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Acute health-related quality of life changes after liver stereotactic ablative radiotherapy

H. Chung[1], J. Helou[1], I. Thibault[1], W. Chu[1], D. Erler[1], K. Chan[1], E. Chow[1], R. Korol[1], M. Davidson[1], L. Zhang[1]
[1]*Odette Cancer Centre - Sunnybrook Health Science, Radiation Oncology, Toronto, Canada*

Purpose or Objective: Stereotactic ablative radiotherapy (SABR) for liver metastases is currently accepted as a standard treatment option for patients with liver metastases. Multiple studies have demonstrated high rates of local control and low risk of serious toxicities. However, there is limited prospective patient-reported health-related quality of life data (HRQoL). Herein, we report the acute HRQoL changes in patients treated with SABR for liver metastases.

Material and Methods: A prospective study was performed to measure HRQoL changes in patients treated with SABR to 1-3 hepatic metastases. Doses of 30- 60 Gy in 3-5 fractions were delivered as per institutional policy depending on tumor location, histology and size. Changes in patients' self-reported HRQoL were measured using the European Organisation for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire–Core 15 Palliative (C15) at baseline (T0) and first follow-up (T1: 6 - 8 weeks post-SABR). The C15 consists of 15 questions; 2 multi-item symptom scales along with 5 single item symptom scales and a final overall QoL question. A significant change in HRQoL was defined as [T0 score-T1 score] > 0.5SD, where SD was the standard deviation of baseline values for each scale. For the overall QoL question, a significant change was defined by a 10-point or greater change from baseline.

Results: Fifty patients were included. Median age at treatment was 65 (40-88) years. Median BED10 was 98 Gy. The 4 most common primary sites of cancer were: gastro-intestinal (29), breast (9), renal cell (4) and lung (4). All patients were Child-Pugh score A. Nine patients had previous hepatectomies for liver metastases. Thirty-one patients had oligometastatic disease≤5(metastases) and 19 had oligoprogression ⩽5 metastases progressing). Forty -seven patients filled the C15 at T1 (94%). The majority of patients did not report a significant change in any of the C15 scales (table 1). For the overall QoL, 64% of the patients reported no significant change at T1, 24% had deterioration and 13% had an improvement.

	Significant Change from Baseline		
C15 Scales	No Significant Change	Improved	Worsen
Physical Functioning	32 (68.09%)	7 (14.89%)	8 (17.02%)
Emotional Functioning	31 (65.96%)	8 (17.02%)	8 (17.02%)
Overall QOL	16 (34.04%)	6 (12.77%)	25 (53.19%)
Pain	18 (38.30%)	16 (34.04%)	13 (27.66%)
Fatigue	26 (55.32%)	7 (14.89%)	14 (29.79%)
Nausea / Vomiting	38 (80.85%)	3 (6.38%)	6 (12.77%)
Appetite loss	34 (72.34%)	6 (12.77%)	7 (14.89%)
Dyspnoea	33 (70.21%)	8 (17.02%)	6 (12.77%)
Insomnia	22 (46.81%)	18 (38.30%)	7 (14.89%)
Constipation	33 (70.21%)	6 (12.77%)	8 (17.02%)
Specific Q7 Scale	30 (63.83%)	6 (12.77%)	11 (23.40%)

Conclusion: SABR offers a non-invasive option for liver metastases ablation. Acute patient-reported outcomes, as measured by C-15, for patients with liver metastases treated with SABR seem favourable. Longer follow-up is needed.

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Induction chemotherapy followed by chemoradiotherapy in locally advanced pancreatic adenocarcinoma

J. Reure[1], J. Doyen[1], A. Falk[1], D. Lam Cham Kee[1], L. Evesque[1], P. Follana[1], E. François[1], K. Benezery[1]
[1]*Centre Antoine Lacassagne, Radiotherapy, Nice, France*

Purpose or Objective: Treating locally advanced pancreatic cancer (LAPC) remains a challenging issue. Chemotherapy or chemoradiotherapy alone have not demonstrated their efficacy. A strategy combining chemotherapy and chemoradiotherapy seems promising. Our retrospective analysis aims to evaluate effectiveness and tolerability of induction chemotherapy with Folfirinox followed by chemoradiotherapy in patients with LAPC.

Material and Methods: Nineteen patients treated for LAPC between Mars 2010 and February 2015 were retrospectively identified. These patients with unresectable disease, were initially treated with Folfirinox and then received a chemoradiotherapy with capecitabine or gemcitabine in case of stable disease. Survival was estimated with Kaplan Meier method.

Results: Median number of cycles achieved for Folfirinox was 5. Following chemotherapy, all patients had stable disease and received chemoradiotherapy with capecitabine (53%) or gemcitabine (47%). Majority of patients (63%) received radiotherapy at a dose of 50.4 Gray in 28 fractions. Toxicities are acceptable: three cases of grade 3 nausea / vomiting, three cases of grade 3 asthenia and three cases of grade 3 diarrhea were described during chemotherapy. No grade 3 toxicity was identified during chemoradiotherapy. The median follow-up time was 9 months (1-43 months). Survival rates were 93.8% at six months, 52.7% at 1 year and 21.1% at 2 years. Disease free survival rates were 35.3% at six months, 7.8% at 1 year and 0% at 2 years. Local recurrence free survival rates were 75.3% at six months, 47.3% at 1 year and 31.6 at 2 years. Distant recurrence free survival rates were 34.3% at six months, 18.3% at 1 year and 9.2% at 2 years. At the end of the therapeutic procedure, one patient received surgical resection.

Conclusion: Induction chemotherapy with Folfirinox followed by chemoradiotherapy in locally advanced pancreatic adenocarcinoma seems effective and allows very promising overall and progression free survival rates. Larger studies would be needed to conclusively confirm these observations.

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Dosimetric parameters predict toxicity in chemoradiotherapy with nelfinavir for pancreatic cancer

D. Holyoake[1], J. Wilson[1], M. Partridge[2], T. Brunner[3], S. Mukherjee[4], M. Hawkins[1]
[1]*CRUK/MRC Oxford Institute for Radiation Oncology, Advanced Radiation Oncology Group, Oxford, United Kingdom*
[2]*CRUK/MRC Oxford Institute for Radiation Oncology, Radiotherapy Physics Research Group, Oxford, United Kingdom*
[3]*University of Freiburg, Department of Radiation Oncology, Freiburg, Germany*
[4]*Oxford University Hospitals NHS Foundation Trust, Department of Clinical Oncology, Oxford, United Kingdom*

Purpose or Objective: Gastrointestinal (GI) toxicity impedes dose escalation in radiotherapy for pancreatic cancer and limits local tumour control. Clinical data on tolerance doses for the organs of the proximal digestive system remain sparse. We analysed patterns of toxicity in patients treated with concomitant chemoradiotherapy (gemcitabine and cisplatin) with nelfinavir (hypoxia modifier) to identify associated dosimetric factors and establish predictive cut-off values to inform radiotherapy planning.

Material and Methods: Dose-volumes and acute toxicity data were analysed for 21 patients treated for locally-advanced pancreatic cancer in a prospective phase II clinical trial (ARCII, EudraCT 2008-006302-42). Radiotherapy comprised 50.4Gy in 28 daily fractions to the tumour and elective lymph nodes followed by a sequential boost to the primary tumour of 9Gy in 5#. Univariate analysis was performed to investigate association of the dose-volume received by stomach and duodenum with RTOG upper GI toxicity symptoms, and of small-bowel with diarrhoea. Receiver Operating Characteristic analysis was used to identify