

**Methods:** All 8051 patients with invasive colon cancer stage III aged  $\geq 75$  years diagnosed in 1997–2009 in the Netherlands were included. Data were extracted from the Netherlands Cancer Registry. Trends in adjuvant chemotherapy administration over time were analysed and multivariable overall survival analyses were performed.

**Results:** The proportion of stage III colon cancer patients aged  $\geq 75$  years who received adjuvant chemotherapy increased from 12% in 1997–2000 to 23% in 2007–2009 ( $p_{\text{trend}} < 0.0001$ ), with large differences between age groups: in patients 75–79 years adjuvant chemotherapy administration doubled from 22% to 44%, in those aged 80–84 years it increased from 4% to 10%, while patients aged  $\geq 85$  years hardly received any adjuvant chemotherapy. Furthermore, there was large variation between geographic regions. Three-year overall survival increased over time from 40% in 1997–2000 to 52% in 2007–2009 ( $p < 0.0001$ ). Receiving adjuvant chemotherapy was the strongest positive predictor of survival in this retrospective study (hazard ratio = 0.46 (95% confidence interval: 0.42–0.51)), while older age negatively influenced survival as well as male gender and tumour characteristics. Geographic region was not correlated with survival.

**Conclusion:** There is an increase in adjuvant chemotherapy administration in elderly patients with stage III colon cancer in the Netherlands since 1997, with a strong age gradient and large geographic variation. Subsequently, survival in elderly patients with stage III colon cancer increased over time, most likely due to stage migration caused by better diagnosis over time. Furthermore, there is a large effect of adjuvant chemotherapy on survival, which might be caused by selection of the fitter patients, which is further investigated.

## 4010

## POSTER

**Does Age Count in Pancreatic Resection?**

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**Background:** Surgery offers the only potential for cure in localized pancreatic cancer. The majority of patients (pts) are  $>65$  years at presentation. Due to compromised physiological reserve, increasing comorbidities and the natural history of pancreatic cancer, elderly pts are often denied the option of surgical resection. We assessed our institution's experience of pancreatic resection for pts aged  $\geq 70$  years.

**Methods:** A prospectively maintained institutional database was retrospectively reviewed for all pts undergoing pancreatic resection from 2006 to 2011. Demographics, laboratory, treatment and outcomes data were obtained.

**Results:** Of 69 pts who had surgery for pancreatic neoplasm, 19 (28%) pts were  $\geq 70$  years. Sites of disease in these pts included pancreas head ( $n = 11$ , 58%), peri-ampullary ( $n = 5$ , 26%), and distal cholangiocarcinoma ( $n = 3$ , 16%). Surgical procedures included pancreaticoduodenectomy ( $n = 16$ , 84%) and double biliary bypass ( $n = 3$ , 16%) [due to occult metastases at surgery]. Pathologies included adenocarcinoma (AC) ( $n = 16$ , 84%) and NET (neuroendocrine tumour)/IPMN (intraductal papillary mucinous neoplasms) ( $n = 3$ , 16%). Number of R0 resections was 15 (15/16, 94%), with positive lymph nodes in the majority of cases. Pre-operative comorbidities included: COPD ( $n = 3$ , 16%), and vascular disease ( $n = 10$ , 53%). Median baseline ECOG was 1 (range, 0–2). There was no perioperative mortality. Median length of hospital stay was 13 days (range, 9–50). The majority of pts were referred to medical oncology with complete recovery of baseline ECOG. Thirteen pts who underwent pancreatico-duodenectomy for AC (81%) received adjuvant chemotherapy (with expected toxicities) and the remaining 3 pts required no treatment. Ten pts, after pancreatico-duodenectomy and adjuvant therapy had at least 2 yrs follow-up with median overall survival of 21.5 months (range, 12–44). Indeed, in those pts aged 70–75 yrs median overall survival was 18.6 months while in the pt subset aged 75–80 yrs median overall survival was 25.75 mths. A further three pts aged  $\geq 80$  yrs underwent pancreaticoduodenectomy followed by adjuvant chemotherapy in the past 12 mths, with no peri-operative complications or significant acute chemotherapy-related toxicities. They remain on active follow-up, with maintenance of baseline performance status to date. Data is currently awaited from another institution in Ireland specialising in pancreatic resections to further validate these findings.

**Conclusions:** Therapeutic nihilism exists in the treatment of pancreas cancer in elderly pts. This group can undergo pancreatic resection with acceptable post-operative morbidity, mortality and overall outcome as is evidenced in our institution's experience.

