

Henry Ford Health

## Henry Ford Health Scholarly Commons

---

Hematology/Oncology Meeting Abstracts

Hematology-Oncology

---

9-1-2022

### **OA06.06 Impact of Systemic Anti-cancer Treatments on Outcomes of COVID-19 in Patients with Thoracic Cancers: CCC19 Registry Analysis**

a. Kulkarni

C. Hennessy

G. Wislon

V. Ramesh

Clara Hwang

*See next page for additional authors*

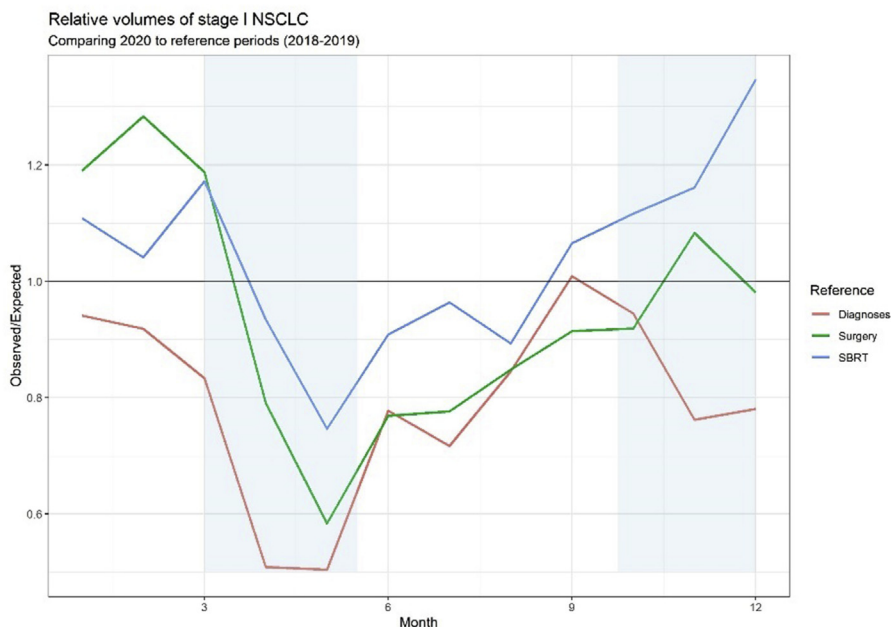
Follow this and additional works at: [https://scholarlycommons.henryford.com/hematologyoncology\\_mtgabstracts](https://scholarlycommons.henryford.com/hematologyoncology_mtgabstracts)

---

---

**Authors**

a. Kulkarni, C. Hennessy, G. Wislon, V. Ramesh, Clara Hwang, A. Joy, Z. Bakouny, H. Khan, D. Vilar-Compte, R. McKay, C. Jani, J. W. Riess, M. Puc, A. Kasi, S. Berg, D. R. Castillo, B. Hayes-Lattin, W. Hosmer, D. Flora, S. Mishra, B. French, J. Warner, G. Lopes, S. Peters, and N. Duma



**OA06.06**  
**Impact of Systemic Anti-cancer Treatments on Outcomes of COVID-19 in Patients with Thoracic Cancers: CCC19 Registry Analysis**



**A. Kulkarni,<sup>1</sup> C. Hennessy,<sup>2</sup> G. Wislon,<sup>1</sup> V. Ramesh,<sup>1</sup> C. Hwang,<sup>3</sup> A. Joy,<sup>4</sup> Z. Bakouny,<sup>5</sup> H. Khan,<sup>6</sup> D. Vilar-Compte,<sup>7</sup> R. McKay,<sup>8</sup> C. Jani,<sup>9</sup> J.W. Riess,<sup>10</sup> M. Puc,<sup>11</sup> A. Kasi,<sup>12</sup> S. Berg,<sup>13</sup> D.R. Castillo,<sup>14</sup> B. Hayes-Lattin,<sup>15</sup> W. Hosmer,<sup>16</sup> D. Flora,<sup>17</sup> S. Mishra,<sup>2</sup> B. French,<sup>2</sup> J. Warner,<sup>2</sup> G. Lopes,<sup>18</sup> S. Peters,<sup>19</sup> N. Duma<sup>20</sup>** <sup>1</sup>University of Minnesota, Minneapolis/MN/USA, <sup>2</sup>Vanderbilt University, Nashville/TN/USA, <sup>3</sup>Henry Ford Health System, Detroit/MI/USA, <sup>4</sup>University of Cincinnati, Cincinnati/OH/USA, <sup>5</sup>Dana-Farber Cancer Institute, Boston/

