**Supplementary file 2.** Forest plots and Hierarchical Summary Receiver Operating Characteristic (HSROC) plots for three categorisations of RHD; any RHD (definite or borderline), definite RHD only and borderline RHD only**.**

*All plots were generated using the Review Manager (RevMan) software package, version 5.3

<u>**Any RHD:**</u>

| Study | TP | FP | FN | TN | Expertise | Sensitivity (95% CI) | Specificity (95% CI) |
|---|---|---|---|---|---|---|---|
| Beaton (2014) | 37 | 6 | 4 | 78 | Expert | 0.90 [0.77, 0.97] | 0.93 [0.85, 0.97] |
| Beaton (2015) | 141 | 158 | 39 | 1076 | Expert | 0.78 [0.72, 0.84] | 0.87 [0.85, 0.89] |
| Beaton (2016) | 44 | 50 | 9 | 286 | Non_expert | 0.83 [0.70, 0.92] | 0.85 [0.81, 0.89] |
| Mirabel (2015) | 41 | 106 | 8 | 1062 | Non_expert | 0.84 [0.70, 0.93] | 0.91 [0.89, 0.93] |
| Ploutz (2016) | 32 | 194 | 11 | 719 | Non_expert | 0.74 [0.59, 0.86] | 0.79 [0.76, 0.81] |
| Zuhlke (2016) | 21 | 0 | 5 | 62 | Expert | 0.81 [0.61, 0.93] | 1.00 [0.94, 1.00] |



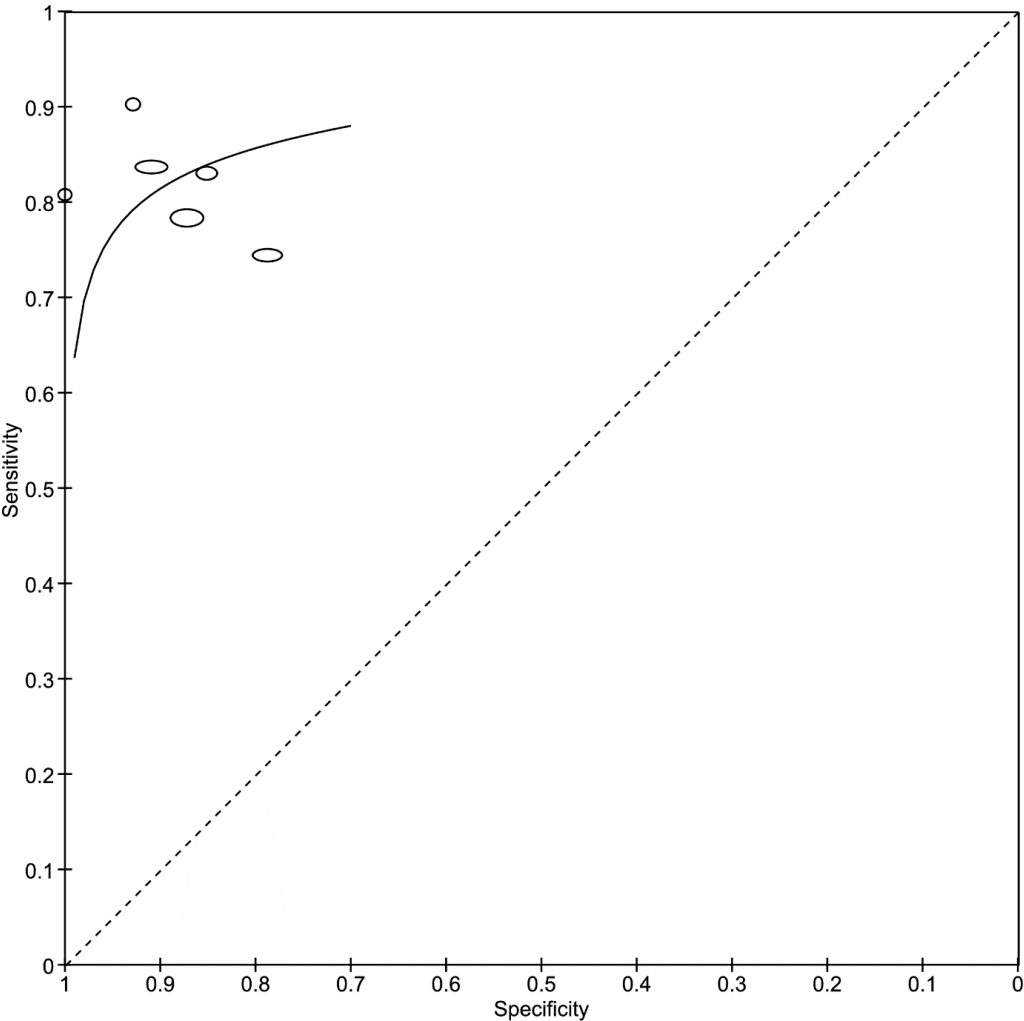**Fig 1.** Forest plot of sensitivity and specificity of handheld echocardiography for any RHD



