



BOOK OF ABSTRACTS

CAMO 2023 ANNUAL SCIENTIFIC MEETING

Thursday, April 27, 2023 | MaRS Centre in Toronto, ON



Dr. Stephanie Snow (Halifax, NS)
2023 ASM Co-Chair



Dr. Zachary Veitch (Barrie, ON)
2023 ASM Co-Chair



Email: info@camo-acom.ca

Tel: 613.415.6033

Website: www.camo-acom.ca

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ORAL PRESENTATION

01_CAMO_2023

MAINSTREAM MODEL OF GENETIC TESTING FOR PROSTATE CANCER: THE SUNNYBROOK ODETTE CANCER CENTRE EXPERIENCE

Xin Wang^{1, 2, 3}, Caleb Tackey³, Larissa Waldman⁴, Yael Silberman⁴, Danny Vesprini⁵, Urban Emmenegger^{2, 3}, Andrea Eisen^{2, 3},
⁴, Martin Smoragiewicz^{2, 3}

¹Department of Medical Oncology, Princess Margaret Cancer Centre, Toronto, ON

²Department of Medical Oncology, Sunnybrook Odette Cancer Centre, Toronto, ON

³Temerty Faculty of Medicine, University of Toronto, Toronto, ON

⁴Cancer Genetics and High Risk Program, Sunnybrook Odette Cancer Centre, Toronto, ON

⁵Department of Radiation Oncology, Sunnybrook Odette Cancer Centre, Toronto, ON

BACKGROUND

An estimated 20-30% of men with prostate cancer carry a mutation in DNA damage repair genes. Eligibility criteria for germline genetic testing expanded significantly and many centres adopted a “mainstreaming” model, defined as oncologist initiated genetic testing.

METHODS

Between May 1, 2021, and May 30, 2022, 174 eligible patients with prostate cancer underwent mainstream testing with a 19-gene panel. Descriptive and inferential statistics were used to compare patients with and without a germline mutation.

RESULTS

Median age was 75 (IQR 68.25-80), 72% of patients were diagnosed with either de novo metastatic or high-risk localized prostate adenocarcinoma. Fourteen patients (8%; 95% CI 4-12%) were found to have a deleterious germline mutation, including likely pathogenic mutations in *BRCA1/2*, *ATM*, *CHEK2*, *PMS2*, *RAD51C*, *HOXB13*, and *BRIP1*. Forty-nine patients (28%; 95% CI 21-35%) were found to have a variant of unknown significance. Patients with germline mutation were not statistically different from those without a mutation in terms of baseline clinico-demographic features including age, stage at diagnosis, baseline PSA, and prior lines of treatment. Thirty-four patients within our cohort also had panel based NGS testing of their somatic tissue. Among this subset, 23% (8 of 34) had an alteration in homologous recombination related genes, as defined per PROfound trial. Of the 14 patients with germline mutation, none had a prior personal history of malignancy and 6 (43%) did not have any first- or second-degree relatives with history of prostate, pancreatic or breast cancer. The median turnaround time for genetic results was 91 days (IQR 37-113 days).

CONCLUSION

We demonstrate the feasibility of a mainstream model for germline genetic testing in prostate cancer patients. Personal history and family history of cancer cannot reliably stratify patients for the presence of pathogenic germline variants. Further work is needed to demonstrate clinical utility.

ORAL PRESENTATION

02_CAMO_2023

DOES COMMUNITY SIZE IMPACT SURVIVAL WITH BREAST CANCER? DATA FROM A LARGE POPULATION-BASED COHORT IN BRITISH COLUMBIA

Emily Jackson¹, Lovedeep Gondara², Caroline Speers², Rekha Diocee², Alan Nichol³, Caroline Lohrisch¹, Stephen Chia¹

¹BC Cancer, Department of Medical Oncology, Vancouver BC

²Breast Cancer Outcomes Unit, BC Cancer, Vancouver BC

³BC Cancer, Department of Radiation Oncology, Vancouver BC

OBJECTIVE

The purpose of this study is both a descriptive and quantitative analysis of the impact of rural versus urban residency on baseline clinical-pathological features and outcomes for individuals diagnosed with breast cancer in British Columbia.

METHODS

Using BC Cancer's Breast Cancer Outcomes Unit database, we identified all patients with invasive breast cancer diagnosed from 2005-2018, and categorized patients as residing in either an urban (population $\geq 100,000$) or rural setting ($< 100,000$) using postal code. We analyzed baseline features, initial treatment, and outcomes differences between these settings.

We performed a univariable analysis examining differences in locoregional relapse, distant relapse and breast cancer-specific survival (BCSS). We performed a multivariable analysis accounting for age, grade, lymphovascular invasion (LVI), subtype, stage, chemotherapy, endocrine therapy (ET), radiotherapy (RT) and type of definitive surgery.

RESULTS

35,255 patients were included. There were no clinically meaningful differences in baseline characteristics. Rural patients were significantly more likely to undergo mastectomy (43.4% vs. 39.1%), and less likely to receive RT (61.4% vs. 67.7%) or ET (67.2% vs. 71.7%). There was no difference in use of chemotherapy or anti-HER2 directed therapies.

Univariable analysis revealed an inferior BCSS in the rural cohort (85.3% [95% CI:84.5-86.1%] vs. 86.5% [86.0-86.9%], $p < 0.001$). Risk of distant relapse was higher in the rural (13.4% [12.6-14.1%]) compared to urban setting (12.1% [11.7-12.6%], $p < 0.001$). There was no difference in locoregional relapse.

On multivariable analysis, urban residency improved BCSS with a hazard ratio (HR) of 0.92 [0.86-0.99, $p = 0.03$]. Urban residency was also associated with a lower distant relapse rate (HR=0.91 [0.85-0.98, $p = 0.01$]). There was no impact on locoregional relapse.

CONCLUSION

Rural residency is a significant and independent risk factor for both distant relapse and mortality from breast cancer. Understanding the factors that contribute to this disparity is necessary to close the gap between rural and urban breast cancer outcomes.

ORAL PRESENTATION

03_CAMO_2023

OUTCOMES OF HEPATOCELLULAR CARCINOMA (HCC) PATIENTS TREATED IN THE LENVATINIB (LEN) AND IMMUNOTHERAPY ERA (2018-2021) COMPARED TO THE SORAFENIB (SOR) ERA (2008-2018)

Chloe Lim¹, Carla Amaro², Philip Ding², Winson Cheung², Vincent Tam²

¹Internal Medicine Residency Program, University of Calgary, Calgary, AB

²Tom Baker Cancer Center, Calgary, AB

BACKGROUND

SOR was the standard first-line treatment for HCC for about a decade until the approval of LEN. Subsequently, atezolizumab + bevacizumab (A+B) were shown to have superior efficacy outcomes. The aim of this study was to compare effectiveness outcomes of HCC patients treated in the SOR era (prior to August 2018 when LEN was first available to patients in Canada) compared to the post-SOR era (August 2018 to December 2021), when most HCC patients received first-line LEN or A+B.

METHODS

All HCC patients who started first-line systemic therapy at cancer centres in the Canadian province of Alberta between January 1, 2008 and December 31, 2021 were included in this study. Overall survival (OS), progression-free survival (PFS), and clinician-assessed response rate (RR) were retrospectively analyzed.

RESULTS

Of 372 total patients included, 230 were treated in the SOR era and 142 in the post-SOR era. Demographic and clinical characteristics are as follows for the SOR era and post-SOR era groups, respectively: median age was 63 and 64 years, 80% and 81% were male, 24% and 11% were of East Asian ethnicity. Prior to systemic treatment 40% and 33% received TACE, 7% and 9% received TARE, and 3% and 14% received SBRT respectively. See table for further clinical characteristics, first-line treatments received and outcomes. Median treatment duration was 3.2 months and 4.8 months, and median follow-up time was 9.6 and 11.0 months for SOR era and post-SOR era, respectively.

CONCLUSIONS

In this real-world multicenter retrospective study, patients treated in the post-SOR era, where LEN and A+B were the more common first-line treatments, had superior overall survival, first-line response rates and progression-free survival. This study confirms the real-world progress that has been made in improving outcomes of HCC patients through systemic treatment advancements over the last 15 years.

ORAL PRESENTATION
03_CAMO_2023
OUTCOMES OF HEPATOCELLULAR CARCINOMA (HCC) PATIENTS TREATED IN THE LENVATINIB (LEN) AND IMMUNOTHERAPY ERA (2018-2021) COMPARED TO THE SORAFENIB (SOR) ERA (2008-2018)

	Overall n=372	SOR era n=230	Post-SOR era n=142	p-value
Clinical characteristics				
ECOG 0-1	87%	85%	91%	n/a
Child-Pugh A	83%	84%	85%	
ALBI grade 1 or 2	94%	96%	98%	
Advanced stage (BCLC C)	89%	91%	87%	
Common cause of liver disease				
Excess alcohol use	26%	24%	30%	n/a
Hepatitis C	41%	37%	48%	
Hepatitis B	22%	48%	15%	
First-line treatment				<0.001
SOR	69%	97%	23%	
LEN	19%	0%	51%	
A+B	9%	0%	22%	
Other	3%	3%	3%	
RR	21%	16%	28%	0.007
Median PFS (95% CI), months	4.9 (4.2 – 5.8)	3.8 (3.2 – 4.6)	7.9 (5.8 – 10.9)	<0.0001
Median OS (95% CI), months	11.8 (10.3 – 13.5)	9.8 (8.4 – 11.8)	17.0 (12.4 – 22.7)	<0.0001
Reason for discontinuation				0.01
Progression				
Toxicity	58%	62%	50%	
Patient choice	29%	23%	39%	
Death	6%	6%	6%	
	7%	8%	4%	

ORAL PRESENTATION**04_CAMO_2023****A COMPREHENSIVE FRAMEWORK FOR ASSESSING AND IMPROVING WELLNESS IN THE MEDICAL ONCOLOGY TRAINING PROGRAM AT THE UNIVERSITY OF OTTAWA**Julian Surujballi¹, Paul Wheatley-Price¹¹The Ottawa Hospital Cancer Centre, University of Ottawa, Ottawa, ON, Canada**OBJECTIVE**

Wellness is a growing area of concern among physicians and residents. This Quality Improvement project aims to assess and improve resident wellness in the Medical Oncology Training Program at the University of Ottawa.

METHODS

A focus group between residents and the training program administrator was conducted to identify all tasks related to residency training. Residents rated time spent, frequency, perceived learning benefit, and wellness detriment for each task on a five-item Likert scale and provided narrative comments. Medical Oncology staff were independently asked to rate tasks for learning benefit only. Tasks were flagged for concern if rated both high wellness detriment and low learning benefit, if learning benefit ratings different significantly between staff and residents, or if flagged directly by the residents.

RESULTS

38 unique tasks were identified. Residents spent an average of 91.0 hours/week on training-related tasks, rising to 101.2 hours/week for chief residents. Non-chief residents spent 66.9 hours/week on mandatory activities and 24.1 hours/week on non-essential activities. Residents spent approximately 49% of their time on clinical duties, 20% on professional development, 12% on service, 8% on administrative duties, with the remainder split between attending rounds, completing evaluations and academic time. Three activities yielded higher than expected time commitments - research (10 hours/week), mock oral exams (8 hours per exam), and preparing consults before clinic (1 hour per consult or 7.5 hours/week).

Process adjustments were suggested for all 17 items flagged for concern. In addition to reducing unnecessary wellness detriment, these changes could decrease average working time to 73.9 hours/week for non-chief residents.

CONCLUSIONS

This project provides a framework to identify training or work-related tasks that are excessively detrimental to wellness compared to their benefit. This process can be repeated to assess effectiveness of change and can be replicated for other groups such as staff physicians or nurses.

ORAL PRESENTATION

05_CAMO_2023

BENEFIT OF ADJUVANT BISPHOSPHONATES IN EARLY BREAST CANCER TREATED WITH CONTEMPORARY SYSTEMIC THERAPY: A META-ANALYSIS OF RANDOMIZED CONTROL TRIALS

Abhenil Mittal¹, Faris Tamimi¹, Consolacion Molto Valiente¹, Massimo Di Iorio¹, Eitan Amir¹

¹Division of Medical Oncology and Hematology, Princess Margaret Cancer Center, Toronto, ON

BACKGROUND

The benefit of adjuvant bisphosphonates (BP) in patients receiving contemporary systemic therapy remains uncertain. Therefore, we performed this meta-analysis to determine the absolute and relative benefits of adjuvant BP on DFS and OS in patients with early-stage breast cancer in contemporary trials.