MA/USA, <sup>6</sup>Brown University, Providence/RI/USA, <sup>7</sup>Instituto Nacional de Cancerologia, Mexico City/MX, <sup>8</sup>University of California, San Diego, San Diego/CA/USA, <sup>9</sup>Mount Auburn, Boston/MA/USA, <sup>10</sup>UC Davis Comprehensive Cancer Center, Sacramento/CA/USA, <sup>11</sup>Virtua Health, Marlton/NJ/USA, <sup>12</sup>University of Kansas, Kansas City/KS/USA, <sup>13</sup>Loyola University, Chicago/IL/USA, <sup>14</sup>Loma Linda University, Loma Linda/CA/USA, <sup>15</sup>Oregon Health and Science University (OHSU), Portland/OR/USA, <sup>16</sup>Hartford HealthCare Cancer Institute, Southington/CT/USA, <sup>17</sup>St. Elizabeth Healthcare, Edgewood/KY/USA, <sup>18</sup>University of Miami, Miami/FL/USA, <sup>19</sup>Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne/CH, <sup>20</sup>Dana-Farber Brigham Cancer Center, Boston/MA/USA

**Introduction:** Patients with thoracic cancers (TC) have one of the highest rates of mortality among patients with cancer and COVID-19.

**Table 1.**

Characteristics	All patients (N = 900)	Chemotherapy +/- immunotherapy (N = 242)	Immunotherapy alone (N = 94)	Chemotherapy and radiation (N=66)	Targeted therapy (N=114)	No cancer treatment (N = 423)
Age [Median (IQR)]	70 (62-77)	66 (59-73)	70 (62-75)	69 (62-73)	64 (56-74)	72 (65-80)
Female	480 (53%)	56%	46%	52%	65%	53%
Current or Former smoker	713 (79%)	79%	91%	82%	47%	83%
ECOG performance status prior to infection						
0	183 (20%)	19%	19%	18%	25%	21%
1	321 (36%)	42%	53%	38%	42%	28%
2 or more	204 (23%)	26%	22%	26%	18%	21%
Cancer Status						
Remission/No evidence of disease	258 (29%)	<5%	5%	9%	6%	52%
Active, stable/responding	302 (34%)	43%	69%	39%	53%	17%
Active, progressing	217 (24%)	38%	19%	38%	32%	17%
Treatment intent						
Curative	196 (22%)	34%	28%	52%	20%	11%
Palliative	313 (35%)	60%	67%	42%	73%	7%
Outcomes						
30-day all-cause mortality	204 (23%)	26%	15%	33%	18%	22%
Supplemental oxygen	503 (56%)	58%	48%	62%	49%	56%
Hospitalization within 30 days	571 (63%)	64%	51%	71%	61%	64%
ICU admission	173 (19%)	22%	18%	27%	18%	17%
Received mechanical ventilation	97 (11%)	12%	9%	17%	12%	9%
Follow up time, days [Median (IQR)]	70 (28-180)	53 (18-135)	70 (30-180)	90 (13-180)	90 (28-180)	80 (30-180)

