**Supplementary information**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |   |   |   |   |   |   |   |   |   |   |   |   |
|   |  |  |   |
|   | **PO (Rev 2)** |   | **PO (Rev 3)** |   | **PO (Rev3)** |   |
| PO (Rev 1) | Group 1 | Group 2 | Total | **PO (Rev 1)** | Group 1  | Group 2 | Total | **PO (Rev 2)** | Group 1  | Group 2 | Total |   |
| Group 1  | 406 | 3 | 409 | Group 1  | 405 | 4 | 409 | Group 1  | 410 | 7 | 417 |   |
| Group 2 | 11 | 2 | 13 | Group 2 | 9 | 4 | 13 | Group 2 | 4 | 1 | 5 |   |
| Total | 417 | 3 | 422 | Total | 414 | 8 | 422 | Total | 414 | 8 | 422 |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |
| Measures | **Estimates** | **95% CI** |   | **Measures** | **Estimates** | **95% CI** |   | **Measures** | **Estimates** | **95% CI** |   |   |
| Accuracy | 0.97 | 0.94–0.98 |   | Accuracy | 0.97 | 0.95–0.98 |   | Accuracy | 0.97 | 0.95–0.99 |   |   |

**Table S1.** Comparison of pedicle screw assessment in Group 1 and 2 by all reviewers. (Rev1, Rev 2, Rev 3) from IO and PO images and their accuracy.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | IO (Rev 2) |  | IO (Rev 3) |  | IO (Rev 3) |
| IO (Rev 1) | Group 1  | Group 2 | Total | **IO (Rev 1)** | Group 1  | Group 2 | Total | **IO (Rev 2)** | Group 1  | Group 2 | Total |
| Group 1  | 408 | 1 | 409 | Group 1  | 405 | 4 | 409 | Group 1  | 414 | 5 | 419 |
| Group 2 | 11 | 2 | 13 | Group 2 | 12 | 1 | 13 | Group 2 | 3 | 0 | 3 |
| Total | 419 | 3 | 422 | Total | 417 | 5 | 422 | Total | 417 | 5 | 422 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Measures |  | **95% CI** |  | **Measures** | **Estimates** | **95% CI** |  | **Measures** | **Estimates** | **95% CI** |  |
| Accuracy | 0.97 | 0.95–0.99 |  | Accuracy | 0.96 | 0.94–0.98 |  | Accuracy | 0.96 | 0.94–0.98 |  |





Number of screws

Number of screws

Specificity

Sensitivity

**Figure S1.** (Right)Predicted confidence interval of the sensitivity of the assessment of pedicle screw positions from IO images as a function of the number of screws included in the study. (Left) Predicted confidence interval for the specificity of the assessment of pedicle screw positions from IO images as a function of the number of screws included in the study. The red horizontal line marks the selected sample size (n=220).