

COVID-19 and the administration of bamlanivimab; a cooperative effort between a community cancer center and an urgent care facility

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Background

The SARS-Cov-2 outbreak which the world has been dealing with over the past year has rattled economies, tested governments and caused over 500,000 deaths in the USA alone. A focused national plan to combat COVID-19 and the pandemic must be multifaceted and have different medical approaches along with a strong public health component. For reasons that are still unknown, up to 10% of asymptomatic and mild infections lead to more severe outcomes, including respiratory distress requiring hospitalization.

On November 9, 2020, the U.S. Food and Drug Administration issued an emergency use authorization (EUA) for the investigational monoclonal antibody, bamlanivimab for the treatment of mild-to-moderate COVID-19 in adult and pediatric patients. Shortly after this emergency use authorization, MA DPH reached out to Southcoast Health to provide these infusion services to COVID-19 positive patients that are age ≥ 65 , those age ≥ 18 with BMI ≥ 35 , and/or meet EUA criteria tier 2. Patients with comorbidities (high risk) tend to do poorer when infected with SARS-CoV-2.

The goal of Massachusetts DPH is to ensure equitable distribution to the most vulnerable population at risk of poor outcomes from COVID-19 and communities with the highest incidence of COVID-19. A lottery system was used to determine those able to receive infusion.

Southcoast administration collaborated with Urgent Care and Cancer Center leadership to quickly bring these services to our region. The decision was made to begin the clinic in Fairhaven, MA because it is cohabited by an urgent care and cancer center in the same building. It was also advantageous to be able to incorporate pharmacy services at the cancer center, along with infusion expertise, in an urgent care setting where reactions could be managed appropriately.

RN staff from emergency rooms, intensive care, and out-patient infusion areas were asked to staff the clinic in addition to their primary roles. Urgent Care paramedic staff and medical assistants were enlisted to support the nurses in this environment. A comprehensive team of oncology pharmacists, pulmonologists, infectious disease experts, COVID screening nurses, EMR analysts, and clinical/non-clinical leadership were part of a work group that set guidelines to establish, streamline, and troubleshoot the process. Training of staff included an all-inclusive overview of monoclonal antibody use, administration, and emergency responses. The clinic was functional within 2 weeks of initial planning.

Characteristics of the Patients at Baseline

		Male	Female	
Total Patients	152	88	64	
Age	average range	63.8 30-91	64.1 27-90	
BMI	greater than 35*	17	19%	22
				34%
Risk Factors	Age greater than 65	56	64%	33
	55 to 64-with at least one comorbidity	17	19%	13
	27-54	15	17%	18
				28%

* (these patients had a risk score of 1, with BMI as the only risk factor)

Methods

- Patients were identified for possible treatment by COVID-19 screening RNs
- Patients screened by either ID or pulmonology via a telehealth visit for treatment
- Experienced nursing staff from various Southcoast departments were scheduled to treat up to six patients per day
- Because of its proximity to treatment areas, the Oncology Infusion Pharmacy double checked patient's appropriateness for treatment, prepared and delivered bamlanivimab to RN in Urgent Care Center once patient was ready for treatment
- Patients were then given the "What to expect during a COVID-19 neutralizing antibody treatment infusion" handout by nursing
- Patients were asked to do a self-assessment of their "symptom burden" so staff could understand patient's perception of their disease

Results

- Summary of first 152 cases treated from December 15, 2020 thru January 29, 2021
- Percent of patients who were seen in ED/UC in 14 days, 13.8%
- Percent of patients who were admitted in 14 days, 7.2%
- Percent of patients who were seen in ED/UC in 28 days, 5.9%
- Percent of patients who were admitted in 28 days, 2%
- In the original BLAZE-1 study, the percentage of patients admitted at 28 days, 1.6%
- Two deaths reported of initial 152 patients
- In the original BLAZE-1 study, no deaths reported post treatment

		Total Patients	Urgent Care/ED within 14 days post tx	Hospitalization within 14 days post tx	Urgent Care/ED within 28 days post tx	Hospitalization within 28 days post tx	Death
BMI	Greater than 35*	39	5	4	1	0	0
Risk Factors	Age greater than 65	89	12	8	6	3	2
	Age 55 to 64-with at least one comorbidity	30	5	3	2	0	0
	Age 27-54	33	4	0	1	0	0

Median number of days from symptom onset to test	3	Range 0 days to 14 days
Median number of days from test to treatment	5	Range 1 day to 12 days

* (these patients had a risk score of 1, with BMI as the only risk factor)

Patient Reported Symptoms Questionnaire

Southcoast Health

Patient Initials: _____ MRN: _____ Assessment Date: _____

Cough None Mild Moderate Severe

Shortness of Breath None Mild Moderate Severe

Feeling Feverish None Mild Moderate Severe

Fatigue None Mild Moderate Severe

Body Aches and Pain None Mild Moderate Severe

Sore Throat None Mild Moderate Severe

Chills None Mild Moderate Severe

Loss of Appetite None Mild Moderate Severe

Headache None Mild Moderate Severe

Loss of Taste None Mild Moderate Severe

Loss of Smell None Mild Moderate Severe

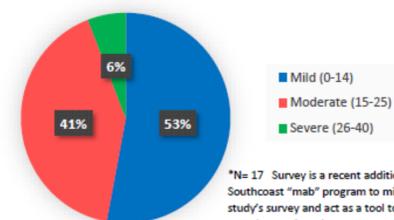
Overall, how bad are your symptoms TODAY? None Mild Moderate Severe

Overall, how is your general physical health TODAY? None Mild Moderate Severe

Have you returned to your usual (pre-COVID) health? Yes No

* Check P, M, S as appropriate

Patient Self-Assessment, Pre-Treatment Survey (Range 0-40 points)



*N= 17 Survey is a recent addition to the Southcoast "mab" program to mimic the original study's survey and act as a tool to gather more complete patient data.

Conclusions

The cooperative effort between the Cancer Center and Urgent Care led to positive outcomes for local COVID-19 patients. Southcoast had a 26% admission rate overall for COVID-19 patients vs. 6% in the Mab program

Southcoast Health

Southcoast Health is a not-for-profit, community-based health system with multiple access points, offering an integrated continuum of health services throughout southeastern Massachusetts and Rhode Island.

At the Southcoast Cancer Center, our team of experienced healthcare professionals bring a higher level of technology, treatment and expertise to the South Coast region. The Cancer Program at Southcoast Health continues in its mission to meet the growing need for comprehensive cancer services.

The Southcoast Health Urgent Care Centers (UCC) provides resources for immediate, non-emergent care. The Southcoast Health Urgent Care Center operates in seven locations across our community. Our urgent care clinics are open seven days a week, including nights and weekends.

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References

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