



### **Nov-Dec 2020 Residency Times**

Resident Spotlight: Jurgena Tusha, MD, PRG-2 Internal Medicine  
Ascension Providence Rochester Hospital

*Residency Times interviewed Dr. Tusha about her research project on the MuLBSTA score. Her 2020 CHEST annual meeting abstract was selected for inclusion in the meeting press kit distributed to online news services in recognition of its significance beyond the immediate CHEST community.*

### **RT: Tell us about your background and undergraduate medical training.**

**Dr. Tusha:** I was born in Albania but grew up in Toronto. I received a BS with honors from the University of Toronto in Health and Disease, Plant Biology, and Spanish. I was drawn to the sciences from a young age but had a variety of interests, including social sciences, languages, and education. Medicine is a unique field which encompasses all of these and allowed me to pursue a field of science where I could make a significant impact on others' lives. I attended Saba University School of Medicine from which I received a Doctor of Medicine.

### **Why did you select Internal Medicine?**

Because it is a field that teaches comprehensive patient care with diverse pathologies. I was also drawn to the broad opportunities it provides to pursue subspecialties and careers within internal medicine.

### **Do you have prior experience in conducting research?**

As an undergraduate I was a Research Associate where I conducted a concordance study of automated microscopy in cancer diagnosis. I have also been involved in multiple research projects in other fields, ranging from pollen analysis in plant genetics to online language use in the field of linguistics.

### **In October you presented research on "The MuLBSTA Score: Predicting Risk Of Mortality And Disease Severity In Patients With COVID-19 Pneumonia" -- at the CHEST 2020 Annual Meeting. Can you describe the MuLBSTA score and explain its importance for patient care?**

During the first surge of the pandemic, I collaborated with another IM resident at APRH, Dr. Verisha Khanam, using the MuLBSTA Score (developed by researchers in China), exploring the applicability of the score in predicting a patient's disease severity and risk of mortality. The score consists of six risk factors: **m**ultilobe infiltrate, **a**bsolute lymphocyte count  $\leq 0.8 \times 10^9/L$ , **b**acterial coinfection, **s**moking history, **h**istory of hypertension, and **a**ge  $\geq 60$ . Much research is ongoing for treatment and prevention of COVID-19, but there is little focus on risk stratification, which could help the allocation of medical resources and guide the clinical management of patients with COVID pneumonia. We found a significant positive correlation of the MuLBSTA score with mortality. This score is a good predictor of in-hospital mortality. There was also a positive correlation with need for ventilator support and length

of stay. The MuLBSTA can be used at admission to screen patients for severity and identify those who may have complications or higher chance of mortality.

**Were you able to undertake any subsequent research on the MuLBSTA score after the first surge?**

We are currently gathering more data and will study whether the applicability of the score is as significant with a bigger patient cohort. Based on some of the risk factors associated with COVID-19 pneumonia that have been discovered, we expect to customize the score to make it more comprehensive of this disease.

**Congratulations on having your work included in the CHEST annual meeting press kit?**

Thank you! It was great to receive this kind of feedback from the CHEST community and have the study more widely publicized after the press kit came out. I have received many questions about the research study since then, such as from hospitals that would like to replicate our study. This feedback has been very encouraging to continue pursuing my research interests.

**Do you have other research interests?**

Currently, I am a part of Sepsis Quality Improvement (QI) research which seeks to improve bundle compliance and documentation. I am also involved in a Health Disparities outpatient research study focusing on addressing barriers to cancer screening. We are also starting a new project regarding alcohol withdrawal, which may lead to a QI initiative to decrease hospital readmissions.

**What are your career plans after completing your residency?**

I am considering a number of options for the future, including a career in internal medicine or fellowship training. I am mainly interested in inpatient medicine with a focus on research and academics.

**The pandemic has had unparalleled and wide-ranging impacts in healthcare. Could you share the effect of this experience on you?**

The pandemic struck the US and the world during my first year of residency. We had rising clinical volumes and acuity needs with overworked residents and other healthcare workers. Our resident pool was redirected towards COVID patient care whether on floors as a special "COVID team" or in the ICU landing extra help to the existing team. When the opportunity came to volunteer in the critical care unit, I quickly said yes but I did face questions with uncertain answers: whether I had enough knowledge to contribute to the team, about the personal risks awaiting me. There was a collective anxiety as we prepared to face off against an unfamiliar disease, but this was in a strange way comforting since we were all in the same boat. The April ICU month was filled with a lot of emotions as we took care of patients the best way we could and dealt with more death than we had collectively seen all year. The teamwork among the residents during this time was truly inspiring. In fact, the entire team, including attendings, residents, nurses, respiratory therapists, pharmacists, laboratory technicians, and housekeeping collaborated each day and adapted to working in these unprecedented times. The local community also filled our halls with posters and letters and offered small acts of kindness that encouraged us each day. I left the COVID ICU unit with great admiration for my internal medicine colleagues. And as we prepare for a second pandemic surge, I hope we continue the teamwork and collaboration to provide humanistic patient care to our community.