Appendix A

Search strategy

Databases:

Cochrane Library (1999-2019), EBSCO (1974-2019), PubMed (1996-2019), Scopus (1960-2019) and Web of Science (1900-2019)

P: “Healthy” OR “older” OR “elderly” OR “adults” OR “seniors” OR “middle age”

I: not applicable

C: any

O: (“respiratory muscles” OR “respiratory muscle strength” OR “respiratory strength” OR “respiratory weakness” OR “respiratory muscle weakness” OR “inspiratory muscles” OR “inspiratory strength” OR “expiratory strength” OR “expiratory muscles” OR “respiratory pressures” OR “maximum inspiratory pressure” OR “maximal inspiratory pressure” OR “maximum expiratory pressure” OR “maximal expiratory pressure” OR “maximum pressures” OR “maximal pressures”) AND (“predictive equations” OR “equations” OR “reference equations” OR “normative values” OR “reference values” OR “predicting” OR “predictive” OR “lower limit of normal” OR “lower limit of normality” OR “lower limit” OR “LLN” OR “cutoff” OR “cut-off”)

T: not applicable

Typical search:

(“Healthy” or “older” or “elderly” or “adults” or “seniors”) AND (“respiratory muscles” OR “respiratory muscle strength” OR “respiratory strength” OR “respiratory weakness” OR “respiratory muscle weakness” OR “inspiratory strength” OR “expiratory strength” OR “respiratory pressures” OR “maximum inspiratory pressure” OR “maximal inspiratory pressure” OR “maximum expiratory pressure” OR “maximal expiratory pressure” OR “maximum pressures” OR “maximal pressures”) AND (“predictive equations” OR “equations” OR “reference equations” OR “normative values” OR “reference values” OR “predicting” OR “predictive” OR “lower limit of normal” OR “lower limit of normality” OR “lower limit” OR “LLN” OR “cutoff” OR “cut-off”).

Appendix B

Table B.1. Quality of included studies using Quadas-2 (Quality Assessment of Diagnostic Accuracy Studies)

|  |  |  |
| --- | --- | --- |
|  | **Risk of Bias** | **Applicability Concerns** |
| **Studies** | **Patient selection** | **Index test** | **Reference standard** | **Flow and timing** | **Patient selection** | **Index test** | **Reference standard** |
| Black and Hyatt (1969) | ? | 🙂 | 🙂 | 🙂 | ? | ? | 🙂 |
| Wilson et al. (1984) | ☹ | 🙂 | ? | 🙂 | ? | ? | 🙂 |
| Bruschi et al. (1992) | ? | 🙂 | 🙂 | 🙂 | ? | ? | ? |
| Enright et al. (1994) | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | ? |
| Enright et al. (1995) | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 |
| Johan et al. (1997) | ☹ | 🙂 | 🙂 | 🙂 | ? | ? | 🙂 |
| Morales et al. (1997) | ☹ | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 |
| Neder et al. (1999) | ? | 🙂 | 🙂 | 🙂 | ? | ? | 🙂 |
| Harik-Khan et al. (1998) | 🙂 | 🙂 | 🙂 | 🙂 | ? | ? | 🙂 |
| Hautmann et al. (2000) | 🙂 | 🙂 | 🙂 | 🙂 | ? | ? | 🙂 |
| Wohlgemuth et al. (2003) | ☹ | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 |
| Windisch et al. (2004) | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 |
| Lausted et al. (2006) | ☹ | ☹ | 🙂 | 🙂 | ? | ? | 🙂 |
| Sachs et al. (2009) | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 |
| Costa et al. (2010) | ☹ | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | ? |
| Simões et al. (2010) | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 |
| Obando et al. (2012) | 🙂 | 🙂 | 🙂 | 🙂 | ? | ? | 🙂 |
| Gopalakrishna et al. (2012) | ☹ | 🙂 | 🙂 | 🙂 | ? | ? | 🙂 |
| Pessoa et al. (2014) | ☹ | 🙂 | 🙂 | 🙂 | ? | ? | 🙂 |
| Sanchez et al. (2018) | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 | 🙂 |

🙂: low risk; ☹: high risk; ?: unclear risk