

## Computer assistance in the alignment of surgical tools

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Computer assistance in the alignment of surgical tools has great potentials for achieving precise and safe surgical outcomes. I will introduce two novel concepts about computer assisted surgical systems in my talk.

One is on the use of a laser-beam display mechanism to show surgical tool entry point and orientation. This display is shown directly on the patient's body. It is robust for any skin deformation and has been used in over 100 clinical cases.

The other is on a body-mounted biopsy apparatus. It can be attached solidly onto the patient's skin by changing the hardness of a section of the apparatus. This device is design to precisely put a needle to the insertion site for insertion. A demonstration of this apparatus will be shown in the talk.

