Detriment to cognitive function is suggested by some studies, but whether this risk changes based on age is unknown. The purpose of this project was to determine patterns of practice for PCI for both limited stage SCLC (LS-SCLC) and extensive stage SCLC (ES-SCLC) across Canada with a focus on how age affects recommendations in clinical practice.

Methods and Materials: A survey was created in English and French. It was approved and distributed through Canadian Association of Radiation Oncology (CARO) to all its radiation oncologist members. Answers were collected anonymously using Google Forms over a five week period. Descriptive statistics were used to analyze responses.

Results: Fifty-seven responses were collected with representation from all CARO regions. Ninety-eight percent of respondents routinely would recommend PCI for LS-SCLC and 78% for ES-SCLC. For LS-SCLC, age was an independent factor for recommending PCI for 52% of respondents, and 65% used an age cut off of 80 - 84 years. For ES-SCLC, only 46% of respondents would consider age when recommending PCI, and 48% of those also used 80 - 84 years as the cut off. 85% justified this cut point based on poor patient outcome in their own or a colleague’s experience. Forty-two percent of respondents who didn’t use an age cut off indicated that a patient’s performance status was a more relevant criterion.

Conclusions: Based on the consensus opinion from this survey, we would suggest PCI for SCLC should be offered to patients with acceptable performance status under 80 years of age. For patients 80 years and older, caution is recommended.

242 PHASE I STUDY OF CISPLATIN/DOCETAXEL CHEMOTHERAPY WITH CONCURRENT THERACNIC RADIOTHERAPY IN LOCALLY ADVANCED NON- SMALL CELL LUNG CANCER

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Purpose: The current standard of care for unresectable locally advanced Stage III non-small cell lung cancer (NSCLC) is chemoradiotherapy. However, there is no established consensus for the optimal chemotherapy regimen. We designed a Phase I study of docetaxel and cisplatin (DC) chemotherapy with concurrent thoracic radiotherapy (RT) followed by consolidative DC for locally advanced NSCLC. The primary objective of this study is to determine optimal concurrent and consolidative DC doses, with secondary objectives to describe associated toxicities.

Methods and Materials: Patients with histologically or cytologically proven and unresectable Stage IIIA or IIIB (dry) NSCLC were eligible for this single-institution research-ethics board approved study. In the concurrent cycles with thoracic RT, C was given every three weeks (fixed at 75mg/m²) and D given weekly. The starting dose of D was 20 mg/m² weekly escalated in cohorts of three to define the maximum tolerated dose. RT was prescribed to a dose of 60 Gy in 30 fractions. This was followed by two cycles of consolidative DC, which were dose escalated if concurrent chemoradiotherapy was tolerated. Evaluation for dose limiting toxicities was performed on a weekly basis during RT. Tumour response was characterized through the RECIST criteria. Actuarial outcomes of overall survival (OS) and progression-free survival (PFS) were estimated using Kaplan-Meier analysis.

Results: Between September 2004 to June 2014, 26 patients were enrolled. One patient did not receive protocol-specified treatment due to metastatic disease on baseline imaging. Of the eligible patients, 18 had Stage IIIA and seven had Stage IIIB disease. The median OS all patients was 33.6 months (95% CI 15.8-71.6). Median PFS was 17.0 months (95% CI 9.2-26.3) with median follow up of 26.6 months (range 0.43 -110.8). The majority of patients (19/26) completed both phases of treatment and most received concurrent D at 20mg/m² weekly. Eight patients tolerated dose escalation of posterior consolidative C or D. Twelve patients experienced Grade 3 toxicities (five esophagitis, one pneumonitis, three nausea, one leukopenia, and two neutropenia). Three patients had Grade 4 neutropenia. No patients died due to early or late treatment toxicities. Complete response, partial response, and stable disease were observed in one, 16 and four patients, respectively. Five patients underwent surgical resection, and three of five did not have evidence of residual disease.

Conclusions: Cisplatin and docetaxel (DC) chemotherapy with concurrent radiation treatment followed by consolidative DC achieved promising results in the treatment of Stage III NSCLC in light of reported outcomes from RTOG 0617 (standard arm median PFS 11.8, OS 28.7 months). However, treatment limitations to this study include its small sample size and non-randomization. This study will inform the design of Phase II/III trials.

243 TREATMENT OF LOCALLY ADVANCED/RECURRENT CUTANEOUS SQUAMOUS CELL CARCINOMA WITH CETUXIMAB AND CONCURRENT RADIOTHERAPY

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Purpose: Cutaneous squamous cell carcinoma (cuSCC) accounts for approximately 30% of all skin cancers and is one of the most common cancers in North America. The standard treatment for locally advanced cuSCC is surgery followed by adjuvant radiotherapy (RT). Patients presenting with locally advanced or recurrent disease are often elderly or immunosuppressed, and may be medically inoperable or technically unresectable. These patients are traditionally treated with radiotherapy alone since adding concurrent chemotherapy may not be well tolerated by this group. The risk of locoregional recurrence is about 40% for RT alone, compared to 15% in those treated by surgery and RT. Cetuximab is an antagonistic monoclonal chimeric IgG1 antibody that binds to the epidermal growth factor receptor (EGFR). EGFR overexpression in cuSCC varies between 43-100% of patients. Small, single institutional studies have retrospectively reported synergistic activity when combining Cetuximab and RT (CRT) for the treatment of metastatic or unresectable cuSCC. In preparation for a larger Phase II study, this project prospectively identified patients with unresectable cuSCC who were candidates for CRT.

Methods and Materials: Three patients have been treated with CRT in the last 18 months. Data regarding patient outcome and tolerability was collected prospectively. Cetuximab was delivered weekly, with the first dose timed as a loading dose (400 mg/m²) seven days prior to the initiation of radiotherapy. Concurrent with radiation, weekly doses of cetuximab were administered at a dose of 250 mg/m². Radiation doses varied between patients (8500 cGy/22#, n = 1, and 6600 cGy/30#, n = 2).

Results: The median age in our cohort was 85 years. All were male patients, with Karnofsky performance scores ≥ 60. Two patients were treated for primary SCC (T3NMO and T3N1M0) while the third patient was treated for recurrent disease. Notably, one patient presented with Waldenstrom’s macroglobulinemia. Treatment was well tolerated, and felt to be comparable to treatment with RT alone. One patient developed a Grade 2 acneiform skin reaction likely related to cetuximab. One patient developed an acute coronary syndrome (Grade 3), most likely unrelated to therapy. Two patients had a complete response to treatment. The first patient is in remission for 18 months and the second patient is in remission for 12 months. The third patient completed CRT two months ago and is waiting for reassessment.

Conclusions: Despite the frailty of our cohort, CRT was well tolerated and produced exceptional clinical outcomes. Limitations to this study include its small sample size and non-randomization. This study will serve as the basis for a larger, prospective, randomized Phase II study which is now in