Atrium Health Levine Cancer

Atrium Health Wake Forest Baptist | Comprehensive Cancer Center

Mobile Lung Screening Reaches Vulnerable Populations

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BACKGROUND

In 2017, the first ever Mobile Lung Screening Program was developed in the United States through Atrium Health Levine Cancer in Charlotte, North Carolina. This was possible through generous grant funding from The Bristol Myers Squib Foundation (BMSF). The original grant proposal, The Lung B.A.S.E.S. 4 Life Program, focused on Bringing Awareness, Screening and Education to improve Survivorship for the underserved populations of North and South Carolina. Statistics show a high number of Stage IV lung cancers diagnosed in the region and a major shift was needed to reach the more vulnerable areas.

Our team consists of an APP, an RN clinical supervisor, 2 RN program coordinators, a scheduling supervisor, referral coordinator and data coordinator where everything is done internally. Approximately 1200-1300 patients are scanned annually. They are not only offered free LDCT scans, but also tobacco cessation counseling, free nicotine replacement, assessment and navigation into local resources and other cancer screenings and close navigation into local care.

METHOD

Levine Cancer and BMSF partnered with Neurologica and Frazer to develop the first mobile lung screening unit. Frazer had been partnering with Neurologica to produce mobile stroke units, so it was natural to shift to lung screening. The BodyTom CT scanner was placed on a "box truck" design on a 35-foot chassis. There is a control area for the CT technologist and plenty of space for the team to sit and talk with patients and for them to receive their scan.

In 2019, the second mobile unit went into production and was deployed in 2020 through a partnership with Winnebago Industries, Summit Bodyworks and Neurologica. This "RV style" mobile unit offers 4 compartments to allow for patient workup, blood draws, consenting, etc. Both mobile units have a wheelchair lift for easy patient access.

RESULTS

76 cancers found since 2017:

- **58** lung cancers
- **18** non-lung cancers
- **100+** community partners
- **30** counties served in NC and SC
- **2,340** patients screened

2,340 Patients Screened	
• 75% Caucasian • 18% African American • 3% Hispanic • 3% American Indian	56% uninsured 28% Medicaid 16% underinsured

As mentioned above, a robust assessment of resource needs is completed at time of screening. 62% identified with at least 1 barrier to care and navigated into local resources.

CONCLUSIONS

Mobile low dose CT yields higher screening rates for underserved patients, with a shift to early-stage detection of lung cancer with sustained treatment induced remissions. By providing community-based whole human care, patients have proven they are more likely to return for follow up. The team created access points and identified barriers early on to avoid resource gaps leading up to a cancer diagnosis.

Levine Cancer partners with Atrium Health Mobile Medicine to handle all maintenance and upkeep of the mobile units and staffing drivers as well. When deployed for a screening day, a team of 6 is onsite. This includes the driver, CT technologist, 2 clinical staff, 1 cancer program development specialist and the data coordinator.

References
Raghavan D et al, The Oncologist, 2020, 25:e777-e781.3

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