Agnes Glaus, PhD, RN

Around 180 international experts from 30 countries met in St. Gallen, Switzerland for a three day conference to discuss ongoing research in cancer prevention. The meeting was organized and co-sponsored by St. Gallen Oncology Conferences (SONK), the European School of Oncology (Milano/Italy), the International Society of Cancer Chemoprevention (New York/USA), the European Society of Medical Oncology (Lugano), the Cancer Research UK (CRUK/London, UK), the Union Internationale Contre le Cancer (UICC, Geneva), the European Association of Cancer Research (EACR), the American Cancer Society (ACS/Atlanta, GA, USA) and the Swiss Cancer League (KLS/Bern, Switzerland).

The first session traditionally focuses on health politics, because international health care systems still somehow neglect cancer prevention. As Hans Jörg Senn pointed out in his welcome lecture, health systems still work in a ‘treatment-oriented’ way. In Switzerland – and in many other countries – more than 98% of the national health budget of >50 billions Swiss Francs are spent for ‘cure and care’. In contrast, less than 2% is dedicated for disease prevention. This may become even worse as less money will be available in the future.

Peter Greenwald (NCI, Bethesda, USA) also raised the question whether the potential of cancer prevention is used. He emphasized the importance of public health policies and education, especially concerning smoking prevention and cessation as well as the fight against obesity. He strongly recommended expansion of chemoprevention research, to develop risk assessment models using new technologies and bringing prevention into mainstream.

Early markers – potential for prevention

Keynote lecturer Scott M. Lippman (MD Anderson Research Center, Houston, Texas) outlined the new potential of a “cancer prevention-therapy convergence” which represents a therapeutic strategy shift towards pre-malignancy. From his point of view the real target of prevention should be the status of micro-neoplasia. As Hans Jörg Senn pointed out in his welcome lecture, health systems still work in a ‘treatment-oriented’ way. In Switzerland – and in many other countries – more than 98% of the national health budget of >50 billions Swiss Francs are spent for ‘cure and care’. In contrast, less than 2% is dedicated for disease prevention. This may become even worse as less money will be available in the future.

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Nutrition and lifestyle: more in focus than ever

Nutrition, diet and food compounds remain highly relevant issues in cancer prevention. Michael Pollak (General Jewish Hospital, Montreal, Canada) gave insights into the effect of energy metabolism on cancer risk. Risk is influenced by BMI, caloric intake, birth weight and exercise. These factors influence serum levels of insulin and IGF-I, that mediate at least partially the effects of energy balance on risk. Research is focussed on Anti-IGF-I-receptor drugs and phase I/II trials. Anthony Howell (University of Manchester, UK) presented a paper dealing with metabolic aspects of cancer prevention. It has been shown that continuous energy restriction (CER) or exercise reduce risk, especially in postmenopausal breast cancer. Howell could demonstrate intermittent energy restriction (IER, 650kcal on 2 days per week) may be superior or at least as effective as continuous energy restriction (CER, 1500kcal/day). Interestingly the insulin serum level was more reduced with IER. Wanda Baer-Dubowska (University of Medical Sciences, Poznan, Poland) investigated the effect of chemopreventive isothiocyanates which are present in cabbage juice and modulate the expression and activity of phase 1 and 2 enzymes like CYP1A P450 in a rat model. New data were presented for chalcones, present in cloudy apple juice or in Kawa tea. Clarissa Gerhäuser (German Cancer Research Center, Heidelberg, Germany) demonstrated that polyphenols may reach the colon after oral intake in an active status and still might be capable to prevent adenoma formation. Studies with recovered ileostomy effluents from patients treated with apple juice showed a transient increase in radical scavenging activity with a maximum at 4h after apple juice consumption. This suggests that polyphenols may reach the colon and exert a local antioxidant effect. Kava is a traditional beverage in the South Pacific Island region. Epidemiological information implies that kava might be chemopreventive against lung tumorigenesis.

Chemoprevention: Aspirins and NSAIDs

Chemoprevention with Aspirin and NSAIDs was discussed by a panel of international experts in cancer prevention. The attempt was made to find an international consensus recommendation for the use of aspirin. The evidence that NSAIDs interfere with carcinogenesis in the large bowel is accepted. This is not the case for reduction of breast cancer but may be for other cancers, e.g. lung cancer. The experts were cautious when considering toxicity and costs. Colonoscopy was considered more cost effective than daily aspirin. No general recommendation for the regular intake of aspirin was made. More research is needed to identify risk groups, to define the dose of aspirin needed and length of treatment. A consensus paper, summarising this expert panel discussion will be published soon.

The next Cancer Prevention Conference for epidemiologists, basic research scientists and clinicians from all disciplines, will take place in St. Gallen in March 2010.

St. Gallen Oncology Conferences

c/o Tumor Center ZeTuP (Detection, Treatment + Prevention)
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