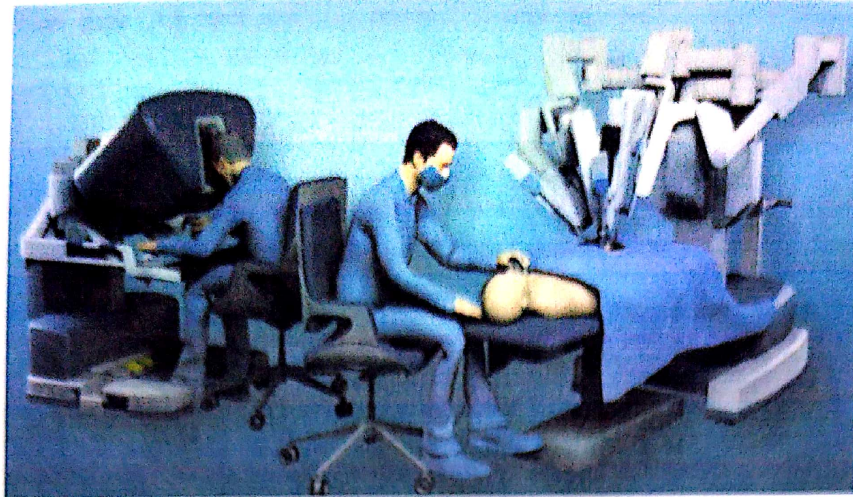


## BRIEF REPORT:

Department of Biomedical Engineering has organized a Seminar on 15.09.23 on the topic "*Trends in Urology and Surgical Robots*". The resource person was Dr Somanath Sharma, Consultant Urologist, Uro-Oncologist & Andrologist, Chennai Urology Research Institute, Thoraipakkam, Chennai. The photos of the seminar are attached.

## PHOTOGRAPHS:





In this Seminar, Dr.Somanath Sharma delivered the latest techniques and advancements in minimally invasive surgery. The programme involved :

- Introduction
- Anatomy
- Oncological dissection: Laparoscopic approach & Robotic approach

It focuses on the topic of robotics and its impact on the future of surgery. This series will look at the future development of surgical practices, increased deployment of robotics training, and the creation of a key framework to help support the future of the multidisciplinary robotic surgical team. Surgery remains a safe and reliable option for the treatment of urological diseases. In surgery, two different methods are used:

1. **Classic Laparoscopic surgery**, also known as keyhole surgery. Slender surgical instruments including a camera are inserted through the small cuts and are directly controlled by hand by the surgeon.
2. **Robotic or robot-assisted surgery**. In robotic surgery, surgical instruments, including a video camera, are placed into the small cuts, which are attached to the arms of a robotic interface controlled by the surgeon from a robotic console. At the console, the surgeon can see a highly magnified and clear 3D view of the area to be operated upon.

Robotic surgery has now moved beyond the domains of urology and gynaecology. It was previously perceived that robotic surgery is of utility only for sites where anatomical constraints prevent dissection due to limited vision with the naked eye and cause difficulty

in suturing due to paucity of adequate space for the needle holder to pierce the tissue at optimal angles. But soon enough, the surgeons realised that the advantages of using the robot went well beyond operating at confined spaces only. Gradually and steadily other surgical fields have adopted the robot and now general surgery procedures make a major chunk of the total robotic procedures done worldwide. This webinar will comprehensively explore why the surgical robot has become an indispensable part of general surgery practice, the use of robot in India and western world and challenges that lie in generalised adoption of robots in routine general surgery practice.

In urology, robot-assisted surgery is used to treat a variety of conditions such as bladder-, kidney- and prostate cancers or other non-cancer conditions of these organs. In particular, The use of robotics in healthcare has seen a recent rise in interest due to their potential use during the COVID-19 pandemic. Although intensive development is evident in all medical robotics application areas such as robots supporting healthcare professionals, robots supporting patients, diagnostic robotics, rehabilitation robotics, and interventional robotics, it is clear that robotic technologies helping frontline healthcare professionals are of utmost importance. Robotic surgery is rapidly gaining traction, and that's a good thing. More and more procedures are being performed using the robots, because they are safer and more precise for the patients.



**Coordinator**



**HoD-BME**



**JERUSALEM COLLEGE OF ENGINEERING**

**(An AUTONOMOUS INSTITUTION)**

**Narayanapuram, Pallikaranai, Chennai - 600100**



## Department of Biomedical Engineering

Organizes  
A Seminar on

**“Trends in Urology and Surgical Robots”**



**Dr Somanath Sharma,**

Consultant Urologist, Uro-Oncologist & Andrologist,  
Chennai Urology and Research Institute Hospital,  
Thoraipakkam, Chennai

**Resource person**



**15 SEP 2023**



**1.00PM TO 2.00PM**



**Seminar Hall**



**III and IV BME**

**Ms B Nivetha**  
Asst.Professor  
Coordinator

**Dr J Sofia Bobby**  
HOD,BME  
Convener

**Dr Ramesh S**  
Principal

**Dr M Mala**  
Chairperson