METHODS

Using references from American Society of Clinical Oncology guidelines on use of adjuvant BP (2017 and 2022), we selected randomized trials that recruited patients exclusively after 2000 and extracted 5-year DFS and OS in BP and control group arm along with associated hazard ratios (HR). DFS and OS data were weighted by study sample size. HR for DFS and OS were pooled in a meta-analysis using generic inverse variance and random effects modelling. Meta-regression comprising linear regression weighted by sample size (mixed effects) was performed to explore association between disease and treatment related factors and absolute differences in benefit from BP.

RESULTS

Eleven trials comprising 24023 patients were included in the analysis. For DFS, pooled HR across trials was 0.89 (0.81-0.97, $p=0.008$) with a 1.5% weighted mean difference favoring BP over control. There was no significant OS benefit with BP (HR 0.92, 0.82-1.03, $p=0.16$). Among patients receiving anthracycline and taxane based chemotherapy, there were no differences in either DFS (HR 0.95, 95% CI 0.80-1.12) or OS (HR 1.04, 95% CI 0.81-1.32). Meta-regression results showed that DFS and OS benefit in higher risk patients (node-positive, larger tumor size, ER-, grade 3 or those receiving chemotherapy) was lower. Overall, 1% (95% CI 0.75-1.15) patients experienced ONJ related to zoledronic acid.

CONCLUSIONS

Compared to data reported by the Early Breast Cancer Trialists' Collaborative Group, benefit from adjuvant BP is lower in more recent clinical trials especially in patients receiving contemporary chemotherapy. The balance between benefits and risks of adjuvant BP should be considered in individual patients.

ORAL PRESENTATION

06_CAMO_2023

RATES OF SURGERY AND ADJUVANT CHEMOTHERAPY USE IN STAGE IB-III A NON-SMALL CELL LUNG CANCER PATIENTS: AN ONTARIO POPULATION-BASED STUDY

Yuchen Li¹, Gregory Pond², Yaron Shargall^{3,4}, Housne Begum^{4,5}, Rosalyn Juergens¹

¹Department of Oncology, Juravinski Cancer Centre, Hamilton Health Sciences, Hamilton, Ontario

²Ontario Institute for Cancer Research, Ontario

³Division of Thoracic Surgery, St. Joseph's Healthcare System, Hamilton, Ontario

⁴The Division of Thoracic Surgery, McMaster University, Hamilton, Ontario

⁵Health Services Management Department, Toronto Metropolitan University, Toronto, Ontario

OBJECTIVE

To identify rates of adherence to guideline recommended surgery and adjuvant chemotherapy treatment for early-stage (IB to IIIA) non-small cell lung cancer (NSCLC) patients in Ontario.

METHODS

A retrospective population-based study using linked administrative data through ICES was completed that included all adult patients (age 18 or older) with a diagnosis of stage IB to IIIA (AJCC 7th edition) NSCLC made from 2010 to 2020 in Ontario. Rates of surgery and chemotherapy completion were calculated using available OHIP (Ontario Health Insurance Plan) billing codes. A logistic regression was also completed to assess for any predictors for adherence to guideline recommended treatments.

RESULTS

A total of 24,237 eligible patients were included. By cancer staging, there were 6,495 (26.8%) stage IB, 7,156 (29.5%) stage II, and 10,586 (43.7%) stage IIIA NSCLC patients. Within 180 days of diagnosis, surgery was completed for 9,929 (41.0%) of patients, by cancer staging were 4090/6495 (63.0%), 3719/7156 (52.0%), and 2120/10586 (20.0%) for IB, II, and IIIA respectively. The median time from diagnosis to surgery was 49 days (IQR 23-77 days). Amongst patients who completed surgery within 180 days, 3344/9929 (33.7%) commenced adjuvant chemotherapy within 180 days. The median time from diagnosis to first chemotherapy administration was 71 days (IQR 44-106 days).

CONCLUSION

In our population-based study, less than half of the patients with early-stage (IB-III A) NSCLC underwent surgical resection and chemotherapy. These low rates are concerning and are likely leading to sub-optimal outcomes. Furthermore, in the context of increasing number of neoadjuvant and adjuvant clinical trials involving early-stage NSCLC patients, the real-world outcomes may be drastically different from trial outcomes if there is poor adherence to guidelines in the real world. Our data suggests a need for quality improvement strategies to identify and improve treatment adherence for patients with early-stage NSCLC.

ORAL PRESENTATION

07_CAMO_2023

THE IMPACT OF COVID-19 ON THE WELLNESS AND RESILIENCE OF THE CANADIAN MEDICAL ONCOLOGY WORKFORCE: A CANADIAN ASSOCIATION OF MEDICAL ONCOLOGISTS SURVEY

Lauren Jones¹, Bruce Colwell², Desiree Hao³, Stephen Welch⁴, Alexi Campbell⁵, Sharlene Gill¹

¹Medical Oncology, BC Cancer, University of British Columbia, Vancouver, British Columbia

²Medical Oncology, Dalhousie University, Halifax, Nova Scotia

³Medical Oncology, Tom Baker Cancer Centre, Calgary, Alberta

⁴Medical Oncology, London Regional Cancer Program, London, Ontario

⁵Canadian Association of Medical Oncologists, Ottawa, Ontario

BACKGROUND

The COVID-19 (C19) pandemic has presented professional and personal challenges. The Canadian Association of Medical Oncologists (CAMO) has been examining the effects of C19 on the workforce to understand the impact of the pandemic on the medical oncology (MO) community. This survey examines how C19 has impacted the workforce with a focus on wellness and resilience. It will also assess the impact that C19 may have on MO workforce capacity going forward.

METHODS

An English-language, multiple-choice survey distributed by email to MOs identified through CAMO and the Royal College of Physicians and Surgeons directory in March 2022.

RESULTS

Response rate was 32% (n=151/477). Respondents were 59% female, 88% worked in comprehensive cancer centres, 64% in practice for >10 years. Physical (60%) and mental (60%) wellness were reported as the biggest personal challenges. 47% are dissatisfied or very dissatisfied with their current work-life balance. 83% indicated that their workload has increased since the beginning of C19. 56% are considering retiring or reducing total working hours or full-time equivalent (FTE) in the next 5 years, 35% have considered leaving MO entirely. Career length >10 years and age >40 were associated with considering leaving MO (p=0.01 and p=0.03 respectively). Career length >10 years was associated with consideration of reducing total working hours or current FTE within the next 5 years (p=0.045).

CONCLUSION

This survey corresponds with the transition of the C19 pandemic toward becoming endemic. There are concerns identified with physician wellness, workload escalation and job dissatisfaction. One-third of respondents are considering leaving MO practice, associated with >10 years in practice suggesting potential loss of senior, experienced workforce. With escalating demand for MO services, due to rising cancer prevalence and treatment complexity, proactive implementation of wellness, retention and workload modification strategies are needed to ensure the stability of the Canadian MO workforce.

ORAL PRESENTATION

07_CAMO_2023

THE IMPACT OF COVID-19 ON THE WELLNESS AND RESILIENCE OF THE CANADIAN MEDICAL ONCOLOGY WORKFORCE: A CANADIAN ASSOCIATION OF MEDICAL ONCOLOGISTS SURVEY

	Considering leaving medical oncology		Considering reducing hours/FTE	
Gender				
Female	53%	p=0.23	59%	p=0.69
Male	45%		40%	
Age				
<40	12%	p=0.03*	20%	p=0.43
>40	88%		80%	
Practice setting				
Comprehensive cancer center	94%	p=0.08	89%	p=0.58
Other	6%		11%	
Years in practice				
<10	23%	p=0.01*	30%	p=0.045*
>10	77%		70%	
Feel valued by institution				
Yes	27%	p=0.98	24%	p=0.36
No	73%		76%	
Feel valued by public				
Yes	38%	p=0.70	45%	p=0.26
No	62%		55%	

ORAL PRESENTATION

08_CAMO_2023

A RETROSPECTIVE REVIEW OF PRIMARY PROPHYLAXIS WITH GRANULOCYTE-COLONY STIMULATING FACTOR (G-CSF) FOR PATIENTS WITH GENITOURINARY MALIGNANCIES RECEIVING CHEMOTHERAPY DURING THE COVID-19 PANDEMIC AND IMPLICATIONS FOR THE FUTURE

Nely Diaz-Mejia¹, Carlos Stecca¹, Di Maria Jiang¹, Nazanin Fallah-Rad¹, Philippe Bedard¹, Kumar Vikaash¹, Osama Abdeljalil¹, Amer Zahraliyali¹, Husam Alqaisi¹, Esmail Al-ezz¹, Vivian Choy¹, Parmvir Banwait¹, Eshetu G. Atenafu¹, Srikala S. Sridhar¹
¹Division of Medical Oncology and Hematology, Princess Margaret Cancer Centre, Toronto, ON

BACKGROUND

To mitigate the risks of chemotherapy associated neutropenia, during the COVID-19 pandemic, all genitourinary (GU) cancer patients treated with chemotherapy at the Princess Margaret Cancer Centre (PMCC) were offered primary prophylaxis with G-CSF. We hypothesize that this reduced rates of febrile neutropenia, hospitalizations, healthcare costs and improved overall outcomes, compared to GU cancer patients treated with chemotherapy without G-CSF in the 2 years prior to the pandemic.

METHODS

We performed a retrospective review of GU cancer patients, receiving curative or palliative intent chemotherapy, with or without primary G-CSF prophylaxis between Jan 2018 and June 2022.

RESULTS

Overall, 248 patients with prostate cancer (44%), urothelial cancers (33%) germ cell (21%), and rare GU cancers (4%) were identified. Median age was 70 (range 19-91), 92% were male, 65% were ECOG 0/1. Treatment intent was neoadjuvant (13%), adjuvant (20%), or palliative (67%). Main regimens used were docetaxel, cabazitaxel, carboplatin, cisplatin/etoposide, gemcitabine/cisplatin and BEP. Median follow-up was 10.5 months (0.23-52.3 months). A total of 206/248 received primary G-CSF prophylaxis.

During chemotherapy, the median white blood cell levels were higher in the G-CSF group compared to the non-G-CSF group ($14.1 \times 10^9/L$ vs $2.90 \times 10^9/L$, $p < 0.0001$); and neutropenia rates were markedly lower (2% vs. 93%, $P < 0.0001$). Hospital admission rates were significantly lower in G-CSF users compared to non-users (19% vs. 69%, $P < 0.0001$). Symptomatic disease progression 13% was the leading cause of admission in the G-CSF group. Infectious causes such as UTI, pneumonia, COVID-19, and sepsis were seen in 12% of the G-CSF group compared to 31% in the non-users. G-CSF was well tolerated with just 0.97% discontinuing G-CSF.

CONCLUSIONS

During the COVID-19 pandemic, primary prophylactic G-CSF use in GU cancer patients, undergoing chemotherapy significantly lowered rates of both febrile neutropenia and hospitalizations and could be a cost-effective strategy in this patient population that warrants further study.

ORAL PRESENTATION

09_CAMO_2023

REAL-WORLD EVALUATION OF BONE TARGETED AGENTS AND FIRST BONE RADIATION INCIDENCE IN PROSTATE CANCER DECEDENTS: A PROVINCIAL-WIDE POPULATION STUDY

William J Phillips¹, Jennifer Leigh¹, Alborz Jooya², Anan Eddeen³, Christina Milani³, Scott Morgan², Rob Macrae², Peter Tanuseputro³, Michael Ong⁴, Jean-Marc Bourque⁵

¹University of Ottawa Department of Medicine, Ottawa ON

²University of Ottawa Department of Radiation Oncology, Ottawa ON

³The Ottawa Hospital Research Institute, Ottawa ON

⁴The Ottawa Hospital Centre, Ottawa ON

⁵Integrate Cancer Centre CHUM, Montreal Quebec

OBJECTIVE

To evaluate the use of bone targeted agents (BTAs) and its relationship with palliative bone radiation, as a measure of skeletal related events (SREs), in patients with metastatic castration resistant prostate cancer (mCRPC).

