DGEpi Nachwuchspreisträger 2010

Es wurden folgende Preise vergeben:

1. Preis

Dr. rer. med. Tobias Luck, LIFE Center Universität Leipzig

Mild Cognitive Impairment: Incidence and Risk factors – Results of the Leipzig Longitudinal Study of the Aged (LEILA75+)

In: *Journal of the American Geriatrics Society*; 2010 Oct;58(10):1903-10. Epub 2010 Sep 14.

Luck T, Luppa M, Briel S, Matschinger H, König HH, Bleich S, Villringer A, Angermeyer MC, Riedel-Heller SG.

ABSTRACT: *OBJECTIVES*: To provide information on age- and sex-specific incidence rates of mild cognitive impairment (MCI) and risk factors for incident MCI. *DESIGN*: Prospective longitudinal cohort. *SETTING*: Leipzig Longitudinal Study of the Aged, a population-based German study of the epidemiology of dementia and mild cognitive impairment. *PARTICIPANTS*: At baseline, 1,692 subjects aged 75 and older were included in the sample. *MEASUREMENTS*: Trained psychologists and physicians conducted structured clinical interviews including neuropsychological assessment and questions about sociodemographics, familial history of dementia, activities of daily living, subjective memory impairment, and lifestyle (alcohol consumption, smoking) at participants' homes. Structured third-party interviews were conducted with proxies. Incidence was calculated according to the person-years-at-risk method. Cox proportional hazards models were used to examine the association between risk factors and incident MCI. *RESULTS*: During an 8-year follow-up period, 26.4% (n=137) of the 519 study participants (population at risk) were identified as incident MCI cases (person-years=1,791.1). The overall incidence rate of MCI was 76.5 (95% confidence interval=64.7-90.4) per 1,000 person-years. Older age, subjective memory impairment, impairment in instrumental activities of daily living, and antecedent lower cognitive performance were found to be significantly associated with the development of future MCI. *CONCLUSION*: MCI is highly incident in the elderly population. For the purpose of early detection of dementia, subjective memory impairment should be taken seriously as a possible prestage of MCI.

2. Preis

Dr. Sc. Hum. Silvia Funke, DKFZ Heidelberg

Genetic polymorphism in GST genes and survival of colorectal cancer patients treated with chemotherapy

In: *Pharmacogenomics*; 11(1): 33-41, 2010

Funke S, Timofeeva M, Risch A, Hoffmeister M, Stegmaier C, Seiler CM, Brenner H, Chang-Claude J

ABSTRACT: Glutathione *S*-transferases (GSTs) participate in the detoxification of chemotherapeutic agents. Genetic polymorphisms in *GST* genes (*GSTP1* Ile105Val, copy-number variants of *GSTM1* and *GSTT1*) that lead to diminished enzyme activity have been associated with increased chemotherapeutic treatment benefit in colorectal cancer patients. *Aims***:** We assessed the effect of genetic polymorphisms in *GST* genes on survival in colorectal cancer patients treated with adjuvant/palliative chemotherapy. As GSTs participate in the metabolism of platinum metabolites, we also assessed the association between genetic variants in *GST* genes and survival of colorectal cancer patients who received treatment with oxaliplatin. *Materials & methods***:** We followed 338 colorectal cancer patients treated with chemotherapy for a median of 36.4 months since treatment start. A total of 65 of the patients received treatment with oxaliplatin. Polymorphisms were genotyped by fluorescence-based melting curve analysis (*GSTP1* Ile105Val), a relative quantification method (copy-number variants of *GSTM1* and *GSTT1*), and PCR followed by gel electrophoresis (null/non-null genotypes for *GSTM1* and *GSTT1*). Associations between genotypes and overall survival were assessed using Kaplan–Meier curves and Cox proportional hazards regression. *Results***:** As hypothesized, *GSTM1* copy number variant was inversely associated with survival in colorectal cancer patients treated with chemotherapy. Mortality was significantly reduced in patients with one *GSTM1* copy (hazard ratio: 0.45, 95% CI: 0.23–0.90, p = 0.02) and nonsignificantly reduced in those with the null genotype (HR: 0.67, 95% CI: 0.35–1.27, p = 0.22) compared with carriers of two copies. Both *GSTP1* genotype and *GSTT1* genotype were not associated with survival. *Conclusion***:** This is the first study to provide suggestive evidence for an effect of copy-number variation of *GSTM1* on survival in colorectal cancer patients who received chemotherapy. Large studies are warranted to establish the impact of *GST* genotypes on treatment outcome in colorectal cancer patients.

3. Preis

Dr. Astrid Steinbrecher, DKFZ Heidelberg

Dietary Glucosinolate Intake, Polymorphisms in Selected Biotransformation Enzymes, and Risk of Prostate Cancer

In: *Cancer Epidemiology, Biomarkers & Prevention*; 19(1): 135-143, 2010

Steinbrecher A, Rohrmann S, Timofeeva M, Risch A, Jansen E, Linseisen J

ABSTRACT: A protective role of glucosinolates in prostate cancer development might be mediated by the induction of biotransformation enzymes. These enzymes, enhancing the elimination of carcinogens from the body, are known to be polymorphic. Therefore, we evaluated whether a possible association between glucosinolate intake and prostate cancer risk is modified by polymorphisms in GSTT1, GSTM1, GSTA1, GSTP1, or NOQ1 genes. A case-control study including 248 prostate cancer cases and 492 matched controls was nested in the prospective European Prospective Investigation into Cancer and Nutrition-Heidelberg cohort. At baseline, participants provided dietary and lifestyle data and blood samples, which were used for genotyping and measurement of serum glutathione S-transferase-α concentration. Odds ratios and 95% confidence intervals were calculated by conditional logistic regression. We found an inverse association of glucosinolate intake with prostate cancer risk (adjusted odds ratio, 0.72 per 10 mg/d increment; 95% confidence interval, 0.53-0.96). Stratification by genotype showed significantly reduced risks for subjects with wild-type of NQO1 (C609T) compared with CT or TT carriers (Pinteraction = 0.04). Those with deletions in both GSTM1 and GSTT1 genes combined had a significantly reduced risk with increasing glucosinolate intake (Pinteraction = 0.01). There was no effect modification of glucosinolate intake and cancer risk by GSTA1 (G-52A) or GSTP1 (A313G) genotype, but serum glutathione S-transferase-α concentrations were inversely associated with prostate cancer. This study showed that the inverse association between glucosinolate intake and prostate cancer risk was modified by NQO1 (C609T) and GSTM1 and GSTT1 deletion polymorphisms. This information will help to further elucidate the mechanism of action of potentially protective substances in vivo.

Posterpreise 2010 der DGEpi

Die Preisträger der beiden Posterpreise 2010 sind:

Autorengruppe Lengerke T von[1], Stehr M[1]
[1] Medizinische Hochschule Hannover, Forschungs- und Lehreinheit Medizinische Psychologie
für das Poster

Sind adipöse Erwachsene in ihrer psychischen gesundheitsbezogenen Lebensqualität eingeschränkt? Ein systematischer Review neuerer Studien

Autorengruppe Schönberger K[1], Wissmann B von[1], Hautmann W[1], Walters L[2], Höller C[1], Wildner M[1]
[1] Bayrisches Landesamt für Gesundheit und Lebensmittelsicherheit (LGL), Oberschleißheim
[2] Gesundheitsamt Oberallgäu, Sonthofen
für das Poster

Epidemiologische Nachbefragung eines Gastroenteritis Ausbruchs in den Allgäuer Alpen