

Three commercially available [cameras](#) were tested: [GoPro](#) Hero 4 Silver, [Google Glass](#), and [Panasonic HX-A100](#) action camera. Typical [spine surgery](#) was selected for video recording; posterior [lumbar laminectomy](#) and fusion. Three cameras were used by one surgeon and video was recorded throughout the operation. The comparison was made on the perspective of human factor, specification, and video quality.

The most convenient and lightweight device for wearing and holding throughout the long operation time was Google Glass. The image quality; all devices except Google Glass supported HD format and GoPro has unique 2.7K or 4K resolution. Quality of video resolution was best in GoPro. Field of view, GoPro can adjust point of interest, field of view according to the surgery. Narrow FOV option was the best for recording in GoPro to share the video clip. Google Glass has potentials by using application programs. Connectivity such as Wi-Fi and Bluetooth enables video streaming for audience, but only Google Glass has two-way communication feature in device.

Action cameras have the potential to improve patient safety, operator comfort, and procedure efficiency in the field of spinal surgery and broadcasting a surgery with development of the device and applied program in the future ¹⁾.

¹⁾

Lee CK, Kim Y, Lee N, Kim B, Kim D, Yi S. Feasibility Study of Utilization of Action Camera, GoPro Hero 4, Google Glass, and Panasonic HX-A100 in Spine Surgery. *Spine (Phila Pa 1976)*. 2017 Feb 15;42(4):275-280. doi: 10.1097/BRS.0000000000001719. PubMed PMID: 28207670.

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