CRC RESEARCH #17

Sunday, November 18, 2007

1. FDA Issues Updated Advisory Regarding Use of Red-Blood Cell Boosters

FDA has approved revised labeling for erythropoiesis-stimulating agents (ESAs) – drugs used to treat low red blood cell counts induced from chemotherapy. The ESAs include: **Procrit, Epogen and Aranesp**. Serious adverse effects of ESAs were reported in certain groups of patients, and in March 2007 the FDA issued a Public Health Advisory about the use of these drugs. Since then, 2 advisory committee meetings have been held and the FDA issued another Public Health Advisory in November and approved revised labeling for ESAs. The following points were made:

- ESAs may shorten survival time or may cause tumour growth
- ESAs should only be used to treat chemo-induced anemia
- ESAs should not be used to treat symptoms of anemia
- ESA treatment should be stopped upon completion of chemo

NB: The studies that reported increased tumour growth or decreased survival with ESAs targeted a hemoglobin level that is higher than the approved level. No clinical data was available for lower levels of hemoglobin to determine if survival or tumour growth were affected. Nevertheless, the advisory was implemented. *U.S. Food and Drug Administration. FDA Public Health Advisory. Nov 8, 2007. Available at http://www.fda.gov/cder/drug/advisory/RHE200711.htm(Accessed November 9, 2007)*

2. Increased Glucose Level is a Strong Risk Factor For Colorectal Cancer - Maintaining Glycemic Index May Help Reduce the Risk

According to the results of a study published in Gastroenterology, patients with high levels of insulin and glucose are at increased risk of developing recurrent colorectal tumours, with elevated glucose providing the strongest risk factor for recurrence of these lesions. The clinical management of glycemic control is important in reducing the risk of tumour recurrence and colorectal cancer because even a modest elevation of fasting glucose can affect a patient's risk of colorectal cancer. Patient's who presented with the highest levels of both insulin and glucose had an approximately 50% increased risk of colorectal tumour recurrence. The Polyp Prevention Trial (headed up by NCI) found a recurrence for colorectal tumours of 39.6% over 4 years. The researchers concluded that it is particularly important to manage glucose levels after a patient has had colorectal cancer or a tumour removed. In the Polyp Prevention Trial, it was found that even a mildly elevated glucose level showed increased rates of crc. *American Gastroenterological Association, "Increased Glucose Level is a strong risk factor for colorectal cancer", Nov. 1/07 www.gastro.com*

3. Cutaneous Side Effects of Colorectal Cancer tx May Predict Efficacy

According to new studies reported recently at the American Society of Clinical Oncology (ASCO), treatment related skin toxicity actually benefits the patient. The studies suggest that the worse the skin toxicity side effects due to anti-epidermal growth-factor receptor (EGFR) therapy, the more encouraging the outlook for most metastatic colorectal patients receiving the treatment. Physicians should, therefore, view the suppurative rashes, pain, itching, inflammation

and other class-specific side effects of EGFR drugs such as vectibix not with apprehension but as "predictors of drug therapy efficacy". *Dermatology Times – Nov. 7, 2007*

4. Erbitux Improves Survival In CRC

Researchers from Canada and Australia recently concluded that Erbitux as a single agent in the treatment of crc improves overall and progression-free survival while maintaining quality of life for patients with recurrent crc. The trial included 572 patients with crc who had either been previously treated with oxaliplatin, irinotecan or 5FU or were not eligible to receive treatment with these chemo agents. Trial patients were treated with either erbitux or best supportive care and the researchers concluded that erbitux improves overall survival and progression free survival and preserves quality of life in patients with crc for whom other treatments had failed. *Jonker D, et al., Cetuximab for the treatment of colorectal cancer. New England Journal of Medicine. 2007; 357: 2040-2048*.

5. Hope For Liver Mets Patients From CRC

The largest of its kind in the world, the SIRFLOX study is underway in Australia, New Zealand, the US and Europe with patients being accepted into the study until December 2008. The study is being sponsored by biotech company Sirtex Med Ltd. The study is designed to discover whether selective internal radiation therapy (SIRT – where microscopic radioactive particles are injected into the bloodstream of the liver, where they target tumours with a single, high dose of radiation while sparing healthy tissue, delivering up to 40x more radiation to the liver tumours than conventional radiationtherapy) in combination with gold standard folfox chemo is more effective than chemo alone for the one in three colorectal cancer patients who have inoperable liver tumours. Half will receive the combo regimen and half will receive the chemo alone. *www.pharmalive.com/News*

