap tests is widespread. Likewise, the risks from contaminated injections remain a problem in low-income nations that have poor sanitation and few resources for vaccinations against infectious agents like hepatitis that can cause cancer.

But the report also shows the tremendous toll that lifestyle factors like overweight and physical inactivity are taking in the United States. After smoking and alcohol use, overweight/obesity was the third most important cause of cancer death in high-income nations, the researchers found. (In low- and middle-income nations, low fruit and vegetable intake was the third most common risk factor for cancer deaths.) It was an especially important factor in colorectal cancer, breast cancer, and uterine cancer. Thun noted that the impact of excess weight on cancer may be even greater than reflected in the Lancet report because the rate of overweight and obesity is increasing so rapidly, particularly in the United States and other developed nations.

The study illuminates opportunities for public health policy and clinical interventions to reduce the global cancer burden, Thun said. For instance, promoting greater tobacco control, through the Framework Convention on Tobacco Control and other means, could greatly reduce the deadly impact of smoking. The development of vaccines for HPV holds great promise for reducing the number of cervical cancer cases and deaths, especially in regions of the world where screening is not widely available.

These types of measures are crucial in regions of the world where advanced medical facilities are not readily accessible, Ezzati said. “To win the war against cancer we must focus not just on advances in biomedical technologies, but also on technologies and policies that change the behaviors and environments that cause those cancers,” he said.

CANCER SURVIVORS NEED BETTER LONG-TERM FOLLOW UP

A report from the National Cancer Policy Board, the Institute of Medicine, and the National Research Council is calling on health professionals, insurers, advocates, and the government to work together to improve follow-up care for the 10 million cancer survivors in the United States. The report, From Cancer Patient to Cancer Survivor: Lost in Transition, makes 10 specific recommendations for changing the way the United States addresses the long-term consequences of cancer and its treatments.

“This is very practical information intended to shift our thinking of what we need to do for cancer survivors,” said Bonnie Teschendorf,
PhD, one of the authors of the report and Director of Quality of Life Science for the American Cancer Society. “The focus has been on ‘cure.’ Now we recognize that many survivors have late effects from treatment, second cancers, and related psychosocial problems. We hope the book will trigger some changes in practice, especially patient education, and influence policy.”

One of the ways health care providers can improve care for cancer survivors is by giving them a comprehensive summary of their cancer care and a detailed plan for follow-up care. The doctor who provided most of their oncology treatment should write this “Survivorship Care Plan,” the report said. It should include detailed information about diagnosis (type and stage of cancer, treatment schedules and dosages, side effects, etc.) as well as information on future screening practices and other precautions patients should take.

Having such a plan could dramatically simplify future medical care for cancer survivors, said Teschendorf. “What happens now in the majority of centers is . . . once a patient has completed [cancer] treatment, they’re sent back to their primary care physician and there’s not a real clear plan for what will happen next,” she said.

Over the course of treatment, patients may collect dozens, if not hundreds, of documents relating to their illness, she explained. Many patients don’t know how much of this information is important for their primary care physician to have—and physicians may not have time to sift through so many documents looking for key facts.

Consolidating the basic facts about a patient’s cancer treatment and recommended follow up in one place would make it easier for primary care physicians to give cancer survivors the care they need, Teschendorf said. Oncologists could use the discharge summary they already write for their own records as the starting point, she added.

“With a good document, a primary care doctor should be able to conduct follow up,” she said, “but he needs information on treatments [the patient received] and what the expectations and long-term follow up should be.”

Along with better instructions for follow-up care, the report calls for the development of more evidence-based guidelines to standardize what that follow-up care should be, and the creation of a system to monitor the quality of that care.

“Cancer survivors represent a very large at-risk population and without evidence-based clinical practice guidelines, health care providers will vary widely in their practices, leading to inefficiencies in care delivery,” the executive summary states.