METHODS

Provincial-wide administrative databases identified patients with prostate cancer (2007-2018, n=98,646), received continuous androgen deprivation therapy (n=29,453), died of prostate cancer (2013- 2018, n=3,864), and received life-prolonging therapy for mCRPC (LPT: abiraterone, enzalutamide, docetaxel, cabazitaxel and radium-223, n=1,850). Demographic, clinical and cancer related variables were collected using a 3-year observation window from the date of death.

RESULTS

Of 1,850 patients who met inclusion criteria, 1,066 (58%) received BTA and 1,137 (62%) palliative bone radiation. More patients received denosumab (n=825, 77%) than zoledronic acid (n=241, 23%). 289 patients (25.4%) started BTA prior to first bone radiation, while 848 patients (74.6%) either did not receive BTA (n=447, 53%) or started BTA after first bone radiation (n=401, 47%). 376 patients received BTA and never received bone radiation. BTA was started within 25-36 months (n=294, 28%), 13-24 months (n=334, 31%), or 12 months (n=438, 41%) relative to death. First bone radiation occurred within 25-36 months (n=188, 16%), 13-24 months (n=367, 32%), or 12 months (n=582, 51%) relative to death. Factors associated with receipt of BTA included palliative bone radiation (p=0.008), radiation to non-bone (p=0.035), elevation in ALP (p<0.001), prior prostatectomy (p=0.008), younger age (p<0.001), medical oncology involvement (p<0.001) and palliative care involvement (p=0.0045).

CONCLUSION

Patients receiving contemporary prostate cancer treatments still suffer from a significant burden of skeletal-related events and the majority only started on BTA after having first SRE. Our results highlight an opportunity to improve outcomes by emphasizing early introduction of BTA in mCRPC patients being started on LPT.

ORAL PRESENTATION

10_CAMO_2023

ANEMIA IS INVERSELY ASSOCIATED WITH PATIENT SURVIVAL IN MELANOMA PATIENTS TREATED WITH IMMUNOTHERAPY

Hyejee Ohm^{1,2}, Derek Tilley³, Hatim Karachiwala^{4,5}, John Walker^{2,6}

¹Department of Internal Medicine, Edmonton, AB

²University of Alberta, Edmonton, AB

³Alberta Health Services, Calgary, AB

⁴University of Calgary, Calgary, AB

⁵Tom Baker Cancer Centre, Calgary, AB

⁶Cross Cancer Institute, Edmonton, AB

OBJECTIVE

Emerging evidence indicates anemia may confer an immunosuppressive state, including for patients with cancer. We hypothesized that the presence of anemia may negatively impact the efficacy of immunotherapy. We tested for associations between peripheral blood cell counts (hemoglobin, leukocyte, neutrophil, lymphocyte, and platelet counts) and response to immunotherapy as measured by overall survival (OS) and objective response rate (ORR).

METHODS

A retrospective cohort study of Albertan patients > 18 years old with unresectable or metastatic melanoma diagnosed between January 2008-December 2017 and treated with at least one dose of immunotherapy was conducted. Data was extracted from the Alberta Cancer Registry. Retrospective chart reviews were completed for laboratory data and radiological findings. Tests for associations between peripheral blood counts (hemoglobin, leukocyte, neutrophil, lymphocyte, and platelet counts) and OS/ORR were performed. Analyses were adjusted for confounders including age, sex, toxicity, Charlson co-morbidity index, transfusion history, tumor location, and treatment regimen.

RESULTS

Among 377 patients, 36.6% received ipilimumab, 45.3% received PD-1 monotherapy, and 17.7% received CTLA4/PD-1 combination therapy. Anemia (HR 1.77, 95% CI [1.19-2.52], p=0.005), was independently associated with reduced OS, and anemia was associated with significantly lower ORR (41.3% vs. 27.6%, p=0.007). Unsurprisingly, abnormal leukocyte counts also correlated with reduced efficacy, but by comparison, no statistically significant associations were found between low platelet counts and OS or ORR.

CONCLUSIONS

In our analysis OS was diminished proportionally with the degree of anemia, but not thrombocytopenia, suggesting our observation has immunological significance. Anemia and lymphopenia, but not abnormal platelet counts, were associated with reduced OS among metastatic melanoma patients. Only anemia was associated with reduced ORR. Our analysis is limited by its retrospective nature but suggests that anemia may negatively impact immunotherapy treatment outcomes. More study is required to delineate possible immunologic mechanisms to explain our findings.

ORAL PRESENTATION

11_CAMO_2023

ANDROGEN RECEPTOR IS EXPRESSED IN THE MAJORITY OF BREAST CANCER BRAIN METASTASES AND IS SUBTYPE-DEPENDENT

Kevin Yijun Fan¹, Rania Chehade², Maleeha Qazi¹, Veronika Moravan³, Sharon Nofech-Mozes⁴, Katarzyna Jerzak⁵

¹Faculty of Medicine, University of Toronto, Toronto, Ontario

²Department of Medical Oncology, Faculty of Medicine, University of Toronto, Toronto, Ontario

³VM stats, Toronto, Ontario

⁴Department of Laboratory Medicine and Pathobiology, University of Toronto, Toronto, Ontario

⁵Sunnybrook Odette Cancer Centre, University of Toronto, Toronto, Ontario

OBJECTIVE

Given availability of central nervous system (CNS)-penetrant systemic therapies that target the androgen receptor (AR), we evaluated the expression of the AR “target” in breast cancer brain metastases (BrM).

METHODS

An established, retrospective cohort of 57 patients with metastatic breast cancer who underwent surgery for BrM at the Sunnybrook Odette Cancer Centre (SOCC) between 1999 and 2013 was studied. AR expression in BrM samples was assessed in triplicate using immunohistochemistry (IHC). AR positive status was defined as nuclear AR expression $\geq 10\%$ in tumor-infiltrating cells as a percentage of tumor area using the SP107 antibody.

RESULTS

The median age of patients was 52 years (range 32-85 years). 17 (30%) patients had hormone receptor positive (HR+) /HER2-negative, 28 (49%) had HER2+, and 12 (21%) had triple negative breast cancer (TNBC) BrM. 61.4% (n=35) of patients had a single BrM and the median size of BrM was 3 cm (range 0.3 cm to 6.2 cm). The median expression of AR was 20% (CI 1.6-38.3%) and 32 of 57 (56%) BrM were AR positive based on a cut-point of $\geq 10\%$. A significantly smaller proportion of patients with TNBC had AR+ BrM (n=2/12, 17%), as compared to patients with HR+/HER2-ve (n= 9/17, 53%) or HER2+ (n=21/28, 75%) disease (p=0.04). Patients with AR positive versus AR negative BrM had similar overall survival (12.5 vs. 7.9 months, p= 0.6), brain-specific progression-free survival (8.0 vs. 5.1 months, p= 0.95), and time from breast cancer diagnosis to BrM diagnosis (51 vs. 29 months, p=0.16). In a subset of 10 patients for whom matched primary breast tumour tissue was available, AR status was concordant in 7 (70%) of cases.

CONCLUSION

AR is expressed in the majority of breast cancer BrM and represents a promising therapeutic target.

ORAL PRESENTATION

11_CAMO_2023

ANDROGEN RECEPTOR IS EXPRESSED IN THE MAJORITY OF BREAST CANCER BRAIN METASTASES AND IS SUBTYPE-DEPENDENT

Characteristic	Patients	Number (%) of AR+ cases	P
Overall	57	32 (56%)	
BrM subtype			0.15
Triple negative	12	2 (17%)	
HER2+/HR-	13	9 (69%)	
HER2+/HR+	15	12 (80%)	
HR+/HER2-	17	9 (53%)	
Age at BrM (years)			0.59
<51.78	28	17 (61%)	
≥51.78	28	14 (50%)	
Unknown	1	1 (100%)	
BrM location			0.95
Frontal	15	8 (53%)	
Parietal	13	8 (62%)	
Temporal	3	2 (67%)	
Cerebellar	25	14 (56%)	
Occipital	1	0 (0%)	
BrM size (cm)			0.25
< 3.0	26	12 (46%)	
≥ 3.0	27	19 (70%)	
Unknown	4	1 (25%)	
BrM grade			0.29
1	16	7 (44%)	
2	20	14 (70%)	
3	15	5 (33%)	
Unknown	6	6 (100%)	

Table 1. Clinicopathological features stratified by androgen receptor (AR) status. AR+ status is defined as ≥10% and AR- status is defined as <10% by IHC using SP107 antibody on breast cancer brain metastases (BrM). 32 of 57 patients had AR+ BrM. Median age at diagnosis of BrM was 52 years (range 32-85 years). Median size of BrM was 3.0 cm (range 0.3-6.2 cm)

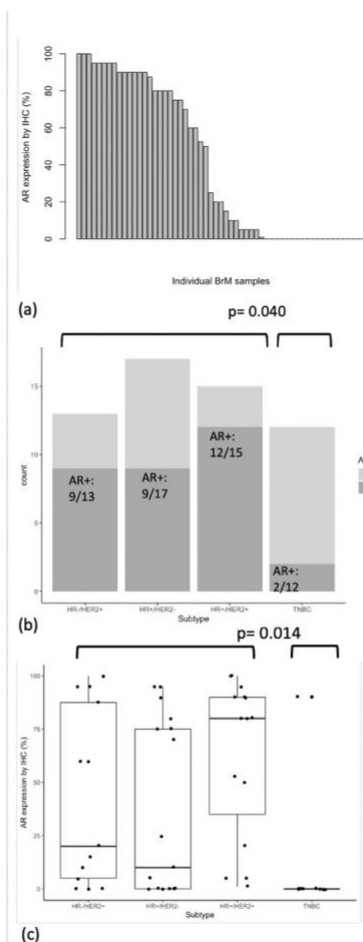


Figure 1. AR expression (% expression by IHC) in breast cancer BrM (a). AR status by breast cancer subtype (b). AR expression by breast cancer subtype (c).

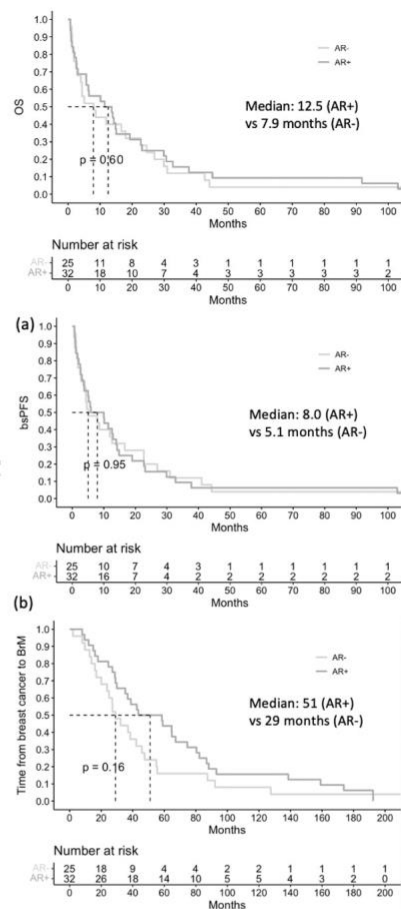


Figure 2. Overall survival (OS) (a), brain-specific progression-free survival (bs-PFS) (b), and time from diagnosis of breast cancer to diagnosis of BrM (c), stratified by BrM AR status.

ORAL PRESENTATION

12_CAMO_2023

INFORMATIVE TOOLS TO OPTIMIZE NEOADJUVANT THERAPY IN ER POSITIVE, HER2 NEGATIVE BREAST CANCERS

Lidiya Luzhna¹, Stephen Chia¹, Mehrnoosh Pauls¹, Nathalie Levasseur¹

¹BC Cancer Vancouver, Vancouver, BC

BACKGROUND

Neoadjuvant therapy (NAT) in HR+/HER2- tumors is often disputable. While the role of Oncotype DX has been well established in adjuvant settings, its clinical utility and potential implementation for prediction of NAT benefit requires further study.

PURPOSE

This ongoing study aims to report the feasibility of Oncotype DX testing on core biopsy specimens prior to NAT in patients with operable HR+/HER2- breast cancer. The effect of the recurrence score (RS) on systemic treatment recommendations and its correlation to dynamic markers of proliferation and NAT response will be evaluated.