6. Mayo Clinic Study Points to a Possible Biomarker for Colon Cancer in People 50 and Under

An abnormality of chromosomes long associated with diseases of aging has, for the first time, been linked to colon cancer in people 50 years old and younger, an age group usually considered young for this disease. Mayo Clinic Investigators found that the caps on the ends of the chromosomes called telomeres, which keep the chromosomes from unraveling usually shorten with aging and are associated with many diseases of aging, including cancer. **Shortened telomeres have been found in colon cancer tumour cells, but this study links these telomeres to colon cancer.** They found that the colon cancer patients had abnormal telomeres that were unusually short, particularly for a group of patients considered young for a colon cancer. And younger patients are likely to develop a type of crc that is biologically distinct from colon cancer in older patients. Researchers are hoping to one day use telomere length as a biomarker of cancer or an early warning system that can alert physicians to pre-symptomatic cancerous changes that are underway, because telomere length can be repaired. www.mayoclinic.com/News

7. Vitamin D May Reduce Colorectal Cancer Mortality

According to the results of a study published in the J of the National Cancer Institute, higher circulating vitamin D levels may reduce the risk of death from colorectal cancer. The study collected information from more than 16,000 individuals. Colorectal cancer mortality was lower among individuals with higher vitamin D levels and therefore suggests that vitamin D may reduce colorectal cancer mortality. *Freedman DM et al., Prospective study of serum vitamin D and cancer mortality in the United States. Journal of the National Cancer Institute [early online publication]. October 30, 2007.*

8. Omega-3 To Cut Colon Cancer

An ever growing body of science of omega-3 and colorectal cancer indicates more fish oil does protect against the cancer. The study states that consuming omega 3 fatty acids cuts the risk of developing the cancer by 12%. Other studies cited herein from Harvard Medical School and Charite University Medicine, Germany, published earlier this year in the Journal Carcinogenesis, reported that supplementation with omega -3 cut inflammation in the colon that may lead to tumour formation by 15%. *Geelen, A et al., Fish Consumption, n-3 Fatty Acids, and Colorectal Cancer: A Meta Analysis of Prospective Cohort Studies. American Journal of Epidemiology. Volume 166, Issue 10, p. 1116-1125,*

9. Cancer fighting Fiber

Researchers at the University of Arizona continue to promote fiber's beneficial effects on polyp or colon cancer prevention. They also concluded fiber has a more pronounced effect in men than. women. The lead researcher, Dr. Jacobs, theorizes that hormones hampered the fiber boost in women. Fiber is the term used to describe the parts of plant foods the body cannot digest. There are 2 types: Soluble fiber dissolves in water to form a gel-like substance. Examples of sources include oatmeal, barley, peas, beans, carrots, broccoli, apples, bananas, citrus fruits and carrots. Insoluble fiber doesn't dissolve in water. It passes through the digestive tract and increases the bulk of stools. Examples include whole grains, seeds, nuts, green beans, and dark leafy vegetables. *www.hoinews.com/news*

10. Diet Can Help Cut Your Cancer Risk

In a recent report from the **World Cancer Research Fund**, a review and evaluation of 7,000 studies on diet, physical activity and weight management and their effect on risk for 17 types of cancer (including crc), the following conclusions were advanced:

- Limit alcohol intake (crc)
- Eat more fruits and vegetables
- Avoid red meat (crc)
- Avoid salt-preserved foods
- Eat foods rich in folate such as beans, grains and folate-enriched cereals.
- Eat foods rich in calcium to reduce risk of crc
- Focus on eating plant foods such as cereals and beans which supply energy.
- Maintain a normal weight and keep your bmi between 18.5 and 25

World Cancer Research Fund, Food, Nutrition, Physical Activity and the Prevention of Cancer: A Global Perspective.
www.rockymountainnews.com/drmn/health/article

11. Excess Body Fat Causes Cancer

The World Cancer Research Fund (WCRF) report is the most comprehensive ever published on the link between cancer and diet, physical activity and weight. I**ts key finding is that maintaining a healthy weight – a BMI of 18.5 to 25 – is one of the most important things you can do to prevent cancer, including colorectal cancer.** They are recommending that people aim to be as lean as possible within the healthy range, and that they avoid weight gain throughout adulthood. And if already overweight, then the aim is to lose weight.
www.medicalnewstoday.com/articles

BMI is a measure of the body fat based on height and weight.

$$\textbf{BMI} = 703 \times \frac{\textbf{Weight (lbs)}}{\textbf{Height}^{2}\ \textbf{(in)}}$$

If BMI is less than 18.5, it is indicative of being underweight.
If BMI is greater than 25, it is indicative of being overweight.
If BMI is over 30, considered obese.

BMI Prime is a simple modification of BMI System. It is the ratio of actual BMI to upper limit BMI which is 25.

ie. If your BMI = 34, then BMI Prime = 34/25 = 1.36 BMI Prime -> **36%** over upper mass limit.

If BMI Prime is **0.74 or less**, considered underweight;
If BMI Prime is **0.75 – 0.99,** optimal weight;
If BMI Prime is **1 or greater**, considered overweight.