

Erratum

A novel probe for measuring tissue bioelectrical impedance to enhance pedicle screw placement in spinal surgery: Am J Transl Res. 2018; 10(7): 2205-2212

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In this paper, we failed to cite articles about a bioelectrical impedance technology that has been commercialized, known as Dynamic Surgical Guidance (DSG) Technology. Therefore, the readers may have mistakenly gotten the impression that we were the original inventor of all such products. We submit this formal Erratum to request a correction.

On page 2205, we add the following contents after the second paragraph of the Introduction: “Bioelectrical impedance technique has also been used in spine surgery. Bolger et al. first reported the impedance measurement pedicle probe [1, 2]. Their invention became a dynamic surgical guidance (DSG) device, a commercially-available pedicle probe that detects pedicle breaches in real time. The safety and accuracy of DSG has been proven [3, 4]. This device also helps reduce X-ray exposure [5, 6]”.

On page 2205, in the Abstract, the sentence “In our study, we designed a bioelectrical impedance pedicle probe and use it to determine the bioelectrical impedance values in vitro and in vivo of different tissues relevant to pedicle screw insertion” should be changed to “In our study, we made a bioelectrical impedance pedicle probe and used it to determine

the bioelectrical impedance values in vitro and in vivo of different tissues relevant to pedicle screw insertion”.

On page 2206, “This new bioelectrical impedance pedicle probe consisted of a bioelectrical impedance detector and a pedicle probe, which was invented by our research group (Patent no. ZL 20152010- 4894.9) (**Figure 1**)” should be replaced by “We made a tool consisting of a bioelectrical impedance detector and a pedicle probe (**Figure 1**)”. The correct **Figure 1** is shown below.

“This novel probe has three sizes, namely 2 mm, 3 mm and 4 mm in diameter, respectively” should be replaced by “This probe has three sizes, namely 2 mm, 3 mm, and 4 mm in diameter, respectively”.

On page 2207, the sentence “In the present study, we reported the performance of a new bioelectrical impedance pedicle probe and used it to measure the bioelectrical impedance values of normal saline” should be replaced by “In the present study, we measured the performance of our bioelectrical impedance pedicle probe and used it to measure the bioelectrical impedance values of normal saline. We tested

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this probe for scientific reasons only, and we do not intend to commercialize the probe or to make a profit from it”.

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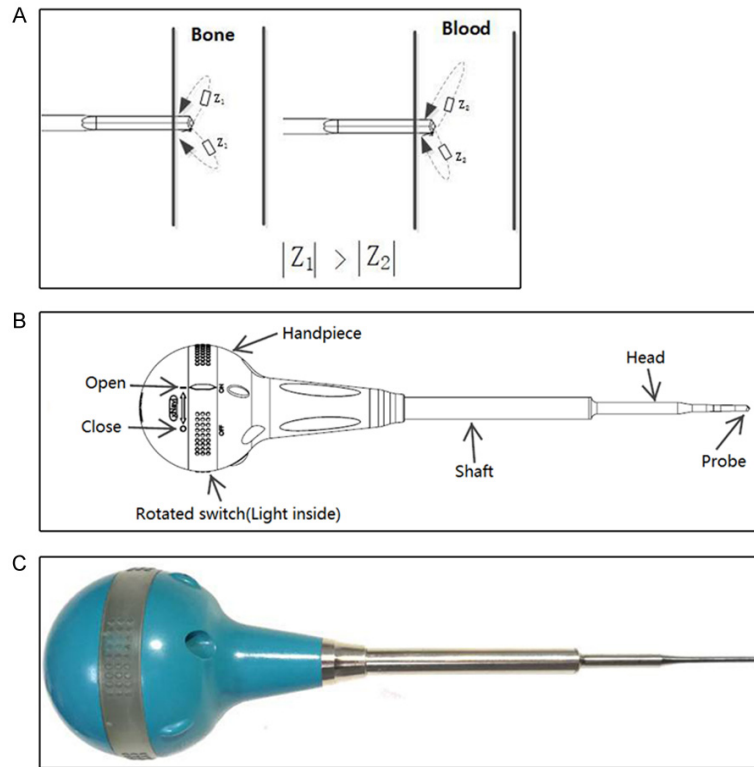


Figure 1. Design of bioelectrical impedance pedicle probe.