Data evaluating the impact of recent anti-cancer therapies on COVID-19 outcomes in patients with TC are confined to small heterogeneous retrospective studies, with limited follow-up data. We analyzed data from the COVID-19 and Cancer Consortium (CCC19) (NCT04354701) to examine the impact of recent systemic therapies on the clinical outcomes of COVID-19 in patients with TC. **Methods:** The CCC19 registry was queried for adult patients with TC and lab-confirmed SARS-CoV-2 infection. Only patients with data quality scores of 0-4 were included in the analysis. The primary outcome was 30-day all-cause mortality. Secondary outcomes were need for oxygen supplementation, hospitalization, ICU admission, and mechanical ventilation. The outcomes were further stratified by demographics, smoking history, ECOG PS (0, 1,  $\geq 2$ ), cancer status (remission, responding/stable, progressing) and type of systemic treatment <3 months prior to COVID-19 (chemotherapy with or without immunotherapy, chemotherapy plus radiation, immunotherapy alone or targeted therapy). **Results:** From January 2020 to December 2021, 900 patients with thoracic cancer met the inclusion criteria. The median age was 70 years (IQR 62-77), 53% were female, 79% were former or current tobacco users, 56% of patients had ECOG PS of 0 or 1, and 34% of patients had active but stable or responding cancer. Fifty-three percent (N=477) of patients received at least one anti-cancer systemic therapy <3 months prior to COVID-19 diagnosis. Chemotherapy with or without immunotherapy was the most prevalent treatment exposure (51%; N=242). After a median follow-up of 70 days (IQR 28-180), 30-day all-cause mortality was similar in patients who received any systemic cancer treatment versus no cancer treatment (23% and 22% respectively). Patients treated with immunotherapy and targeted therapy had the lowest mortality (15% and 18% respectively), the majority of whom were treated with palliative intent. Similar trends were also noted with secondary outcomes (Table 1). **Conclusions:** We report one of the largest studies evaluating the clinical outcomes of COVID-19 in the context of recent systemic anti-cancer treatments for TC. While continued caution is required when utilizing systemic treatments, delays in treatment may not be justified. The study provides reassuring data that patients receiving immunotherapy or targeted therapy even in the context of palliative treatment appear to have a lower risk for all-cause COVID-19 mortality. Further analysis exploring the prognostic factors associated with poor outcomes in patients with chemoradiation is planned. **Keywords:** COVID-19, Immunotherapy, Thoracic Cancers

#### OA06.07

Stereotactic Ablative Radiotherapy Before Resection to Avoid Delay for Early-Stage Lung Cancer or Oligometastases



**B. Kidane,<sup>1</sup> J. Spicer,<sup>2</sup> J.O. Kim,<sup>1</sup> I.J. Gerard,<sup>2</sup> B. Abdulkarim,<sup>2</sup> P.-O. Fiset,<sup>2</sup> M.J. Cecchini,<sup>3</sup> R.A. Malthaner,<sup>3</sup> R.I. Inculcet,<sup>3</sup> E. Wakeam,<sup>4</sup> D. Fortin,<sup>3</sup> P. Wawryko,<sup>5</sup> G. Qing,<sup>6</sup> D.A. Palma<sup>3</sup>**

<sup>1</sup>University of Manitoba/ CancerCare Manitoba, Winnipeg/MB/CA, <sup>2</sup>McGill University, Montreal/QC/CA, <sup>3</sup>Western University, London/ON/CA, <sup>4</sup>University of Michigan, Ann Arbor/MI/USA, <sup>5</sup>University of Manitoba, Winnipeg/MB/CA, <sup>6</sup>University of Manitoba/Shared Health, Winnipeg/MB/CA

**Introduction:** The COVID-19 pandemic led to worldwide barriers to access to operating rooms; some multidisciplinary thoracic oncology teams pivoted to a paradigm of stereotactic ablative radiotherapy (SABR) as a bridge to provide radical-intent treatment combining immediate SABR followed by planned surgery when surgical resource constraints ameliorated. This pragmatic approach, termed SABR-BRIDGE, was instituted with prospective data collection at four institutions (3 Canada, 1 USA); herein we present the surgical and pathological results from this approach. **Methods:** Eligible participants had early-stage presumed or biopsy-proven lung malignancy that would otherwise be surgically-resected. SABR was delivered using