In addition, the report says health care providers need better training in survivorship care and calls on professional associations, voluntary health organizations, and the National Cancer Institute to offer continuing education in this field. Extra training should be offered not only to oncologists and other doctors who provide initial cancer treatment, but also to primary care doctors, nurses, and social workers, the report says.

Another recommendation urges federal agencies like the Centers for Medicare and Medicaid Services, the National Cancer Institute, the Department of Veterans Affairs, and others to support demonstration programs to test new ways of delivering survivorship care. The report describes certain promising models, including one where nurses have primary responsibility for cancer follow up, and another that would set up specialized cancer survivorship clinics to deliver many types of follow-up care at one site.

Improving insurance coverage for cancer survivors is another of the report’s core recommendations. Although the majority of cancer survivors are 65 years or older and thus covered by Medicare, the report describes serious gaps in the insurance safety net for other survivors.
For instance, cancer survivors may be denied health insurance in some states because of their cancer history, or may have to pay extra to receive coverage. And even insured patients may still struggle to pay for prescriptions or other care.

The report suggests federal support for state programs that provide insurance for high-risk residents, as well as expansion of federal programs that offer services like screening to low-income people. And it says government and private insurers should expand their coverage of survivorship-related care.

That recommendation is key for implementing many of the report’s other suggestions, Teschendorf said.

“There’s no reimbursement code for follow-up clinics now,” she explained. “This is a springboard to figure out how Medicare and private insurers would pay for this type of visit.”

The full report is available to read online or purchase from the National Academies Press at http://www.nap.edu/catalog/11468.html. Related resources, including fact sheets for survivors and doctors, can be downloaded from the Institute of Medicine Web site (http://www.iom.edu/report.asp?id=30869).

A CANCER TREATMENT IN THE SPICE CABINET?

A growing body of research suggests the spice turmeric has potent anticancer activity—and researchers have launched a slew of human trials to find out just how powerful it may be.

“I think the promise is enormous,” said Bharat Aggarwal, PhD, Professor of Cancer Research, Cancer Medicine, and Chief of the Cytokine Research Laboratory in the Department of Experimental Therapeutics at the University of Texas MD Anderson Cancer Center. Aggarwal has conducted numerous in vitro and animal studies of turmeric and its primary component, curcumin (diferuloylmethane), and recently gave a lecture discussing “Curcumin as a Paradigm for Nutrition-based Therapy” at the annual conference of the Society for Integrative Oncology.

“Turmeric and curcumin are anti-inflammatory,” Aggarwal said. “That has been described in traditional medicine like Ayurveda for thousands of years.”

More recently, Aggarwal and colleagues have shown that curcumin inhibits inflammation by reducing activation of the IkBα kinase/NF-κB pathway. As researchers have come to understand the role inflammation plays in cancer, they have grown more interested in the ability of curcumin to prevent or treat this disease.

NF-κB plays a key role in regulating several other cellular processes such as apoptosis and cell proliferation, suggesting curcumin might exert anticancer activities independent of its inhibition of inflammation. And, recent preclinical studies have documented that curcumin can inhibit angiogenesis, induce apoptosis, and slow metastasis.

What’s more, these effects do not appear to be limited to just one type of cancer. Curcumin has shown effects against metastatic melanoma (Cancer 2005;104:879–890), mantle cell lymphoma (Biochemical Pharmacology 2005;70:700–713), and other cancers. Most recently, Aggarwal published a study in the journal Clinical Cancer Research (2005;11:7490–7498) showing that dietary curcumin inhibited lung metastases in mice with advanced human breast cancer. In addition, it appeared to moderate the toxicity of paclitaxel and enhance the drug’s positive effects—another potential benefit to using curcumin more broadly in cancer therapy.

However, at least one laboratory study also suggests that curcumin may inhibit the proapoptotic action of camptothecin, mechlorethamine, and doxorubicin in vitro and the antitumor activity of cyclophosphamide against