METHODS

Participants with clinical T2-T4 and/or node positive HR+/HER2- breast cancer had Oncotype DX testing done prior to NAT. Clinico-pathological information, treatment regimens, clinical, radiologic, and pathological responses were recorded.

RESULTS

Of the 48 patients with HR+/HER2- breast cancer referred to BC Cancer Vancouver for consideration of NAT between September 2021 and January 2023, 26 were eligible and enrolled in the study. The success rate of the Oncotype DX on core biopsy samples was 96%. The mean turnaround time from patient consent to RS report was 19 calendar days. Approximately 32% of tumors had a RS equal or higher than 26 while 4% had a score less than 10. Nearly 25% of neoadjuvant treatment recommendations were changed based on the RS. Overall, 33% of patients received neoadjuvant chemotherapy, 54% received neoadjuvant endocrine treatment, and 12.5% proceeded with upfront surgery.

CONCLUSIONS

The success rate of Oncotype DX testing on core biopsy samples was excellent. There were multiple factors that influenced trial enrollment, highlighting the low uptake and equipoise of NAT use in HR+/HER2- tumors. The Oncotype DX testing resulted in a change in systemic treatment plan in 25% of patients. Analyses are ongoing to correlate the RS to NAT response, dynamic Ki-67 changes and breast MRI changes.

IN-PERSON POSTER PRESENTATION

13_CAMO_2023

TEST PERFORMANCE AND CLINICAL VALIDITY OF CIRCULATING TUMOR DNA (CTDNA) IN PREDICTING RELAPSE IN SOLID TUMORS TREATED WITH CURATIVE INTENT THERAPY

Abhenil Mittal¹, Consolacion Molto Valiente¹, Faris Tamimi¹, Massimo Di Iorio², Laith Al-Showbaki¹, David Cescon³, Eitan Amir³

¹Clinical Fellow, Division of Medical Oncology and Hematology, Princess Margaret Cancer Center, Toronto, ON

²Medical Oncology Resident, Division of Medical Oncology and Hematology, Princess Margaret Cancer Center, Toronto, ON

³Division of Medical Oncology and Hematology, Princess Margaret Cancer Center, Toronto, ON

BACKGROUND

Presence of circulating tumor DNA (ctDNA) is prognostic in solid tumors treated with curative intent. Studies have evaluated ctDNA at specific 'landmark' timepoints or over numerous 'surveillance' timepoints. However, variable results have led to uncertainty about the clinical validity of this tool.

METHODS

A search of MEDLINE (host: PubMed) identified studies evaluating ctDNA monitoring after curative intent therapy in solid tumors. Odds ratios (OR) for clinical and/or radiologic recurrence at both landmark and surveillance time points for each study were calculated and pooled in a meta-analysis using the Peto method. Pooled sensitivity and specificity weighted by individual study inverse variance were estimated and meta-regression utilizing linear regression weighted by inverse variance was performed to explore associations between patient and tumor characteristics and the OR for disease recurrence.

RESULTS

Of 39 studies identified; 30 (1924 patients) and 24 studies (1516 patients) reported on landmark and surveillance time points respectively. The pooled OR for recurrence at landmark was 15.47 (95% CI 11.84 - 20.22). and at surveillance was 31.0 (95% CI 23.9-40.2) The pooled sensitivity for ctDNA at landmark and surveillance analyses were 58.3% and 82.2%. The corresponding specificities were 92% and 94.1%. There was lower prognostic accuracy with the use of tumor agnostic panels. Adjuvant chemotherapy negatively impacted specificity in the landmark setting. Longer time to landmark analysis, higher number of surveillance blood draws and a history of smoking were associated with higher prognostic accuracy.

CONCLUSIONS

Although ctDNA at both landmark and surveillance time points shows high prognostic accuracy for relapse in patients with solid tumors treated with curative intent, it has low sensitivity, borderline high specificity and therefore modest discriminatory accuracy, especially for landmark analyses. Adequately designed clinical trials with appropriate testing strategies and assay parameters are required to demonstrate clinical utility.

IN-PERSON POSTER PRESENTATION

14_CAMO_2023

IMMUNE CHECKPOINT INHIBITORS IN THE TREATMENT OF SMALL CELL LUNG CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

Nupur Krishnan¹, Patsy Wai Pin Lee², Gabriel Boldt³, Suganija Lakkunarajah⁴, Phillip Blanchette⁵, Jacques Raphael⁵

¹Faculty of Health Sciences, McMaster University, Hamilton, Ontario

²Department of Internal Medicine, Schulich School of Medicine and Dentistry, Western University, London, Ontario,

³Department of Radiation Oncology, London Health Sciences Centre, London, Ontario

⁴Department of Medicine, Schulich School of Medicine & Dentistry, Western University, London, Ontario

⁵Division of Medical Oncology, Department of Oncology, London Regional Cancer Centre, London Health Sciences Centre and Western University, London, Ontario

We conducted a systematic review and meta-analysis to assess the role of immune checkpoint inhibitors (ICI) in the treatment of extended stage small cell lung cancer (ES-SCLC).

Medline (PubMed), EMBASE, and Cochrane Library databases were queried between January 2010 and March 2022 and conference proceedings between 2018 and 2022 were searched for randomized clinical trials assessing ICI (combined with chemotherapy or as single agents), compared with chemotherapy, in patients with ES-SCLC. The primary endpoints were overall survival (OS) and progression-free survival (PFS). Secondary endpoints included objective response rate (ORR), and grade 3 or higher adverse events (AEs). Pooled hazard ratios (HR) for OS and PFS were meta-analyzed using the generic inverse variance method, and random-effect models were used to compute pooled estimates. Subgroup analyses compared survival by line of therapy, sex, age, and ECOG status.

A total of 5,325 patients from 10 trials were included. Compared to chemotherapy, ICI-based treatment decreased the risk of death by 19% (HR 0.81, 95% confidence interval (CI) 0.76-0.86). The OS benefit was seen regardless of age, sex, or ECOG status, but was only seen in patients treated in the first-line setting. Similarly, ICI-based therapy decreased the risk of disease progression by 20% (HR 0.80, 95%CI 0.68-0.94) and the PFS benefit was restricted to first-line treatment with detrimental effect in the second-line setting. ORR was also improved with ICI (odds ratio (OR) 0.80, 95%CI 0.65-0.97) with an increase in grade 3 or higher diarrhea (OR 3.63, 95%CI 1.46-9.02).

In conclusion, ICI conferred efficacy benefits (OS, PFS, and ORR) and an acceptable safety profile in the treatment of patients with ES-SCLC in the first-line setting and should not be used in the second-line setting as single agents. Valid biomarkers predicting long-term benefit are needed to further improve outcomes.

IN-PERSON POSTER PRESENTATION

15_CAMO_2023

ASSESSMENT OF TUMOUR INFILTRATING LYMPHOCYTES AS A PROGNOSTIC FACTOR IN PATIENTS WITH ADVANCED MELANOMA TREATED WITH IMMUNOTHERAPY

Zahra Taboun¹, Jasna Deluce^{1,2}, Adi Kartolo³, Wilma Hopman⁴, Tara Baetz⁵, John Lenehan^{1,2}

¹Schulich School of Medicine and Dentistry, Western University, London, ON

²Department of Oncology, London Health Sciences Centre, London, ON

³Department of Oncology, Juravinski Cancer Centre, McMaster University, Hamilton, ON

⁴Public Health Sciences, Queen's University, Kingston, ON

⁵Department of Oncology, Cancer Centre of Southeastern Ontario, Kingston, ON

OBJECTIVE

To determine whether tumour infiltrating lymphocytes (TIL) impact prognosis in patients treated with immunotherapy for advanced melanoma.

METHODS

This retrospective study involved 204 patients with metastatic melanoma who received single-agent, palliative-intent PD-1 inhibitors between January 2012 and December 2021 at the Cancer Centre of Southeastern Ontario (CCSEO) and London Regional Cancer Program (LRCP). TIL was assessed in pathology specimen prior to immunotherapy initiation. TIL status was defined as 'brisk', 'non-brisk/absence', or 'unknown'. Primary study outcome was overall survival (OS).

RESULTS

Twenty-eight (14%), 88 (43%), and 88 (43%) patients had 'brisk', 'non-brisk/absence', and 'unknown' TIL statuses, respectively. Patients with cutaneous melanoma were more likely to have 'brisk' TIL status, when compared to non-cutaneous melanoma (13% vs. 1%, $p=0.022$). The estimated median OS with 95% confidence interval (CI) of the TIL brisk, TIL Non-brisk/absent, and TIL unknown were 30.5 (95% CI 12.2-48.8) months, 16.4 (95% CI 10.7-22.1) months and 15.9 (95% CI 9.2-22.6) months, albeit statistically non-significant ($p=0.57$). Multivariate analysis showed no OS improvement with having 'brisk' compared to 'non-brisk/absence' TIL statuses (HR 0.75 95%CI 0.42-1.32); rather, ECOG ≥ 2 (HR 2.03, 95%CI 1.35-3.05) and elevated LDH levels (HR 2.06, 95%CI 1.43-2.95) were independent prognostic factors for worse OS.

CONCLUSIONS

Our study demonstrated a non-significant improved OS trend favouring 'brisk' over 'non-brisk/absence' or 'unknown' TIL statuses, in advanced melanoma patients on immunotherapy. However, our study was limited by its small sample size and relatively large 'unknown' TIL group. If validated in future larger, multi-centre studies, TIL may be part of standard of care pathology reporting, given its inexpensive and requires no additional invasive procedure.

IN-PERSON POSTER PRESENTATION

16_CAMO_2023

THE IMPACT OF AN ETOPOSIDE SHORTAGE ON PATIENTS WITH EXTENSIVE-STAGE SMALL-CELL LUNG CANCER (ES-SCLC)

Claire Browne¹, Toufic Ayoub², Nadeesha Samarasinghe³, Syed Hussaini⁴, Andrew Warner⁵, Morgan Black⁶, David Palma⁵, Jacques Raphael⁶, Sara Kuruvilla⁶, Phillip Blanchette⁶

¹Department of Internal Medicine, Schulich School of Medicine & Dentistry, Western University, London, ON, Canada

²Department of Science, Western University, London, ON, Canada

³Department of Surgery, University of British Columbia, Vancouver, BC, Canada

⁴Department of Oncology, Oakville Trafalgar Memorial Hospital, Oakville, ON, Canada

⁵Division of Radiation Oncology, Department of Oncology, London Health Sciences Centre, Western University, London, ON, Canada

⁶Division of Medical Oncology, Department of Oncology, London Health Sciences Centre, Western University, London, ON, Canada

BACKGROUND

Shortages of oncology therapeutics are becoming increasingly prevalent. A shortage of IV etoposide lasted from 2018 until 2020 in Ontario, Canada. The purpose of this study was to evaluate the impact of this etoposide shortage (ES) on patient outcomes in ES-SCLC.

METHODS

ES-SCLC patients treated at the London Regional Cancer Program during a “pre-ES” (Nov 2017 - Oct 2018) and “ES” (Nov 2018 - Oct 2019) time interval were retrospectively reviewed. Information was gathered on patient demographics, treatment regimens, emergency room (ER) visits, hospitalizations and survival. The primary endpoint was rate of hospitalizations. Statistical analysis was performed using descriptive statistics, Kaplan Meier estimates and multivariable logistic and Cox proportional hazards regression models.

RESULTS

A total of 119 patients with ES-SCLC were assessed, 49 in the pre-ES interval and 70 in the ES interval. Mean \pm SD age was 68 ± 8 years, 48% were male, 33% had central nervous system (CNS) metastases and 69% received first-line systemic therapy. Alternate regimens used for ES cohort included platinum-oral (PO) etoposide (51%), platinum-irinotecan (24%), and PO etoposide monotherapy (16%). There was a significantly increased rate of hospitalizations during the ES vs. pre-ES (49% vs. 29%, $p=0.029$). The increased risk of hospitalization for ES vs. pre-ES remained significant in our multivariable model adjusting for age, sex, baseline Charlson comorbidity index, CNS metastases and receipt of first-line chemotherapy (HR: 2.30, 95% CI: 1.01-5.24, $p=0.047$). Compared to pre-ES, there were no statistically significant differences in rates of ER visits or survival.

