

Medical Affairs Policy & Procedure

Title/Service: Robotic Assisted Surgery (Aesop, DaVinci, EndoAssist, Hermes, Zeus)

Revised	
Reviewed	11/16/07, 11/21/08, 12/28/09, 07/27/10, 06/09/11; 09/16/2011
Developed	11/16/07
Policy Committee Approval	09/16/2011

Description:

During robotic assisted surgery, the surgeon views the operative procedure on a terminal screen through cameras inserted into the individual and manipulates the surgical instruments from a control panel. The goal of robotic assisted surgery is increased precision and decreased invasiveness.

Indications of Coverage:

Robotic assisted surgery is considered medically necessary for the treatment of prostate cancer.

Limitations of Coverage:

Review contract and endorsements for exclusions and prior authorization or benefit requirements.

If used for a condition/diagnosis other than is listed in the Indications of Coverage, the use of the robot is considered investigational. The medical peer -reviewed literature does not support the use of robotic surgery for diagnoses other than prostate cancer, in that there is no demonstrated improved overall surgical outcome when compared to operative approaches that do not use the robot. The use of a robot is left to the discretion of the surgeon.

Documentation Required:

- Procedure report

Rationale:

Robotic assisted surgery has been approved for use in varied abdominal and pelvic surgical procedures and some cardiac and thoracic procedures. Robotic assisted surgery has been proposed as a means of reducing surgical inaccuracies while increasing the surgeon's ability to successfully complete complicated procedures. Other than during

prostate surgery, where evidence has shown a decrease in intraoperative blood loss and a decrease in complications when compared to standard surgical procedures, there is insufficient documentation of any significant benefit with robotic assisted surgery over standard procedures. Even so, the evidence of benefit during prostate surgery is limited.

There is a moderate amount of literature evaluating robotic assisted surgery. Much of the literature, however, focuses on the feasibility of robotic assisted surgery and not whether outcomes are improved with the use of the robot. Many of the studies were non-randomized and included only a small number of patients. Evaluation of the long term outcomes was rare. Several studies addressed the benefit to the surgeon who used the robot, but failed to document whether there was any benefit for the patient. Quantification of the distinct advantages as a result of robotic assisted surgery is rare. Many of the studies documented significant increases in operative times with the use of robotic assisted surgery and questioned whether the inherent risk of an increase in the duration of anesthesia was balanced by the use of the robot. Except for prostate surgery, none of the studies showed a significant decrease in blood loss or complications when the robotic assisted techniques were utilized. Additionally, the use of the robot did not generally result in a decrease in length of hospital stay. Numerous articles included discussions regarding the limitations of robotic assisted surgery, with decreased tactile feedback being the most common. Several articles concluded that while the robotic assisted surgery was feasible, there was no obvious benefit to the procedure.

Most of the authors have recommended additional controlled clinical trials to evaluate whether robotic assisted surgery is of any benefit to the patient. A study by the Veteran's Administration recommended that robotic assisted surgery only be performed at specialized centers and urged additional trials to identify the benefit to patients.

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Approved by the Medical Director