whether the results depended on age and sex, somatic multimorbidity, or history of psychotropic drug treatment.

**Material and Methods:** The population consisted of two cohorts of adult patients affiliated with the National Health Insurance Fund (NHIF); cancer patients were followed until the second anniversary of their diagnosis, and individuals without cancer matched to cancer patients for age, sex, somatic multimorbidity, and history of psychotropic drug treatment before cancer diagnosis. Using NHIF database information about antidepressive, hypnotic, antidepressant, and antipsychotic prescriptions dispensed in community pharmacies from January 2009 to December 2012, we applied conditional log-binomial regressions to estimate adjusted risk ratios for occasional and regular purchases of these drugs by people with and without cancer.

**Results:** Occasional and chronic psychotropic drug treatment was significantly more prevalent among cancer patients than among the matched controls. The risk ratio for occasional or one-off purchases of anxiolytics-hypnotics peaked within three months after diagnosis (aRR = 2.22; 95% CI 2.10–2.35). During the second year after diagnosis, occasional treatment by antidepressants or chronic treatment by anxiolytics-hypnotics among cancer patients was more than 50% more frequent than among the controls. Differences between people with and without cancer were highest for patients <50 years, with neither multimorbidity nor a history of psychotropic drug treatment.

**Conclusions:** Our results suggest that the period around cancer diagnosis is one during which psychotropic drug prescriptions rise notably. The increased prevalence of occasional antidepressant or chronic anxiolytic-hypnotic treatment among cancer patients raises questions about their compatibility with prescription guidelines.

**Table: Annual prevalences of psychotropic drug purchases in cancer patients and matched individuals without cancer (N = 8,526 cancer patients matched to individuals without cancer).**

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<tr>
<th>Year before cancer diagnosis (%)</th>
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**No conflict of interest.**

1021 **Poster**  
Radiation therapy in resectable rectal cancer: Population-based analysis of adherence to standards and survival by the data of Arkhangelsk Regional Cancer Registry  
D. Dubovichenko1, M. Valkov1. 1Northern State Medical University, Radiology, radiotherapy and clinical oncology, Arkhangelsk, Russian Federation

**Background:** The incidence of rectal cancer (RC) has been increasing worldwide and in Russia, ranking 7th among all malignancies. Randomized trials and meta-analysis have shown that combination of surgery with radiation therapy (RT) results in decrease of local relapse rate, but doesn’t give benefit in overall survival (OS). Combination of surgery and RT is recommended to patients with Stages II and III RC. Adjuvant/neoadjuvant chemotherapy is necessary for Stage III cases while in Stage I only surgery is appropriate, since the risk of local failure is very low.

**Material and Methods:** All new cases of RC (C20) were obtained from the Arkhangelsk Regional Cancer Registry for the period 2000–2014. Only patients with histologically proven Stage I-II RC and information about radical surgery were chosen for analysis. Survival was calculated using life-tables. Adjustment for age, gender, stage at diagnosis, use of chemotherapy and time period was performed using Cox regression.

**Results:** Altogether, 734 cases were selected. Surgery only was performed to 331 patients, combination of surgery with pre- or postoperative RT = in 397 cases. The combination therapy was given to 35%, 51%, 14% patients with RC Stage I, II and III, respectively. Five-year OS and cancer specific survival (CSS) were 56% (95% confidence interval (CI) 50–62%) vs 66% (95% CI 60–70%), log-rank p = 0.001 and 65% (95% CI 59–71%) vs 70% (95% CI 65–75%), log-rank p = 0.001 in those treated surgically or using combination therapy, respectively.

In univariate analysis of OS combination therapy was associated with significantly better OS (HR 0.74, 95% CI 0.59–0.94), comparing to surgical treatment. Adjustment for other factors only marginally changed the association (HR = 0.69, 95% CI: 0.55–0.89). OS was independently influenced by stage (HR 1.4 and HR 2.42 for Stages II – III, respectively)

and age (HR = 0.82, 0.52, 0.6 and 0.43 for age groups 50–59, 60–69, 70–79 and 80+ years, respectively, comparing to younger patients).