CONCLUSIONS

This single-institution retrospective analysis during an IV ES shows increased rates of hospitalization among ES-SCLC patients treated with alternate chemotherapy regimens, but was not able to demonstrate a significant difference in progression-free or overall survival. The oncology community needs to advocate for reliable supplies of essential chemotherapy drugs and utilize appropriate substitute therapies when necessary.

IN-PERSON POSTER PRESENTATION

17_CAMO_2023

AN EXAMINATION OF THE DETERMINANTS AND OUTCOMES OF ACUTE IMMUNE CHECKPOINT INHIBITOR (ICI) PNEUMONITIS IN PATIENTS WITH LOCALLY ADVANCED NON-SMALL CELL LUNG CANCER (LA-NSCLC) RECEIVING DURVALUMAB CONSOLIDATION FOLLOWING CHEMORADIATION: A RETROSPECTIVE, POPULATION-BASED MULTICENTER STUDY

Chloe Lim¹, Sunita Ghosh², Daniel Meyers¹, Igor Stukalin¹, Marc Kerba³, Desiree Hao³, Aliya Pabani³

¹Internal Medicine Residency Program, University of Calgary, Calgary, AB

²Cancer Care Alberta, University of Alberta, AB

³Tom Baker Cancer Center, Department of Oncology, University of Calgary, AB

BACKGROUND

Consolidation durvalumab following chemoradiotherapy has improved survival outcomes in patients with LA-NSCLC. However, ICI pneumonitis is a serious complication that can have life-threatening outcomes necessitating ICI discontinuation. Understanding the factors driving the risk of pneumonitis can inform patient selection and treatment monitoring. The objective of this study is to characterize the risk factors and outcomes of ICI pneumonitis in NSCLC patients treated with consolidation durvalumab therapy in real-world practice.

METHODS

Using the Alberta Immunotherapy Database, we retrospectively evaluated all NSCLC patients who received durvalumab in Alberta, Canada from Jan/18-Dec/21. Pneumonitis cases were identified based on radiographic changes and oncologists' clinical assessments. We examined incidence and predictive values of severe pneumonitis, with secondary outcomes of overall survival (OS) and time-to-treatment failure (TTF). Exploratory multivariate analyses was performed to identify predictive values to developing severe pneumonitis.

RESULTS

Of 189 patients, most were ECOG 0-1 (91%) and partial response from chemoradiation (85%) prior to durvalumab. 49% of patients received full year of therapy (n=93). Median TTF=11.2 months, and median OS=19.7 months with 1-year OS=64% (n=121). Median treatment duration=62 days with a median follow-up duration of 613 days. Durvalumab was discontinued in 23% of patients due to any toxicity. 26% (n=49) developed any grade of pneumonitis. 9% (n=17) had \geq grade 3 pneumonitis. 13% (n=9) of deaths were attributed to pneumonitis. Corticosteroids were administered to 86% of the patients with pneumonitis (n=42). Male gender and pre-existing autoimmune condition were associated with \geq grade 3 pneumonitis.

CONCLUSIONS

We report a risk of pneumonitis comparable to prior retrospective studies and the PACIFIC study, but higher incidence of corticosteroid use. This is the first Canadian real-world study to date that explore clinical factors associated with ICI pneumonitis post-durvalumab therapy in NSCLC which may help guide future patient selection for safe completion of consolidation immunotherapy.

IN-PERSON POSTER PRESENTATION

18_CAMO_2023

REAL WORLD SEQUENCE OF PEPTIDE RECEPTOR RADIONUCLIDE THERAPY (PRRT) AND CHEMOTHERAPY IN PATIENTS WITH METASTATIC PANCREATIC NEUROENDOCRINE TUMORS (PNETS)

William J Phillips¹, Elena Tsvetkova², Macyn Leung³, Gautham Nair⁴, Stephen Welch², David Laidley², Tim Asmis⁵, Michael Vickers⁵, Morgan Black², Robin Sachdeva², Horia Marginean³, Rachel Goodwin⁵

¹ Department of Medicine University of Ottawa, Ottawa ON

² London Regional Cancer Program (LRCP), London ON

³ The Ottawa Hospital Research Institute, Ottawa ON

⁴ Faculty of Medicine Western University, London ON

⁵ The Ottawa Hospital Cancer Centre, Ottawa ON

INTRODUCTION

To characterize the sequence of PRRT and chemotherapy at two Canadian pNET treatment centers, distinguished by the availability of PRRT.

METHODS

This is a multicenter retrospective cohort study involving The Ottawa Hospital Cancer Centre (TOHCC; PRRT non-treatment center (PRRT-NTC)) and London Regional Cancer Centre (LRCC; PRRT treatment center (PRRT-TC). Patients with histologically confirmed pNETs between January 2010 – June 2021 over the age 18 (n=226), with metastatic disease (n=177) were included. Demographic, clinical and cancer treatments were collected. Descriptive statistics were used to evaluate the sequence of systemic therapy.

RESULTS

177 patients with metastatic pNET were identified. The most common locations of metastasis were liver (n=135, 76%), lymph node (n=65, 37%) and bone (n=37, 21%). Systemic therapies included octreotide (n=59, 40%), lanreotide (n=47, 32%), targeted therapy (n=40, 27%), chemotherapy (n=48, 33%) and PRRT (n=47, 32%). Temozolomide-containing chemotherapy was used in 22 (46%) patients.

There were 83 (47%) patients treated at the PRRT-TC. Of those, 44 (53%) patients received PRRT and chemotherapy, of which 11 (25%) received chemotherapy prior to PRRT. Likewise, 33 (35%) patients received PRRT and chemotherapy at the PRRT-NTC, of which 1 (3%) received chemotherapy prior to PRRT. There were 7 (16%) patients who received temozolomide prior to PRRT at the PRRT-TC, compared to 0 (0%) patients at the PRRT-NTC.

DISCUSSION

Early data from United States centres may suggest an association with temozolomide prior to PRRT and the development of myelodysplasia and leukemia. In this large real-world sample, sequencing of chemotherapy and PRRT showed center-to-center variation with metastatic pNET patients treated at a PRRT-TC being more likely to receive chemotherapy, including temozolomide, prior to PRRT. This may be explained in-part by referral/practice patterns, and PRRT availability. These findings suggest an opportunity to evaluate and optimize the sequence of systemic therapy with the increasing availability of PRRT in Canada

IN-PERSON POSTER PRESENTATION

19_CAMO_2023

INCIDENCE OF RADIOTHERAPY FOR BRAIN METASTASES AMONG BREAST CANCER PATIENTS IN ONTARIO: A POPULATION-BASED STUDY

Rania Chehade¹, Xin Ye Wang², Michael N. Rosen³, Arjun Sahgal⁴, Sunit Das^{2,5}, Refik Saskin⁶, Bo Zhang⁶, Hany Soliman⁴, Kelvin K.W. Chan^{1,2}, Katarzyna J. Jerzak^{1,2}

¹Division of Medical Oncology, Sunnybrook Odette Cancer Centre, University of Toronto, Toronto, Ontario, Canada

²Institute of Medical Sciences, Faculty of Medicine, University of Toronto, Toronto, Canada

³Faculty of Medicine, University of Ottawa, Ottawa, Canada

⁴Department of Radiation Oncology, Sunnybrook Odette Cancer Centre, University of Toronto, Toronto, Ontario, Canada,

⁵Division of Neurosurgery, St. Michael's Hospital, University of Toronto, Toronto, Canada

⁶Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, ON, Canada; Institute of Clinical Evaluative Sciences, Sunnybrook Health Sciences Centre, Sunnybrook Research Institute, Toronto, ON, Canada

OBJECTIVE

To evaluate cumulative incidence of radiotherapy for brain metastases (BrM) among patients diagnosed with breast cancer (BC) in Ontario.

METHODS

We conducted an Ontario-wide retrospective, observational cohort study using ICES database to assess treatment patterns and outcomes of patients with BC who received radiotherapy for BrM between January 2009 and December 2018.

The primary endpoint was cumulative incidence of radiotherapy for BrM accounting for the competing risk of death. Data were censored if patients were alive on the same therapy at last available follow-up with the last cut-off date being March 31, 2019. Kaplan-Meier analyses were performed for the time to event endpoints and compared using the log-rank test. Cumulative incidence of radiotherapy for BrM from the diagnosis of BC was calculated using the Cumulative Incidence Function, accounting for the competing risk of death using a competing risk analysis. Multivariable regression models were used to account for confounding variables.

RESULTS

88,111 patients with BC were identified; 85.2% had stage I-III disease and 4.6% had stage IV disease at diagnosis. In the overall population, 2.4% (n=2,120) received radiotherapy for BrM; this proportion was highest among patients with de-novo stage IV disease (14%, n=549). 82% (n=1738) of patients with BrM were treated with whole brain radiotherapy (WBRT) while 18% (n=382) were treated with stereotactic radiation (SRS). Patients treated with SRS had a longer median OS compared to those treated with WBRT (9.3 months vs 4.6 months, p<.0001), with lower 30-day mortality (5.2% vs 15.5%, p<0.001), after adjustment for confounding variables.

CONCLUSIONS

Approximately 1 in 7 patients with metastatic BC will require radiotherapy for BrM. Given that women treated for BC BrM with SRS had better outcomes, the use of SRS should be encouraged when clinically indicated.

IN-PERSON POSTER PRESENTATION

20_CAMO_2023

MULTIDISCIPLINARY RECTAL CANCER ROUNDS - CHARACTERIZATION OF DELAYS TO ONCOLOGICAL CONSULTATION AND TREATMENT AMONG PATIENTS SCHEDULED FOR CLINICAL DISCUSSIONS; QUALITY IMPROVEMENT ANALYSIS

Joanna Mycek¹, Mark Freeman², Richard Lee-Ying², Hyea Min Yoon³

¹Department of Medicine, University of Calgary, Alberta, Canada

²Department of Oncology, Tom Baker Cancer Centre, Calgary, Alberta, Canada

³Department of Surgery, University of Calgary, Alberta, Canada

OBJECTIVE

Since September 2020, the Tom Baker Cancer Centre (TBCC) has embedded weekly multidisciplinary rounds review of all non-metastatic rectal cancer cases to determine optimal management before formal consultations. However, this extra step could lead to delays in management.

METHODS

We reviewed all non-metastatic rectal cancer referrals from January 2019 to December 2021 and compared the time from clinical diagnosis to first TBCC consultation (either medical or radiation oncologist) and time to first rectal cancer treatment between those reviewed in rounds and those not.

RESULTS

During the study period, 203 eligible patients were identified, with a median age of 63 years (IQR 53-70) and male predominance (62.6%). The majority 126 (62.0%) had stage III disease. In total, 126 (62.1 %) patients received neoadjuvant therapy with predominance of long course chemoradiation (89, 43.8%). Only 11 (5.4%) received total neoadjuvant therapy. Surgical resection occurred in 168 (82.8%) patients, with low anterior resection being the most common (124, 61.1%). Adjuvant treatment was administered in 115 (56.7%) patients, principally with chemotherapy alone (98, 48.3%). 97 (47.8%) patients were reviewed in rounds, while 106 (52.2%) were not. Following multidisciplinary review, 25 (12.3%) patients were downstaged and 9 (4.4%) upstaged. Among patients reviewed and not, median time from diagnosis to TBCC consultation was 41 days (IQR 27.5-74.0) and 57 days (IQR 28.0-90.5), respectively ($p = 0.926$) and the median time from diagnosis to first treatment was 53 (IQR 40.0-68.5) and 49 days (IQR 37.5-63.8), respectively ($p = 0.284$).

DISCUSSION

This convenience sample demonstrates no statistically significant delays between diagnosis and first oncological consultation or treatment among patients scheduled for mandatory multidisciplinary rounds discussion. These findings provide reassurance that adding steps to improve the quality of rectal cancer management does not have a worrisome impact on time to consultation or treatment.

IN-PERSON POSTER PRESENTATION

21_CAMO_2023

MULTISYSTEM IMMUNE-RELATED ADVERSE EVENTS FROM DUAL AGENT IMMUNOTHERAPY USE

Yuchen Li¹, Gregory Pond², Elaine McWhirter¹

¹Department of Oncology, Juravinski Cancer Centre, Hamilton, Ontario

²Ontario Institute for Cancer Research, Ontario

OBJECTIVE

To assess for rate of multisystem immune-related adverse events (irAEs) for patients who received ipilimumab and nivolumab for cancer treatment.

