



## Computer-Assisted Surgery (CAS)



### Overview

This advanced tech is used in many types of surgeries. It helps us treat critical, complex organs like the brain and heart. We use it for joint replacement. And we use it for a wide range of general surgeries.

### Planning stage

How does it work? Computer assistance may be used in the planning stage. Before a brain surgery, for example, powerful software turns brain scans into a 3D model. This lets the surgeon closely study the brain's anatomy. They can look at the brain from many angles. They can take apart its structures. The model helps them find the best way to reach the area they need to treat.

### During the procedure

Computer assistance also helps during the surgery. Let's look at a computer-assisted hip replacement surgery. The surgeon attaches special hardware to the bones of the leg. This hardware is seen and tracked by a computer. The computer helps the surgeon understand the anatomy. Special tools linked to the computer guide the surgeon's hand to make sure the cuts are made at the proper angles. The computer helps choose implants that are the right size and shape. And it helps make sure they fit together the way they should.

### Conclusion

Know that your surgeon is always in control during this type of surgery. But computer assistance makes surgery smoother and safer for you. It gives you the best outcome. And it may speed your recovery. For more info, talk to your surgeon.