standard institutional guidelines with one of three fractionation regimens: 30-34 Gy /1 fraction, 45-55 Gy/3-5 fractions, or 60 Gy/8 fractions. Surgery was recommended at a minimum of 3 months following SABR with standardized pathologic assessment of resected tissue. A pathological complete response (pCR) was defined as absence of viable cancer, and a major pathologic response (MPR) was defined as  $\leq 10\%$  viable tissue. **Results:** Seventy-five participants were enrolled, of which 72 received SABR. Following SABR, 26 patients underwent resection, while 46 did not; reasons for not undergoing surgery included metastasis (n=2), non-cancer death (n=1), awaiting lung surgery (n=13) and patient choice given favorable post-SABR imaging response (n=30). Of 26 patients who underwent resection, 62% had a pre-treatment biopsy. The most common SABR regimens were 34 Gy /1 fraction (31%) and 48 Gy in 3-4 fractions (31%). SABR was well-tolerated, with two grade 1 toxicities (pain, 7.7%), and one grade 3 pneumonitis (3.8%). Median time-to-surgery was 4.5 months from SABR completion (range:2-17.5 months). Most had minimally-invasive surgery (n=19, 73%) with 4 patients (15%) requiring conversion to thoracotomy, and 3 (12%) had planned open operation. Surgery was reported as being more difficult because of SABR in 38% (n=10). There were two intraoperative complications (7.7%, pulmonary artery injury), and 8 patients with post-operative complications (31%, all grade 2, most commonly air leaks [n=5]). The amount of residual primary tumor ranged from 0% to 90%. Thirteen (50%) had pCR while 19 (73%) had MPR. Rates of pCR were higher in patients operated upon at earlier time points (75% if within 3 months, 50% if 3-6 months, and 33% if  $\geq 6$  months). Rates of pCR were higher in patients without pre-treatment tissue diagnosis (91% versus 20% in those without and with tissue diagnosis, respectively). In 31% (n=8) of patients, nodal disease was discovered on resection, with half being N2 (4/26=15%). **Conclusions:** The SABR-BRIDGE approach allowed for delivery of treatment with minimal upstaging during a period of operating room closure & high risk for patients. Surgery was well-tolerated. However, most patients who received SABR did not proceed to surgery, limiting precise estimates of pCR rates. However, the reported pCR rate is consistent with previous phase II trial data. **Keywords:** lung surgery, SBRT, Multi-modal therapy

#### OA07 IS THERE STILL A ROLE FOR CHEMOTHERAPY ALONE IN THE MANAGEMENT OF NSCLC?, MONDAY, AUGUST 8, 2022 - 11:00 - 12:00

##### OA07.03

Association Between Genetic Variation in the ATP-binding Cassette Transporter ABCC10 and nab-PTX Treatment in Japanese Cohort



**M. Horiuchi, T. Uemura, Y. Suzuki, Y. Kagawa, S. Fukuda, K. Maeno, T. Oguri, Y. Mori, K. Sone, N. Takeda, K. Fukumitsu, Y. Kanemitsu, T. Tajiri, H. Ohkubo, Y. Ito, A. Niimi Nagoya City University Graduate School of Medical Sciences, Nagoya, Aichi/JP**

**Introduction:** ABCC10 is an ATP-binding cassette transporter, which is shown to be involved in the extracellular transport of taxanes. We have reported that differences in rs2125739, one of the single nucleotide polymorphisms in ABCC10, affect the cytotoxic effects of docetaxel in lung cancer cell lines and the occurrence of docetaxel side effects in clinical practice. The present study elucidated whether rs2125739 affects the cytotoxicity of paclitaxel (PTX) in lung cancer cell lines. The investigation was conducted for determining the effect of rs2125739 on the efficacy and side effects of nanoparticle albumin-bound PTX (nab-PTX) in clinical practice. **Methods:** We analyzed the rs2125739 in 18 non-small cell lung cancer (NSCLC) cell lines and HeLa cells as well as in HeLa cells genome-edited using clustered regularly interspaced short palindromic repeats-CRISPR associated protein 9. The cell lines