METHOD

A retrospective cohort review was completed that included all cancer patients seen at Juravinski Cancer Centre who received at least one dose of ipilimumab and nivolumab from January 1, 2018 to May 31, 2022. Patient characteristics, cancer types, and number and types of irAEs were recorded. Multivariate logistic regressions were also completed comparing those who experienced multisystem irAEs, single irAE, and no irAE.

RESULTS

A total of 123 patients were included in this study. Median age was 59 years old, with 69% male. 72 out of 123 patients (59%) had melanoma, 50/123 (41%) had renal cell carcinoma (RCC), and 1/123 (1%) had breast cancer. At least one irAE was seen in 72% of patients, and most irAEs occurred during the combination phase (89% of first irAE, 59% of second irAE, 75% of third irAE, and 50% of fourth irAE). Multisystem irAEs were seen in 40% of the overall cohort. The most common irAE type was dermatitis (22%), followed by colitis (19%), hepatitis (17%), and thyroiditis (15%). 30 out of 89 patients (34%) who experienced irAE(s) required hospitalization for treatment of irAE(s).

CONCLUSION

From our single-centre cohort study, there appeared to be a higher than previously quoted percentage of patients who experienced irAEs after receiving ipilimumab and nivolumab, with a majority of them developing multisystem irAEs. Many patients experienced debilitating associated symptoms and hospital admissions relating to irAEs. It is important for both the counselling and consent of patients, and for patient education, to discuss the possibility of multiple irAEs prior to dual immunotherapy initiation.

IN-PERSON POSTER PRESENTATION

22_CAMO_2023

IMPROVING THE FREQUENCY AND DOCUMENTATION OF GOALS OF CARE CONVERSATIONS BY MEDICAL ONCOLOGISTS AT THE OTTAWA HOSPITAL

Julian Surujballi¹, Joanna Gotfrit¹

¹The Ottawa Hospital Cancer Centre, University of Ottawa, Ottawa, ON, Canada

OBJECTIVE

This Quality Improvement project aims to assess and improve rates of Goals of Care discussion (GOCD) documentation using an electronic documentation template for medical oncologists and nurses at The Ottawa Hospital Cancer Centre.

METHODS

The primary intervention was the creation and distribution of a documentation template in the Epic electronic health record. The secondary intervention was education sessions for medical oncologists and nurses regarding holding GOCDs and using the template.

The rate of documented GOCDs within 60 days of consultation to medical oncology was assessed by retrospective chart review. Rates of GOCDs were assessed for seven days before and after the education sessions. Results were assessed based on treatment intent and by individual oncologist. A survey assessing barriers to GOCDs was administered to medical oncologists after the evaluation period.

RESULTS

During the assessment period, 88 and 111 charts were reviewed before and after the intervention, respectively. Rates of documented GOCDs in the overall population were not significantly different before and after the intervention (0.24 vs 0.22, $p=0.71$). GOCD rates based on treatment intent were as follows: palliative (0.35 vs 0.26, $p=0.16$), adjuvant (0.18 vs 0.20, $p=0.77$), curative (0.18 vs 0.25, $p=0.25$), and neoadjuvant (0.18 vs 0.25, $p<0.01$). Significant variation in baseline documented GOCD rates were observed between providers (Median 0.17, SD 0.26, Minimum 0, Maximum 0.67), which persisted after the intervention. 69% of documented GOCDs occurred at the initial visit. No GOCDs were documented by nurses.

The barrier survey response rate was 42.3% ($n=11$). Top barriers identified were being unaware of the template ($n=4$) and forgetting to use the template ($n=3$).

CONCLUSIONS

Creating a documentation template and provider education did not significantly increase rates of documented GOCDs among medical oncologists at The Ottawa Hospital. Future directions include further education and engaging patients in GOCDs outside of clinic visits.

IN-PERSON POSTER PRESENTATION

23_CAMO_2023

THE CON EXPERIENCE IN ADVANCED OVARIAN CANCER: ARE WE MEETING THE STANDARD?

Kelly Li¹, Samuel Leung^{2,3}, Aline Talhouk^{3,4}, Anna Tinker^{1,3}

¹Division of Medical Oncology, BC Cancer Agency, Vancouver, BC

²BC Cancer Research Institute, Vancouver, BC

³Gynecological Cancer Outcomes Unit, BC Cancer Agency Vancouver, BC

⁴Division of Gynecological Oncology, BC Cancer Agency Vancouver, BC

BACKGROUND

Management of advanced ovarian cancer requires a multidisciplinary team. The Community Oncology Network (CON) in British Columbia (BC) connects local health centres with the BC cancer agency, enabling patients to receive cancer care close to home. The CON is defined by a Tiers of Service framework, ranging from tier 1 (primary care) to 6 (subspecialized province-wide consultations). We aim to identify whether patients undergoing treatment for advanced ovarian cancer at tier 3/4 CON centres received the same care compared with those at tier 5/6 centres.

METHODS

Patients with advanced high grade serous ovarian cancer diagnosed from January 1 2017 to June 30 2019 were identified. 30 patients from tier 3/4 CON centres and 30 patients from tier 5/6 centres with follow-up data were selected. Information on diagnostic and treatment details was collected and analyzed.

RESULTS

20% patients from tier 3/4 CON centres had cytology only for diagnosis, compared to 33.3% patients from tier 5/6 centres. 70% patients from tier 3/4 centres received pre-operative chemotherapy (POC) and 63.3% patients from tier 5/6 centres received POC. For both tier 3/4 and tier 5/6 centres, most patients (83.3%) had a surgical consult with a gynecological oncologist and 70% had debulking surgery. The median number of cycles of POC received by patients prior to surgical debulking was 5 among tier 3/4 CON patients and 4 among those from tier 5/6 centres. 60% patients treated in tier 3/4 and 63.3% from tier 5/6 centres received adjuvant chemotherapy. Referral rates to Hereditary Cancer Program was high (81.7%) among patients from both groups.

CONCLUSION

In the pre-COVID era, BC patients with advanced ovarian cancer treated at tier 3/4 CON centres received similar care as those treated at tier 5/6 centres. Tier 3/4 patients received more cycles of POC, possibly reflecting a delay in coordinating surgical care.

VIRTUAL POSTER PRESENTATION

24_CAMO_2023

A CONTEMPORARY ASSESSMENT OF THE LANDSCAPE OF CANADIAN UNDERGRADUATE MEDICAL EDUCATION (UGME) ONCOLOGY TRAINING

Sumiya Lodhi, MSc¹, William Phillips, MD², Jerry Maniate, MD², Craig Campbell, MD², Anna Wilkinson, MD³, Sandeep Sehdev, MD⁴

¹Department of Medicine, University of Ottawa, Ottawa, Ontario, Canada

²Department of Medicine, The Ottawa Hospital, Ottawa, Ontario, Canada

³Department of Family Medicine, The University of Ottawa, Ontario, Canada

⁴The Ottawa Hospital Cancer Centre, Ottawa, ON, Canada

OBJECTIVE

This initiative aims to identify specific gaps in undergraduate medical education (UGME) curricula to guide future curriculum improvement.

METHODS

A mixed methods model was employed with initial surveys of educational stakeholders including medical students, recently graduated family physicians and UGME leadership. Among medical students, only executive members of Canadian student councils were asked to participate. Surveys were designed to assess oncology training structure, methods, and formal teaching time for core oncology competencies. Participants were recruited via email and surveys were distributed using Google Forms.

RESULTS

We received 14 responses from UGME leadership, 29 from medical students and 17 from family physicians. UGME leaders from 13 and medical students from 8 of 17 Canadian institutions responded. Overall, 13 (45%) of medical students do not feel prepared for cancer care. Students felt least prepared for managing survivorship and complications of active cancer/cancer therapies, which were allotted <5 hours as reported by 10 (71.4%) of UGME leadership. More than 50% of family physicians reported undergraduate and residency training as below average or unsatisfactory. Family physicians identified cancer screening, survivorship, and communication as the most relevant competencies to their practice.

CONCLUSION

Despite cancer being the leading cause of death in Canada, medical graduates do not feel prepared for cancer care. These results identify survivorship and management of cancer and cancer treatment complications as areas of deficiency, which would benefit from more comprehensive teaching and exposure in UGME training.

VIRTUAL POSTER PRESENTATION

25_CAMO_2023**LOCALLY ADVANCED RECTAL CANCER REFERRALS AT THE OTTAWA HOSPITAL CANCER CENTRE: AN AUDIT**Victor Lo¹, Joanna Gotfrit¹¹Division of Medical Oncology, Department of Medicine, University of Ottawa, Ottawa, Ontario**OBJECTIVE**

Locally advanced rectal cancer patients require multidisciplinary care for treatment planning. We determined the proportion of patients who had all necessary consultations and investigations prior to their medical oncology consultation, and plan to assess the logistical, system, and clinical factors that may be associated with increased time from diagnosis to treatment initiation.

METHODS

We conducted a retrospective chart review of adult patients referred to The Ottawa Hospital Cancer Centre with locally advanced rectal adenocarcinoma, seen in consultation by a surgical, medical, and radiation oncologist between January 2019 and December 2022.

RESULTS

Data collection and analysis are ongoing. Of 60 patients, the median age was 63 years (range: 22-83) and 36 (60%) were male. The median time from diagnosis to treatment was 57 days (range: 23-108). All patients underwent MRI imaging, with 58 (97%) also completing an abdomen-pelvis CT scan, and 51 (85%) completing a chest CT scan. Forty-nine (82%) of patients met criteria for high-risk disease as per the RAPIDO trial, and 11 (18%) patients required presentation at multidisciplinary case conferences (MCCs). Surgical oncology consultation preceded medical oncology consultation in 34 (57%) patients, and 26 (43%) patients required an additional appointment with their medical oncologist prior to treatment initiation (range: 1-2 additional appointments). The most common initial treatment plans included: non-operative management (35%), total neoadjuvant therapy with planned resection (22%), long-course chemoradiation (23%), short-course radiation, (13%), and upfront resection (5%).

CONCLUSION

Many patients did not have a surgical oncology opinion at the time of medical oncology consultation, and almost half of all patients require additional appointments with medical oncology prior to treatment initiation. Future analysis aims to determine whether the initial treatment approach, order of specialist consultations, availability of staging investigations at time of medical oncology consultation, and need for presentation at MCCs are associated with increased time-to-treatment initiation.

VIRTUAL POSTER PRESENTATION

26_CAMO_2023

ELIGIBILITY AND WORKLOAD IMPACT OF INTRODUCTION OF ADJUVANT NIVOLUMAB IN PATIENTS WITH RESECTED ESOPHAGEAL AND GASTROESOPHAGEAL JUNCTION (ESO/GEJ) CANCER

Tae Hoon Lee¹, Sharlene Gill^{1,2}

¹Department of Medicine, University of British Columbia, Vancouver, British Columbia

²BC Cancer, Vancouver, British Columbia

OBJECTIVES

The CheckMate (CM) 577 study demonstrated the benefit of 12 months of additional therapy with adjuvant nivolumab in patients with pathologic residual disease following neoadjuvant chemoradiation for ESO/GEJ cancer. Nivolumab is now funded in BC, as per the *GIA/NIV* protocol. This BC Cancer retrospective study reviews the real-world eligibility and potential resource implications associated with the therapy.

METHODS

REB-approved chart review of patients who underwent *CROSS* chemoradiation at BC Cancer from January 2016 to December 2020. Patient eligibility was determined by identifying at least ypT1 or ypN1 and assessed per the CM577 and *GIA/NIV* criteria. The resource impact of nivolumab was assessed by projecting the number of MD visits, chemotherapy visits, and anticipated G3/4 serious toxicity events per the CM577 study.

RESULTS

677 patients were identified: 63% esophageal and 37% GEJ, with 74% adenocarcinoma and 25% squamous cell carcinoma histology. 460 patients underwent resection, with 365 patients (79%) with pathologic residual disease. By the CM577 criteria, n=249 (68%) were eligible for adjuvant nivolumab, while n=321 (88%) were eligible per the *GIA/NIV* criteria. In BC, with conservative assumptions, this translates into an estimated 60 patients/year being eligible for adjuvant nivolumab, resulting in 768 additional new chemotherapy visits and potentially equal number of MD visits, which translates into 254 additional MD workhours annually. Based on a 34% G3/4 toxicity rate, an estimated 20 patients/year would experience a serious toxicity event that requires medical intervention.