Age alone should not be a discriminatory factor. Standard pre-operative assessment and geriatric scoring systems combined with more intensive post-operative rehabilitation is affording the older patient the opportunity to avail of optimal oncologic treatment.

## 4011

## POSTER

**Concurrent Chemoradiation in Locally Advanced, Unresectable Non Small-cell Lung Cancer (LA-NSCLC): Comparison of Efficacy and Treatment Tolerance in the Elderly**

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**Background:** Concurrent chemoradiation (CCRT) is considered the standard of care for LA-NSCLC but is associated with significant local and systemic toxic effects. To test the hypothesis that elderly patients are more subject to toxicity, we compared treatment-related toxicity, impact of treatment on quality of life and differences in outcome between younger ( $<70$  years) and older ( $\geq 70$  years) patients.

**Materials and Methods:** Fifty-nine consecutive patients ( $<70$  years = 42,  $\geq 70$  years = 17) were prospectively enrolled in a phase I/II radiation dose escalation trial with fixed dose weekly chemotherapy consisting of cisplatin and docetaxel at 20 mg/m<sup>2</sup> each. The trial was approved by the competent authorities and institutional ethics committee and was registered (NCT00379717, EUDRACT2006–003708–21). A median total dose of 67.2 Gy (range, 60–74.4 Gy) was administered in all patients besides one patient due to early progressive disease. Dose intensity of concurrent cisplatin and docetaxel was 96% each. Dose reductions and/or omission of weekly chemotherapy occurred in 8 patients ( $<70$  years = 3,  $\geq 70$  years = 5,  $p = 0.152$ ). Acute and late toxicities were scored using RTOG/EORTC toxicity scoring systems. Quality of life was assessed using the QLQ C-30 questionnaire. Incidences of toxicities and mean scores for global health status were compared using Student t-test and paired-samples t-test. Overall survival was calculated using Kaplan–Meier method with log-rank testing for intergroup comparison.

**Results:** The rate of acute  $\geq$  grade 3 esophagitis and pneumonitis was 15% and 3% respectively. The rate of late  $\geq$  grade 3 esophagitis was 26% and pneumonitis was 2%. No significant differences in esophageal or lung toxicity were observed between both age groups. The rate of  $\geq$  grade 3 neutropenia was 23.5% in the older population, significantly higher than the 2% incidence in the younger population ( $p = 0.0099$ ). Mean values for global health status decreased at last day of treatment compared with baseline for both groups. However, decrease in global health status was significant in younger population only ( $62.5 \pm 23.5$  at baseline vs  $52.6 \pm 18.6$  at last day of CCRT,  $p = 0.0403$ ). Median survival time for elderly patients was not significantly different (416 days vs 450 days,  $p = 0.425$ ).

**Conclusions:** Besides increased rate of neutropenia, elderly patients did not experience increased toxicity or decreased quality of life after CCRT, compared to younger patients. A comparable survival can be achieved in the elderly patient.

## 4012

## POSTER

**Stereotactic Radiosurgery of Brain Metastases in Elderly Patients: the Cleveland Clinic Experience**

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**Background:** Elderly patients often suffer from cerebrovascular impairment. Whole brain radiotherapy (WBRT) can cause vascular damage and enhances the risk of dementia. For patients with a limited number of brain metastases (BM) stereotactic radiosurgery (SRS) is promising alternative. This study was designed to evaluate the therapeutic effect of SRS in patients aged  $\geq 70$  years who presented with BM.

**Methods:** The IRB-approved Cleveland Clinic Brain Tumour and Neuro-Oncology Center's database was used to identify patients with BM who were  $\geq 70$  years at the time of diagnosis of BM and were treated with SRS between 8/2000 and 12/2009. Multivariable analysis was conducted to identify independent predictors of survival using a Cox proportional hazards model and a stepwise selection algorithm with  $p = 0.10$  and  $p = 0.05$  as criteria for entry and retention.

**Results:** 173 BM patients with a median age of 75 years (range 70–87, 64% male) were included. Most patients had either lung cancer (55%, 95/173) or kidney cancer (16%, 28/173) primaries and the median time between diagnosis of the primary cancer and diagnosis of BM was 10.3 months (0–309.6 months). Forty-six percent (79/173) of patients had multiple BM and 57% (99/173) had extra-cranial metastases at the time BM was diagnosed. Median overall survival (OS) was 5.5 months from the time of SRS (95% CI, 4.4–7.2 months). Cause of death was extracranial tumour progression in 35% of the patients, cerebral tumour progression in