ISMICS Board Statement in Support of Robotic Cardiac Surgery

There has been a steady rise in the use of robotic technology in all fields of surgery. Although Intuitive Surgical’s DaVinci robot was initially targeted towards heart surgeons when it was first made clinically available, in 1999, the adoption of robotics seen in other specialties (e.g. urology) has not been mirrored in cardiac surgery. This is felt to be due to multiple factors not the least of which are: a steep and demanding learning curve (with very few dedicated training pathways), lack of surgical society support and enthusiasm, and the absence of supporting technologies.

In 2020 however, interest in robotic cardiac surgery has seen a resurgence worldwide. There has been a steady growth of hospitals and institutions initiating robotic cardiac surgery programs all over the world to provide the advantages and benefits of the robotic approach to their patients. These benefits are many but mostly include excellent surgical results and shorter recovery times for procedures such as mitral valve repair, coronary artery bypass, atrial fibrillation surgery and others. This resurgence can be attributed to many factors, not the least of which is the significant improvement in the newer generation robotic platforms that make them much more user friendly. Other important factors include but are not limited to the impingement on our specialty from percutaneous therapies, a younger cadre of cardiac surgeons interested in innovative and less invasive surgical approaches, and the demonstration of successful outcomes by large and well-known institutions in the U.S.

Unfortunately, robotic cardiac surgery is under a very significant threat at this time as well. At a time when the hope and expectation was that industry would increase their support, Intuitive (maker of the only clinical system available for use in cardiac surgery) has decided to withdraw support for its cardiac surgery instruments and procedures in European Union countries. This decision was communicated to the European robotic cardiac surgeons in March of this year and happened despite a 40% increase in robotic cardiac volume in Europe in 2019.
This dramatic decision has grave implications for our specialty. Even as some of our societies have started embracing robotics and creating task forces for the purpose of standardizing training and education, we are facing a significant lack of support from industry. This was first demonstrated by the decision of Intuitive not to make some of instruments essential to robotic endoscopic coronary artery bypass TECAB (such as the Endowrist Stabilizer™) for its latest generation DaVinci Xi robot. Now with this latest development in the EU we feel that the future of robotic cardiac surgery is seriously being undermined.

At the recent Board Meeting of the International Society for Minimally Invasive Cardiothoracic Surgery (ISMICS), a unanimous decision was made in strong support of the use of robotic technology in cardiac surgery. The well-known benefits of minimally invasive cardiac surgery are greatly enhanced by robotics and our society is taking a strong position in the recommendation of this approach for appropriate patients. ISMICS has had a long tradition of working closely with industry in the spirit of developing less invasive technology for cardiothoracic surgery and this cooperation has been part of our mission statement from inception. We believe that investing in heart surgery is an investment in the future and we continue to reach out to industry partners focused on robotics and encourage them to include cardiothoracic surgical instruments and procedures on their platforms.

The Society strongly encourages Intuitive to reconsider its dramatic withdrawal of support of robotic cardiac surgeons in Europe and its elimination of key instruments from its newer robotic platforms around the world. We would be happy to work with the company to find ways to make this a financially viable option and increase our efforts to train and develop new programs around the world.

Signed

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www.ismics.org