**Table 1** Title: Review of literature on automated sleep staging

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| **Author Year** | **Population, PMA [wk]** | **Gold standard Annotations** | **Sleep states of interest** | **Used signals for analysis** | **Method** | **Results** |
| Harper 1987 [18] | 39-41 PMA | Manual scoring based on PSG | AS, QS, W | HR, RR | LDA | Agreement for separation of AS-QS-W  HR: 82%; RR: 80%; HR+RR 85% |
| Haddad 1987 [19] | 44-56 PMA | Manual scoring EEG, EOG, chin EMG and behavior | AS, QS | HR, RR | Kolmogorov Smirnov distances | Agreement for separation of AS and QS  AS 99% and for QS 93% |
| Sadeh 1995 [20] | 40-84 PMA | Manual scoring respiration and behavior | AS, QS, W | Actigraphy | LDA | Agreement for separation of AS-QS-W  75-87% depending on PMA, and for S-W 89-98% depending on PMA |
| Nason 2001 [21] | 48-60 PMA | Manual scoring EEG, EOG, ECG, chest and abdominal movement | S, W | HR | LDA; AM | Agreement for separation of S and W LDA, 75%-90% depending on PMA  AM: 89%-96% |
| Lewicke 2004 [22] | 33-58 PMA | Manual scoring EEG, EOG, EMG | S, W | HR  Actigraphy | Neural network (LVQ) | Agreement for separation of S and W  HRV: Sleep: 90% Wake: 57%  Actigraphy: S 92%, W 42% |
| Lewicke 2008 [23] | 39-53 PMA | Manual scoring EEG, EOG, EMG | S, W | HR | Neural network (MLP; LVQ);  Non linear SVM | Agreement for separation of S and W  MLP, S 86%  and W 85%  LVQNN, S 89% and W 80%  SVM, S 90% and W 79% |
| Fraiwan 2011 [13] | 40 PMA | Manual scoring based on PSG | AS, QS, W | EEG | Time frequency analysis | Agreement for separation of AS-QS-W  63%-75% |
| Terril  2012 [52] | 48-84 PMA | Manual scoring based on PSG | AS, QS, W | RR | Time frequency analysis | Agreement for separation of AS-QS-W  80%-85% |
| Palmu 2013 [24] | 25-32 PMA | Manual scoring EEG, EOG, chin EMG | S-W | EEG | Time frequency analysis | Agreement for separation of S-W, extracted from table 90% |
| Isler 2016 [12] | 37-44 PMA | Manual scoring EEG, EOG, chin EMG , respiration, behavior | AS, QS | RR variability | Time frequency analysis | Agreement for separation of AS-QS   AS 78%-90%, QS 87-100% |
| Dereymaeker 2017 [25] | 27-42 PMA | Manual scoring EEG and video | QS | EEG | Time frequency analysis | AUC 0.97 for detecting QS |
| Koolen 2017 [26] | 24-45 PMA | Manual scoring EEG | AS, QS | EEG | Non linear SVM | Accuracy for separation of AS and QS: 85%, sensitivity 83%, specificity 87% |