CONCLUSIONS

Adjuvant nivolumab is an important new treatment option for patients with resected ESO/GEJ cancer. Our findings suggest that most patients (88%) with resected ESO/GEJ cancer and residual disease would be eligible for 12 months of adjuvant nivolumab. In addition to treatments costs, additional oncologist workload impact should be considered in the provincial implementation of therapies for new indications.

VIRTUAL POSTER PRESENTATION

27_CAMO_2023

REAL WORLD EXPERIENCE OF CEMIPIMAB IN THE TREATMENT OF REFRACTORY LOCALLY-ADVANCED AND METASTATIC CUTANEOUS SQUAMOUS CELL CARCINOMA

Scott Strum¹, Seth Climans², Victoria Purcell³, Morgan Black¹, Scott Ernst¹

¹Department of Oncology, Western University, London, Ontario, Canada

²Department of Clinical Neurological Sciences, Western University, London, Ontario, Canada

³Schulich School of Medicine and Dentistry, Western University, London, Ontario, Canada

BACKGROUND

Cutaneous squamous cell carcinoma (cSCC) is the second most common non-melanoma skin cancer in Canada. However, few real-world reports exist on the treatment of refractory locally-advanced (non-metastatic cSCC no longer amenable to surgical intervention or radiation therapy) or metastatic cSCC with cemiplimab to date. The objective of this study was to characterize the demographic and clinical outcomes of these patients in a real-world setting.

METHODS

Retrospective analysis of adult patients with refractory locally advanced (LA) and metastatic cSCC treated with cemiplimab at the London Regional Cancer Program in Ontario, Canada. Patient demographics and treatment characteristics were reported, as well as Kaplan-Meier estimates of progression free survival (PFS) and overall survival (OS).

RESULTS

Forty patients were included in this study. 15 (38%) had LA disease at the time of cemiplimab treatment, and 25 (62%) had metastatic disease. Median treatment duration was 5.2 months (IQR 1.6 months-10.3 months). Kaplan-Meier analysis revealed the median OS was not reached (NR) for LA patients, but was 10 months (95% CI 3.25 months-NR) for metastatic patients. Median PFS was 25.3 months (95% CI 7.29 months-NR) for LA patients, 7.1 months (95% CI 3.02 months-NR) for metastatic patients. Estimated probability of OS at 12 months for all patients was 58.6% (95% CI 43.2%-79.4%), and estimated probability of PFS at 12-months was 45.3% (95% CI 30.4%-67.5%). Reasons for treatment discontinuation were death from any cause (44%), disease progression (22%), cemiplimab side effects (4%), and other causes (30%; comorbidities, treatment breaks).

DISCUSSION

The estimated 12-month OS and PFS were lower than corresponding pivotal phase I and II clinical trials. However, toxicity was tolerable and no deaths were attributable to cemiplimab. Thus, cemiplimab is a safe and effective therapy in patients with refractory locally-advanced and metastatic cSCC disease.

VIRTUAL POSTER PRESENTATION

28_CAMO_2023

HEPATOCELLULAR CARCINOMA (HCC) IN ALBERTA, CANADA: A RETROSPECTIVE DATABASE ANALYSIS TO UNDERSTAND TREATMENT PATTERNS AND OUTCOMES IN INTERMEDIATE AND ADVANCED UNRESECTABLE HCC

Chloe Lim¹, Carla Pires Amaro², Philip Ding², Winson Cheung², Iqra Syed³, YongJin Kim³, Derek Clouthier³, Sharon Wang³, Cal Shephard³, Vincent Tam²

¹Internal Medicine Residency Program, University of Calgary, AB

²Department of Oncology, University of Calgary, AB,

³AstraZeneca

BACKGROUND

With the emergence of new systemic therapies there has been a substantial change in the treatment of HCC. The aim of this study was to assess real-world data regarding treatment patterns and outcomes in Canadian HCC patients with intermediate (BCLC-B) and advanced (BCLC-C) stage disease who received systemic treatments.

METHODS

All BCLC-B and C HCC patients who received at least one dose of systemic therapy between January 1, 2008 to December 31, 2020 in Alberta, Canada were included. Patient characteristics, treatment patterns, overall survival (OS), progression-free survival (PFS), clinician-assessed response rates (RR), and reasons for treatment discontinuation were retrospectively analyzed across both BCLC stages.

RESULTS

Of total 321 patients included, 33 (10%) were BCLC-B and 288 (90%) were BCLC-C. Demographic and clinical characteristics are as follows for the BCLC-B and BCLC-C groups respectively, median age was 65 and 63 years, 91% and 80% were male, 9% and 20% were of East Asian ethnicity. Most patients were ECOG 0-1 (94% and 85%) and Child-Pugh A (82% and 85%). In both groups, 97% were albumin-bilirubin (ALBI) grade 1 or 2 before the start of first-line treatment. Common causes of liver disease were hepatitis C (33% and 42%), alcohol (36% and 25%) and hepatitis B (15% and 24%). Prior treatments included: TACE (34% and 30%), TARE (6% and 8%), liver resection (24% and 17%) and SBRT (15% and 4%). Table 1 outlines systemic treatments received and outcomes by BCLC stage. Median follow-up was 13.5 months and 10 months for BCLC-B and C groups, respectively. Median treatment duration of systemic therapy for all patients was 4 months.

CONCLUSIONS

Although this study was not powered for a formal comparison, systemic treatment patterns and outcomes of BCLC-B and C HCC patients seemed comparable, with a possible trend towards better PFS and OS in BCLC-B patients.

VIRTUAL POSTER PRESENTATION

28_CAMO_2023

HEPATOCELLULAR CARCINOMA (HCC) IN ALBERTA, CANADA: A RETROSPECTIVE DATABASE ANALYSIS TO UNDERSTAND TREATMENT PATTERNS AND OUTCOMES IN INTERMEDIATE AND ADVANCED UNRESECTABLE HCC

Table 1.

	Overall	Intermediate stage (BCLC B)	Advanced stage (BCLC C)	P value
	n=321	n=33	n=288	
First-line treatment				0.72
- sorafenib	79%	76%	80%	
- lenvatinib	14%	21%	13%	
- atezo+bev	3%	3%	4%	
RR	19%	13%	19%	0.25
Median PFS (95% CI), months	4.4 (3.8-5.6)	7.4 (5.1 – 15.9)	4.2 (3.5 – 5.3)	0.08
Median OS (95% CI), months	11.1 (9.9 – 12.9)	13.5 (11.6 – 25)	10.9 (9.6 – 12.6)	0.32
Reason for discontinuation				0.35
- Progression	58%	57%	59%	
- Toxicity	28%	27%	29%	
- Patient Choice	6%	13%	5%	
- Death	7%	3%	8%	

VIRTUAL POSTER PRESENTATION

29_CAMO_2023

ASSESSING FOR OPTIMAL UTILIZATION OF THE MEDICAL ONCOLOGY INPATIENT UNIT AT THE OTTAWA HOSPITAL

Julian Surujballi¹, Paul Wheatley-Price¹

¹The Ottawa Hospital Cancer Centre, University of Ottawa, Ottawa, ON, Canada

OBJECTIVE

Inpatient medical oncology units face growing capacity pressures as systemic therapy becomes increasingly complex. This Quality Improvement initiative assesses adherence to local admission criteria for the inpatient medical oncology ward at The Ottawa Hospital.

METHODS

In Phase 1, medical oncology inpatient admissions during January 2020 were retrospectively assessed for adherence to local admission guidelines. Reasons for admission were additionally reviewed by two medical oncologists to assess if cases were most appropriately primarily cared for by a medical oncologist versus another specialist.

In Phase 2, on-call personnel were asked to log and rate the appropriateness of all referrals from the emergency department from February to November 2020.

RESULTS

In Phase 1, 80% of admissions were referred through the emergency department and 20% from direct admissions or transfers. 59% of admissions were adherent to the referral guidelines, 26% were non-adherent, and 15% were unclear. When assessed by medical oncologists, 63% of admissions were thought to be appropriate, 14% were best cared for by another specialist, and 23% required collaborative care.

In Phase 2, 71 referrals were recorded, mostly before June 2020. Of these, 62% were deemed appropriate for medical oncology admission versus 38% inappropriate. Reasons for deeming a referral inappropriate included hemodynamic instability (13.2%), respiratory distress (2.6%), insufficient workup (15.8%), requiring admission for a non-oncologic reason (15.8%), or requiring a non-oncologic specialty (52.6%).

CONCLUSIONS

There exists an opportunity for optimization of medical oncology inpatient service utilization, though results are confounded by competing inpatient pressures caused by the COVID-19 pandemic. With medical oncology being a primarily outpatient specialty, reserving the oncology inpatient unit for patients that require specialized oncology care could allow for resources to be diverted to the outpatient setting. As oncology care becomes more complex, a multidisciplinary approach to inpatient cancer care may be required.

VIRTUAL POSTER PRESENTATION

30_CAMO_2023

A PATIENT SURVEY EVALUATING COVID-19-INDUCED CHANGES IN FOLLOW UP OF PATIENTS WITH EBC: OPPORTUNITIES FOR EVIDENCE-BASED PRACTICE?

Ana-Alicia Beltran-Bless¹, Gail Larocque², Muriel Brackstone³, Angel Arnaout⁴, Jean-Michel Caudrelier⁵, Denise Boone², Parvaneh Fallah¹, Terry Ng^{1, 6}, Peter Cross⁵, Nasser Alqahtani¹, John Hilton^{1, 2}, Lisa Vandermeer⁶, Gregory Pond⁷, Mark Clemons^{1, 2, 6}

¹University of Ottawa, Ottawa, Ontario

²The Ottawa Hospital Cancer Centre, Ottawa, Ontario

³Department of Surgery, London Health Sciences Centre, London, Ontario

⁴Department of Surgery, The Ottawa Hospital Cancer Centre, Ottawa

⁵Department of Radiation Medicine, The Ottawa Hospital Cancer Centre, Ottawa, Ontario

⁶Cancer Therapeutics Program, The Ottawa Hospital Research Institute, Ottawa, Ontario

⁷Department of Oncology, McMaster University, Hamilton, Ontario

PURPOSE

Following completion of early breast cancer (EBC) treatment, guidelines recommend routine in-person follow-up with physical examination. Adoption of virtual visits during the COVID-19 pandemic resulted in major changes in practice. A patient survey was conducted to understand current practices, perspectives, and desires of follow-up.

METHODS

EBC patients who have completed the acute treatment phase (i.e. surgery, chemotherapy and radiation) were approached. The survey evaluated: current follow-up schedule, perceptions about follow-up, as well as interest in clinical trials.

RESULTS

Of 402 patients approached, 239 responses were obtained (response rate 59%). Median age of participants was 62.5 years (range 25-86 years). Routine well follow-up appointments were most often conducted by patients' medical (n=147/244, 60%) or radiation oncologist (n=130/244, 53%). Patients were often followed by multiple healthcare providers (mean 1.7). Breast examinations were conducted every 6 months (n=110/236, 46%) or annually (n=106/236, 44%).

Regularly scheduled follow-up was important to monitor for local recurrence, distant recurrence, manage side effects of treatment and to provide psychological support. Most patients were satisfied with their follow-up frequency (satisfaction score 8.26/10) and would worry more about their cancer if there were no visits (n=225/247, 91%). Patients felt that regular follow-up would detect recurrent cancer earlier (n=214/255, 96%) and would help them live longer (n=218/249, 88%). While most patients felt that their medical oncologist was the most suited to provide follow-up, 55% of patients felt comfortable being followed by their family physician. The COVID-19 pandemic reduced the number of in-person breast examinations for 54% of patients (n=63/117). Many patients were concerned that this would lead to later detection of local (n=29/63, 46%) and distant recurrence (n=25/63, 40%).

CONCLUSIONS

Despite evidence showing little impact of in-person assessment and the move to virtual care on the detection of recurrence, patients continue to place importance on regularly scheduled in-person follow-up.

