

Genetics of Bladder Cancer in Sri Lanka

Professor Ajith P Malalasekera

Professor in Urology, Department of Anatomy, Faculty of Medicine, University of Colombo, Sri Lanka and Visiting Consultant Urological Surgeon, Private sector, Colombo, Sri Lanka

Bladder cancer molecular profiling has led to defining of subtypes of bladder cancer as per the Cancer Genome Atlas and findings of other projects. Subsequent consensus agreements have and will pave the way for individualising treatment modalities based on molecular and genetic profiles. In a pilot study in Sri Lanka, the genes which carry more than 50 pathogenic or likely pathogenic variants in non muscle invasive bladder cancer (NMIBC) patients were NECTIN4, NF1, SYNE1, SYNE2, and KMT2D. In the muscle invasive bladder cancer (MIBC) group the similarly affected genes were NF1, SYNE1, SYNE2, LRP2, KMT2A and ANK2. Most studies in other populations have highlighted genetic variants in TP53, FGFR3, RB1, HRAS, and TSC1. While these are found in lesser numbers in our study population, our initial study highlights the need to test for a wider range of genes in profiling bladder cancers with a view to individualizing treatment in the future.