**Conclusions:** In population-based analysis we revealed a significant amount of probably overtreated patients receiving combination therapy in Stage I. The use of RT in advanced treatment for Stage I-II RC is unacceptably low. In contrast to evidence from clinical trials, better OS but not CSS was found for patients receiving combination of radiotherapy with surgery.

**No conflict of interest.**

1022 **POSTER**  
High serum glucose and triglycerides are associated with increased risk of severe prostate cancer among Swedish men  
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**Background:** In a cohort study using the Swedish Apolipoprotein-related Mortality Risk (AMORIS) study, we investigated the associations between selected serum metabolic markers, which are potentially linked to carcinogenic processes such as oxidative stress and chronic inflammation, and prostate cancer severity at time of diagnosis.

**Materials and Methods:** The study comprised 13,273 Swedish men who were diagnosed with prostate cancer between 1998 and 2011. We extracted information on age at diagnosis, educational level, Charlson comorbidity index and serum total cholesterol, triglycerides and glucose from the Swedish AMORIS study. Information on clinical characteristics including TNM stage, Gleason score and PSA values was also retrieved through linkage with the National Prostate Cancer Registry. Our primary outcome was prostate cancer severity which was categorised as low (N = 4,463), intermediate (N = 4,212) and high (N = 3,460) risk localised prostate cancer or regional/distant metastatic (N = 2,333) disease. Univariate and multivariate logistic regression was used to investigate the relation between glucose, triglycerides and total cholesterol and prostate cancer severity. Stratified analyses by age were also conducted. In sensitivity analyses, we excluded men with measurements taken less than 1.5 years prior to prostate cancer diagnosis to assess any reverse causation.

**Results:** Mean age at time of prostate cancer diagnosis was 67 years. Hyperglycaemia was associated with increased risk of high risk localised prostate cancer and regional/distant metastatic prostate cancer (adjusted odds ratio (OR) for ≥5.6mmol/l vs <5.6mmol/l: 1.23; 95% CI: 1.08–1.40 and 1.34; 1.14–1.57 respectively). Triglycerides also had a statistically significant positive association with high risk localised prostate cancer (adjusted OR for ≥1.7mmol/l vs <1.7mmol/l: 1.13; 95% CI 1.01–1.26). No statistically significant association was observed between total cholesterol and high risk localised prostate cancer or regional/distant metastatic prostate cancer. None of the serum markers were associated with intermediate risk localised prostate cancer. Furthermore, there were no differences in the relation between any of the serum markers and prostate cancer severity among age groups. Similar findings were obtained after excluding men with measurements taken less than 1.5 years prior to prostate cancer diagnosis.

**Conclusion:** Our findings suggest that high serum glucose and triglycerides may increase risk of severe prostate cancer. These findings imply that further investigation on the association of lipid metabolism and prostate cancer severity is important and may define targets for intervention.

**No conflict of interest.**

1023 **Poster**  
Prostate cancer in multi-ethnic Asian men  
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**Background:** Although the overall prostate cancer incidence is much lower in Asia compared to the West, a higher proportion of men are diagnosed with advanced stage prostate cancer in the former. In the present study, we describe the clinical and pathological tumour characteristics, treatment patterns, and outcomes of prostate cancer amongst our cohort of Southeast Asian men.
Materials and Methods: Data for this study was retrieved from the University Malaya Medical Center (UMMC) prostate cancer registry. Of note, UMMC is a teaching hospital and serves as one of the tertiary referral centers for urology services in Malaysia. The UMMC prostate cancer registry encompasses 560 patients who were newly diagnosed between 1998 and 2015. Data was collected retrospectively for patients diagnosed between 1998 and 2011 whilst prospective data collection was done for patients diagnosed after 2011. The database consists of patient's demographic including age at diagnosis, ethnicity and family history of prostate cancer, tumour characteristics and treatment profile, follow-up and vital status.