**Fig 2.** Summary ROC plot of sensitivity versus specificity of handheld echocardiography for any RHD

**Definite RHD:**

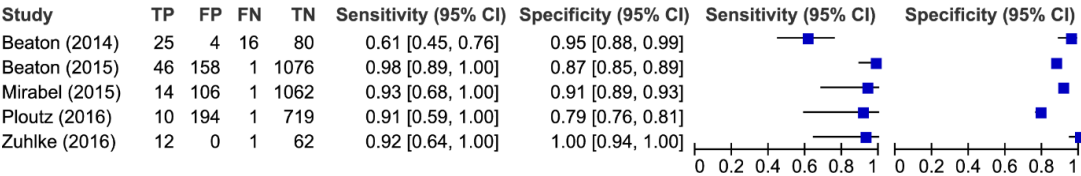| Study | TP | FP | FN | TN | Sensitivity (95% CI) | Specificity (95% CI) | Sensitivity (95% CI) | Specificity (95% CI) |
|-------|-----|-----|-----|------|----------------------|----------------------|----------------------|----------------------|
| Beaton (2014) | 25 | 4 | 16 | 80 | 0.61 [0.45, 0.76] | 0.95 [0.88, 0.99] | | |
| Beaton (2015) | 46 | 158 | 1 | 1076 | 0.98 [0.89, 1.00] | 0.87 [0.85, 0.89] | | |
| Mirabel (2015) | 14 | 106 | 1 | 1062 | 0.93 [0.68, 1.00] | 0.91 [0.89, 0.93] | | |
| Ploutz (2016) | 10 | 194 | 1 | 719 | 0.91 [0.59, 1.00] | 0.79 [0.76, 0.81] | | |
| Zuhlke (2016) | 12 | 0 | 1 | 62 | 0.92 [0.64, 1.00] | 1.00 [0.94, 1.00] | | |