VIRTUAL POSTER PRESENTATION

31_CAMO_2023

EVOLVING STRATEGIES FOR THE ROUTINE FOLLOW-UP OF PATIENTS WITH EARLY BREAST CANCER AND THE IMPACT OF COVID-19: A SURVEY OF HEALTHCARE PROVIDERS

Ana-Alicia Beltran-Bless¹, Gail Larocque², Angel Arnaout³, Jean-Michel Caudrelier⁴, John Hilton^{1,2}, Nasser Alqahtani¹, Lisa Vandermeer⁵, Gregory Pond⁶, Mark Clemons^{1,2,5}

¹University of Ottawa, Ottawa, Ontario

²The Ottawa Hospital Cancer Centre, Ottawa, Ontario

³Department of Surgery, The Ottawa Hospital Cancer Centre, Ottawa, Ontario

⁴Department of Radiation Medicine, The Ottawa Hospital Cancer Centre, Ottawa, Ontario

⁵Cancer Therapeutics Program, The Ottawa Hospital Research Institute, Ottawa, Ontario

⁶Department of Oncology, McMaster University, Hamilton, Ontario

PURPOSE

The COVID-19 pandemic resulted in a rapid change in routine follow-up for early breast cancer (EBC). A survey was performed to explore healthcare providers (HCPs) perceptions around current practices and goals of follow-up.

METHODS

Canadian HCPs who treat EBC participated in an anonymous electronic survey. Participants provided perspectives on follow-up, current practices regarding in-person and virtual visits, and interest in clinical trials assessing follow-up strategies.

RESULTS

Responses were received from 73 HCPs including medical (n=41/73,56%), radiation (n=13/73,18%) and surgical oncologists (n=13/73,18%). Thirty-four percent (n=25/73) of HCPs did not perform routine follow-up. Of the 48 (n=48/73,66%) who conducted in-person follow-up, it was typically six-monthly for years 1-3, yearly until year 5 and then on demand. Common reasons for follow-up visits were: assessment of symptoms from endocrine therapy and for the detection of recurrent disease. HCPs felt routine follow-up with physical examination resulted in earlier detection of local (n= 16/48,33%) and distant metastasis (n= 6/48,12.5%). While 48% of HCPs felt that the transition to virtual visits would neither impact local- nor distant recurrence or overall survival, 42% thought it would lead to later detection of local recurrence and 33% a later detection of distant recurrences. Sixty-nine percent (n=33/48) will continue to follow patients with a combination of in-person and virtual appointments. Most respondents agreed that follow-up should be more individualized, and risk adapted (n=42/48,87.5%). Most (62%, n=29/47) expressed interest in performing trials assessing well follow-up strategies.

CONCLUSION

Virtual care will remain an integral part of routine follow up. The effects of this on a range of patient outcomes should be explored in future trials.

VIRTUAL POSTER PRESENTATION

32_CAMO_2023

TREATMENT PATTERNS OF PANCREATIC NEUROENDOCRINE TUMOR (PNET) PATIENTS AT THE LONDON REGIONAL CANCER PROGRAM (LRCP) AND THE OTTAWA HOSPITAL CANCER CENTRE (TOHCC)

Gautham Nair¹, Stephen Welch², David Laidley², Robin Sachdeva³, Rachel Goodwin⁴, Macyn Leung⁵, Tim Asmis⁵, William Phillips⁶, Morgan Black³, Michael Vickers⁴, Horia Marginean⁶, Elena Tsvetkova²

¹Western University, London, Ontario

²London Health Sciences Centre, London, Ontario

³Lawson Health Research Institute, London, Ontario

⁴The Ottawa Hospital, Ottawa, Ontario

⁵The Ottawa Hospital Research Institute, Ottawa, Ontario

⁶Department of Medicine, University of Ottawa, Ottawa, Ontario

OBJECTIVE

To determine the treatment patterns of pNET patients managed at the LRCP and TOHCC.

METHODS

This is a multicenter retrospective cohort study involving LRCP and TOHCC. Patients with histologically confirmed pNETs between January 2010 - June 2021 over the age 18 were included. Demographic, clinical and cancer treatments were collected. Descriptive analysis was performed on the data collected to identify the local and systemic therapies used.

RESULTS

In total 192 pNET patients' charts were reviewed, 40% treated at LRCP; 42% female. Most common pNET locations were the pancreatic head (34%) and tail (45%) of the pancreas. 53% presented with stage IV disease and 21% with stage II. 28% were grade 1, 36% grade 2, and 8% grade 3 with the remainder being unknown or pathology not performed.

Local treatments included surgery for the primary tumour in 56% of patients, with 40% having curative intent. Surgery for metastasis occurred in 16% of patients and 63% of surgeries were in the liver. Local regional ablative treatments were used in 16%, 99% of ablations targeted metastases, and radiation was used in 15% of patients. The percentage of patients treated with systemic therapy included: 34% octreotide, 30% lanreotide, 30% chemotherapy, 29% PRRT, and 22% targeted therapy. The majority of patients undergoing systemic therapy had established metastases and progressive disease prior to treatment.

CONCLUSION

In this real-world database, 53% of patients present with non-curative disease and 15% of pNETs undergo metasetectomy, while embolization is not a common modality used. The most common systemic treatment used was somatostatin analogues followed by chemotherapy, PRRT and targeted therapy. This is one of the first cross centre, patient-level, Ontario databases that report the common treatment modalities used for pNETs. Further analysis will assess how treatments choices vary according to tumour grade.

VIRTUAL POSTER PRESENTATION

32_CAMO_2023

TREATMENT PATTERNS OF PANCREATIC NEUROENDOCRINE TUMOR (PNET) PATIENTS AT THE LONDON REGIONAL CANCER PROGRAM (LRCP) AND THE OTTAWA HOSPITAL CANCER CENTRE (TOHCC)

Treatment Modality	Percentage of Patients Receiving Treatment (%)	Notes
Surgery for Primary Tumor	56	40% had curative intent
Surgery for Metastases	16	63% targeted the liver. 31% had curative intent.
Octreotide	34	Of all treatment instances 66% had progressive disease and 82% had metastases at start
Lanreotide	30	Of all treatment instances 77% had progressive disease and 75% had metastases at start
PRRT	29	Median number of cycles was 4 [1,13]. Of all treatment instances 80% had progressive disease and 96% had metastases at start. 77% were completed.
Radiation Therapy	15	93% of treatments were done with non-curative intent. 100% had progressive disease and 93% had metastases at start.
Targeted Therapy	22	Of all treatment instances 85% had progressive disease and 89% had metastases at start
Chemotherapy	30	Of all treatment instances 94% had progressive disease and 91% have metastases at start. 45% of treatments ceased due to disease progression. 18% of treatments were completed.
Locoregional Ablative Therapy	16	99% of ablations targeted metastases.

Table 1: Summary of the treatment modalities used at LRCP and TOHCC for pNET patients.

VIRTUAL POSTER PRESENTATION

33_CAMO_2023

A RETROSPECTIVE ANALYSIS OF THE DIAGNOSIS OF GASTROENTEROPANCREATIC NEUROENDOCRINE TUMORS (GEP-NETS) AT THE OTTAWA HOSPITAL CANCER CENTRE (TOHCC) AND THE IMPACT OF COVID-19 ON DIAGNOSIS

Mohammad Alrehaili^{1, 2}, William Phillips³, Timothy Asmis^{1, 2, 4}, Michael Vickers^{1, 2, 4}, Horia Marginean⁴, Rachel Goodwin^{1, 2, 4}

¹University of Ottawa Division of Medical Oncology, Ottawa, ON Canada

²The Ottawa Hospital Cancer Centre, Ottawa, ON Canada

³University of Ottawa Department of Medicine, Ottawa, ON Canada

⁴The Ottawa Hospital Research Institute, Ottawa, ON Canada

INTRODUCTION

The incidence of NETs is rising. Our objective was to assess trends of GEP-NETs diagnosis (June 2010 to June 2021) at TOHCC and to explore if early COVID-19 pandemic data impacted these trends.

METHODS

This is a single center retrospective chart review with data collected from June 2010 to June 2021. We searched all databases including OACIS/EPIC, PACS and OPIS and found 647 GEP-NETs patients. Descriptive analysis was performed using frequencies and related percentages.

RESULTS

Of 647 patients with GEP-NETs, small bowel was the most common primary location (n=210 cases, 32.4%), then pancreas (n=118, 18.2%) and unknown primary (n=99, 15.3%). Most of the cases were classified as metastatic or locally advanced on initial presentation, and stage 1/2 was found in 158 cases (23.8%). Lower GI tumors was the most common disease among early stage NETs (n=88, 55.7%). There were 5 cases in 2010-2011 and average number per year-period was 5.5 until 2016-2017, after which time the number of cases increased to 10, 15, 11 and 13 during the last 4 year-periods. Regarding early stage pancreatic and upper GI NETs, total number of cases was 52 (32.9%) and 18 (11.4%), respectively. The number of pancreatic cases was 4 in 2010-2011, and the average number per year-period throughout the last 10 years was 4.7. Cases of upper GI tumors ranged between 1 and 3 per year-period, with the average of 1.6 over the last decade.

DISCUSSION

At our centre, most GEP-NETs presented in the advanced setting. There has been an increase in the incidence of early stage disease. Disease detection for all GEP-NETs was consistent throughout the last decade except for the lower GI cases that have increased since mid-2017, perhaps reflecting the adoption of Ontario FIT testing. Despite endoscopy closures during the pandemic, cases of GEP-NETs did not decrease.

VIRTUAL POSTER PRESENTATION

34_CAMO_2023

MULTICENTER POPULATION-LEVEL ANALYSIS OF SYSTEMIC THERAPY USE IN METASTATIC OR RECURRENT PROSTATE CANCER

Heba Mohamed¹, Grace Kim², Corin Macphail³, Ishmam Bhuiyan⁴, Taylor Sidhu⁴, Amir Emami¹, Longlong Huang⁵, Shaun Zheng Sun⁵, Scott Tyldesley⁶, Jenny Ko¹

¹Medical Oncology, BC Cancer, Abbotsford, BC

²Faculty of Medicine, University of British Columbia, Vancouver, BC

³Department of Pediatrics, University of Alberta, Edmonton, AB

⁴Faculty of Medicine, University of British Columbia, Vancouver, BC

⁵Department of Mathematics and Statistics, University of Fraser Valley, Abbotsford, BC

⁶Radiation oncology, BC Cancer, Vancouver, BC

BACKGROUND

Treatment (tx) options for metastatic prostate cancer (mPC) have advanced significantly. We evaluated real-world prescribing patterns and outcomes of new therapeutics.

METHODS

We reviewed all consecutive patients (pts) diagnosed with PC between 2016-2017 in British Columbia; only pts with de novo metastatic or recurrence were included. We performed descriptive statistics and univariate/multivariate analyses to examine overall survival (OS).

RESULTS

Of n=796 (de novo 69.6%; recurrence 30.4%), 93.3% had metastasis by cutoff (Sep 1, 2022). Median age at diagnosis of mPC was 73 (range 45-98). 99.2% started ADT. Additional line of tx started with ADT in 35.4% of mCSPC and in 38.8% of mCRPC. 18.7% tested for homologous repair defects (21 positive). Radiotherapy to prostate for mPC were given to 93 (11.6%). 307 (38.6%) received 1 line of tx; 181 (22.7%), 2; 128 (16.1%), 3 or more. 432 (54.3%) received ≥ 1 androgen receptor-axis-targeted therapies (ARAT). 59.5% died (84.4% from prostate cancer). Pts with ADT alone or one additional systemic tx had better OS than who had more tx lines (NR vs. 55.5m vs. 21.0m, $p=0.03$). Longer OS was seen for pts with no or one ARAT than for those with multiple ARAT (NR vs. 48.5m vs. 22.5m, $p=0.009$). No statistical difference in OS was seen between pts who had chemotx vs none, or pts on trial vs none. None of other clinical factors had an independent effect on OS. Pts with major cardiovascular/neurologic comorbidities received ARATs at a similar rate.

CONCLUSIONS

We observed low uptake of early treatment intensification. Pts who required less switch to another systemic tx had better OS. Different ARATs were prescribed at a similar rate to pts with various comorbidities regardless of the potential side effects.