Results: A review of data found that the median age at diagnosis was 70 years (range 43–98) and 59.6% of the patients were Chinese, followed by Malays (22.7%), Indians (17.1%) and other races (0.5%). For cases diagnosed between 1998 and 2011, the five-year overall survival of prostate cancer around 18% each of radical prostatectomy and ADT. For cases diagnosed around 2011, 75% of patients were treated with active surveillance, 32% of them with ADT. Radiotherapy was chosen by 28.6% of men with advanced prostate cancer, 41.0% had radiotherapy and a third of them had androgen deprivation therapy (ADT). For locally-advanced prostate cancer, 41.0% had radiotherapy and a third of them administered to ADT. Radiotherapy was chosen by 28.6% of men with organ-confined tumour and followed by active surveillance (23.8%) whilst 21.4% were locally-advanced disease. There were 34.4% of patients presented with metastatic prostate cancer and all had androgen deprivation therapy (ADT). For locally-advanced prostate cancer, 41.0% had radiotherapy and a third of them administered to ADT. Radiotherapy was chosen by 28.6% of men with organ-confined tumour and followed by active surveillance (23.8%) whilst 21.4% were locally-advanced disease. There were 34.4% of patients presented with metastatic prostate cancer and all had androgen deprivation therapy (ADT).

Family history of prostate cancer in one first-degree relative was found in 8.2% of the men. Most tumour were adenocarcinoma (99.8%) and amongst these, 44.2% were of organ-confined tumour whilst 21.4% were locally-advanced disease. There were 34.4% of patients presented with metastatic prostate cancer and all had androgen deprivation therapy (ADT). For locally-advanced prostate cancer, 41.0% had radiotherapy and a third of them administered to ADT. Radiotherapy was chosen by 28.6% of men with organ-confined tumour and followed by active surveillance (23.8%) whilst 21.4% were locally-advanced disease. There were 34.4% of patients presented with metastatic prostate cancer and all had androgen deprivation therapy (ADT).

Conclusions: We conclude that more than half of the Asian men are of locally-advanced to metastatic prostate cancer at presentation which poses a challenge to the health care community in this region. Evidence-based prostate cancer control strategies aiming at early detection of significant prostate cancer and effective management may be the next step forward.

No conflict of interest.

1025

The association between glyceraldehyde-derived advanced glycation end-products and colorectal cancer risk: A case-control study nested within the European prospective investigation into cancer and nutrition cohort


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Background: A large proportion of colorectal cancers (CRC) are thought to be associated with unhealthy dietary and lifestyle exposures, particularly energy excess in CRC development.

Method: 1,055 CRC cases (colon n = 659; rectal n = 396) were matched (1:1) to control subjects. Circulating glycer-AGEs were measured by a competitive enzyme-linked immunosorbent assay. Multivariable conditional logistic regression models that were used to calculate odds ratios (OR) and 95% confidence intervals (95%CI), adjusting for potential confounding factors including smoking, alcohol, physical activity, body mass index, and diabetes status.

Results: Elevated glycer-AGEs levels were not associated with CRC risk (highest vs. lowest quartile, 1.10; 95% CI, 0.82–1.49). Sub-group analyses showed possible divergency by anatomical sub-sites (OR for colon cancer n = 0.83; 95% CI, 0.57–1.22; OR for rectal cancer n = 1.90; 95% CI, 1.14–3.19).

Conclusions: In this prospective study on European populations, circulating glycer-AGEs were not associated with risk of colon cancer, but showed a positive association with the risk of rectal cancer. Further research is needed to clarify the role of toxic products of carbohydrate metabolism and energy excess in CRC development.

No conflict of interest.

1026

Risk of lung cancer among metal and construction workers

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Background: Construction and metal workers are exposed to carcinogenic substances that can lead to development of lung cancer. Wearing personal protective equipment during exposure to welding fumes poses the greatest risk. It is estimated that 4% of all lung cancers can be directly attributed to welding. The incidence of lung cancers in construction workers is 2.3 to 12-times greater compared to the incidence in the general population. Additional risks in construction workers are connected to their work conditions, such as poor access to medical services. To evaluate the risk of lung cancer in connection with the occupation, we conducted a case control study.

Patients and Methods: Consecutive lung cancer patients seen at the outpatient clinic at the Institute of Oncology Ljubljana answered a questionnaire about their working and living conditions. Controls were consecutive patients with bowel cancer, since healthy controls could not be obtained due to data privacy law concerns. Patients answered questions about smoking, occupation, education, living conditions and place of birth.

Results: 551 lung cancer patients and 494 bowel cancer patients answered the questionnaire. In both groups there were 70% of males and there were no significant differences in age and education. Lower income, worse housing conditions, a larger share of immigrants and lower body mass