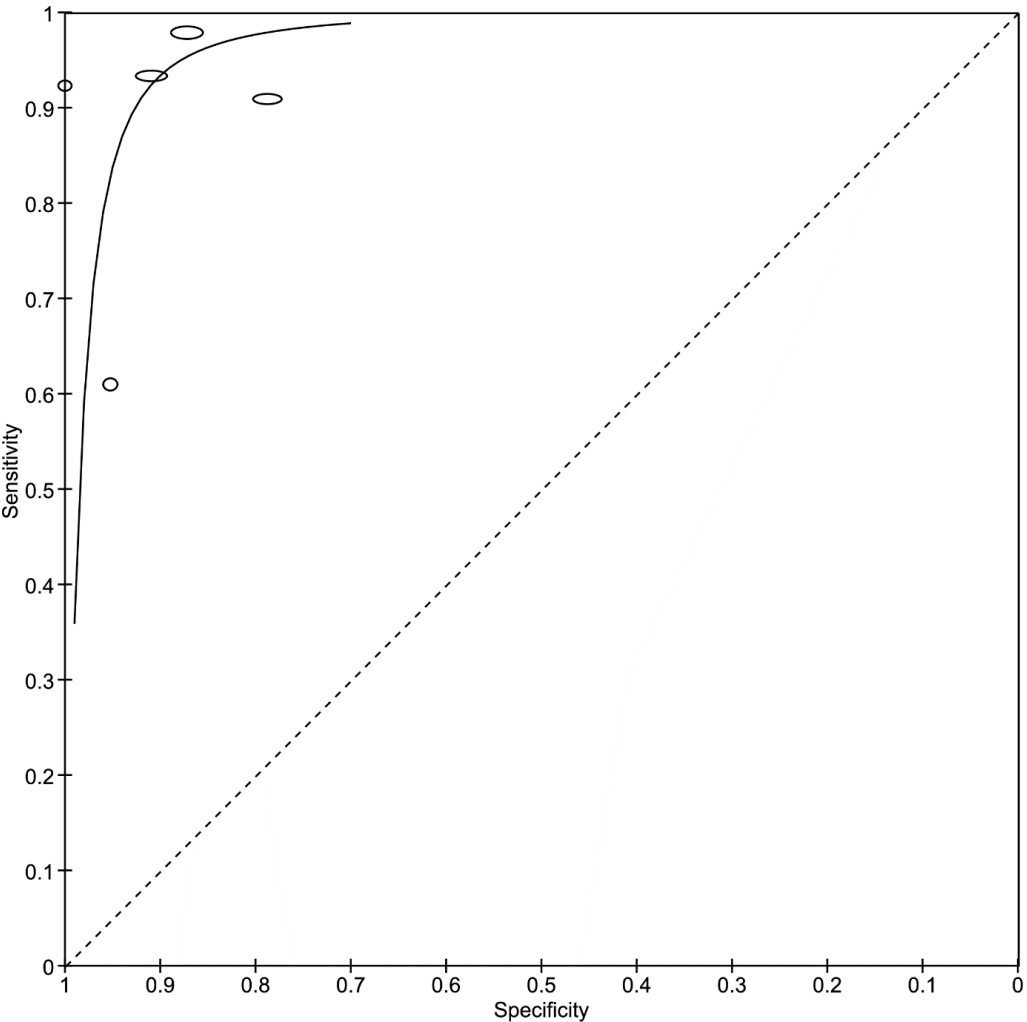**Fig 3.** Forest plot of sensitivity and specificity of handheld echocardiography for definite RHD



**Fig 4.** Summary ROC plot of sensitivity versus specificity of handheld echocardiography for definite RHD
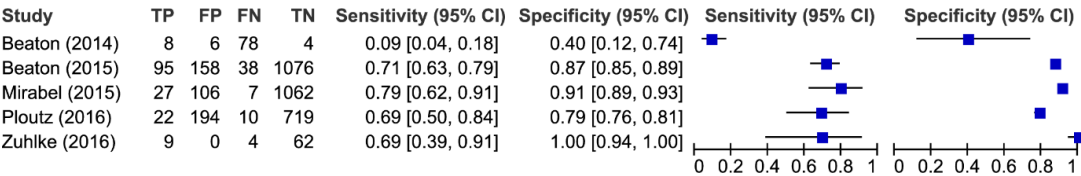
**Borderline RHD:**

| Study | TP | FP | FN | TN | Sensitivity (95% CI) | Specificity (95% CI) | Sensitivity (95% CI) | Specificity (95% CI) |
|---|---|---|---|---|---|---|---|---|
| Beaton (2014) | 8 | 6 | 78 | 4 | 0.09 [0.04, 0.18] | 0.40 [0.12, 0.74] | | |
| Beaton (2015) | 95 | 158 | 38 | 1076 | 0.71 [0.63, 0.79] | 0.87 [0.85, 0.89] | | |
| Mirabel (2015) | 27 | 106 | 7 | 1062 | 0.79 [0.62, 0.91] | 0.91 [0.89, 0.93] | | |
| Ploutz (2016) | 22 | 194 | 10 | 719 | 0.69 [0.50, 0.84] | 0.79 [0.76, 0.81] | | |
| Zuhlke (2016) | 9 | 0 | 4 | 62 | 0.69 [0.39, 0.91] | 1.00 [0.94, 1.00] | | |

**Fig 5.** Forest plot of sensitivity and specificity of handheld echocardiography for borderline RHD
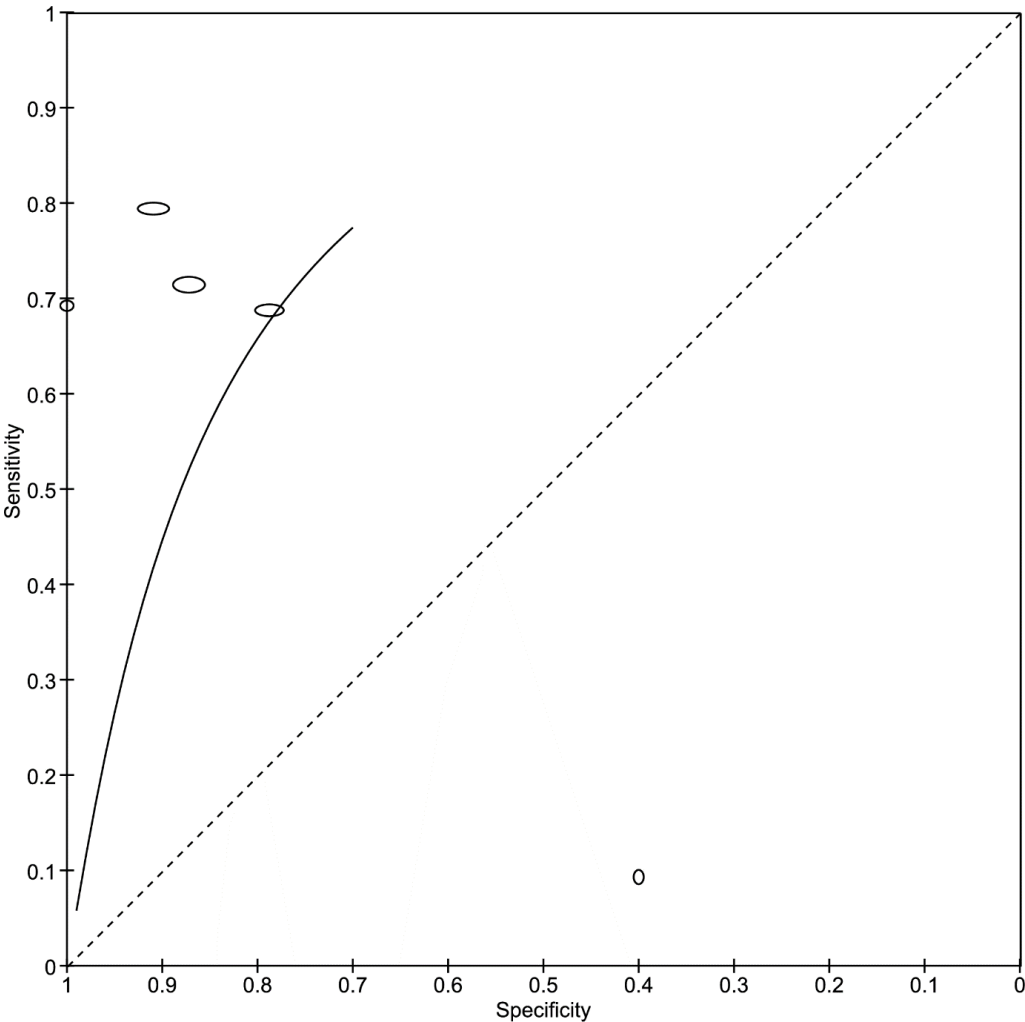


**Fig 6.** Summary ROC plot of sensitivity versus specificity of handheld echocardiography for borderline RHD