**Supplemental table S1:** Echocardiographic protocol used in Copenhagen Baby Heart Study

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| View | Cross sectional images | Color Doppler | Pulsed wave | Continuous wave | Tissue Doppler | M-mode |
| Subxiphoid |  |  |  |  |  |  |
| Situs view | X |  |  |  |  |  |
| Abdominal long axis | X |  |  |  |  |  |
| Atrial septum | X | X |  |  |  |  |
| Long-axis: SVC-RA-IVC-LA |  | X |  |  |  |  |
| Left parasternal |  |  |  |  |  |  |
| PLAX | X | X |  |  |  | X (AV, LA) |
| PLAX with focus on aorta | X |  |  |  |  |  |
| SAX aorta | X | X |  |  |  |  |
| SAX pulmonary trunk | X | X | X |  |  |  |
| SAX LV | X |  |  |  |  |  |
| Apical |  |  |  |  |  |  |
| Four chamber view (LV center) | X | X | X |  | X |  |
| Four chamber view (RV center) | X | X | X | X |  | X (TAPSE) |
| Coronary sinus view | X | X |  |  |  |  |
| Five chamber view | X | X | X (LVOT) | X |  |  |
| Suprasternal |  |  |  |  |  |  |
| Aortic arch | X | X |  | X |  |  |

*X* indicates views obtained and imaging modalities used. *AV* aortic valve, *IVC* inferior vena cava, *LA* left atrium, *LV* left ventricle, *LVOT* left ventricular outflow tract, *PLAX* parasternal long-axis, *RA* right atrium, *RV* right ventricle, *SAX* parasternal short-axis, *SVC* superior vena cava, *TAPSE* tricuspid annular plane systolic excursion.

**Supplemental table S2:** Pitfalls to be aware of

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| **Pitfalls to be aware of** |
| To be able to detect an interatrial communication following the algorithm, images of acceptable quality in the correct projection without too much noise are needed. |
| If the aorta is visualized by its blue color flow across the atria, the projection is not acceptable. (Supplemental figure 1a and 1b). |
| Dropouts of the ultrasound signal from the cardiac tissue can occur, which can be mistaken for visual communications in the septum. To ensure a communication is not a dropout consistency between point of color flow and visual communication is required. (Supplemental figure 2a and 2b) |
| If the color flow is perpendicular to the axis of the probe, the signal from the flow of blood can be weakened. The same phenomenon results in dropouts of the signal from the septum, if the septum is parallel to the axis of the probe. |
| In the case of a large color jet from the inflow of the superior caval vein, attention should be given on not mistaking flow from the superior caval vein flow with color flow crossing the atrial septum. This can be evaluated by reducing color Doppler gain. (Supplemental figure 3) |
| Turbulence of blood flow from the inferior caval vein against the inferior part of the septal wall can be mistaken for flow acceleration across the septum. Eustachian valves and Chiari network can likewise be the cause of turbulence in this area. (Supplemental figure 4) |
| In the case of multiple flows crossing septum one needs to ensure that each flow meets the criteria of either a visible communication or a non-visible communication with flow acceleration in the color flow conferthe algorithm. A visible communication can occur together with a non-visible communication with flow acceleration. |
|  |
| If a convincing visible communication is visualized in one cycle, but not in the rest of the loop, this finding will overrule a non-visible communication, and the communications should be classified as the visible communication in question (e.g., channel-like PFO, size-defined PFO etc.) . |

**Supplemental figure S1-S4**

Image S2b

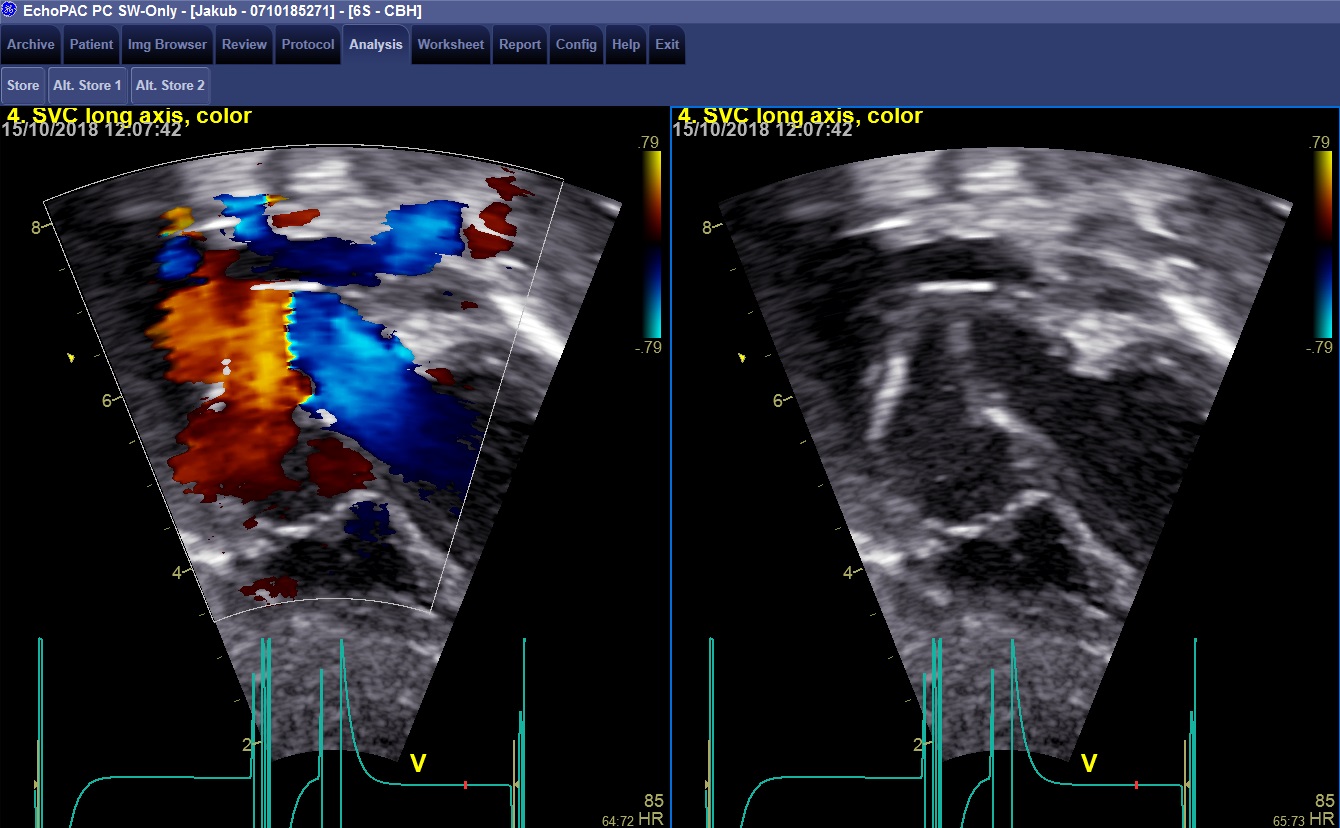
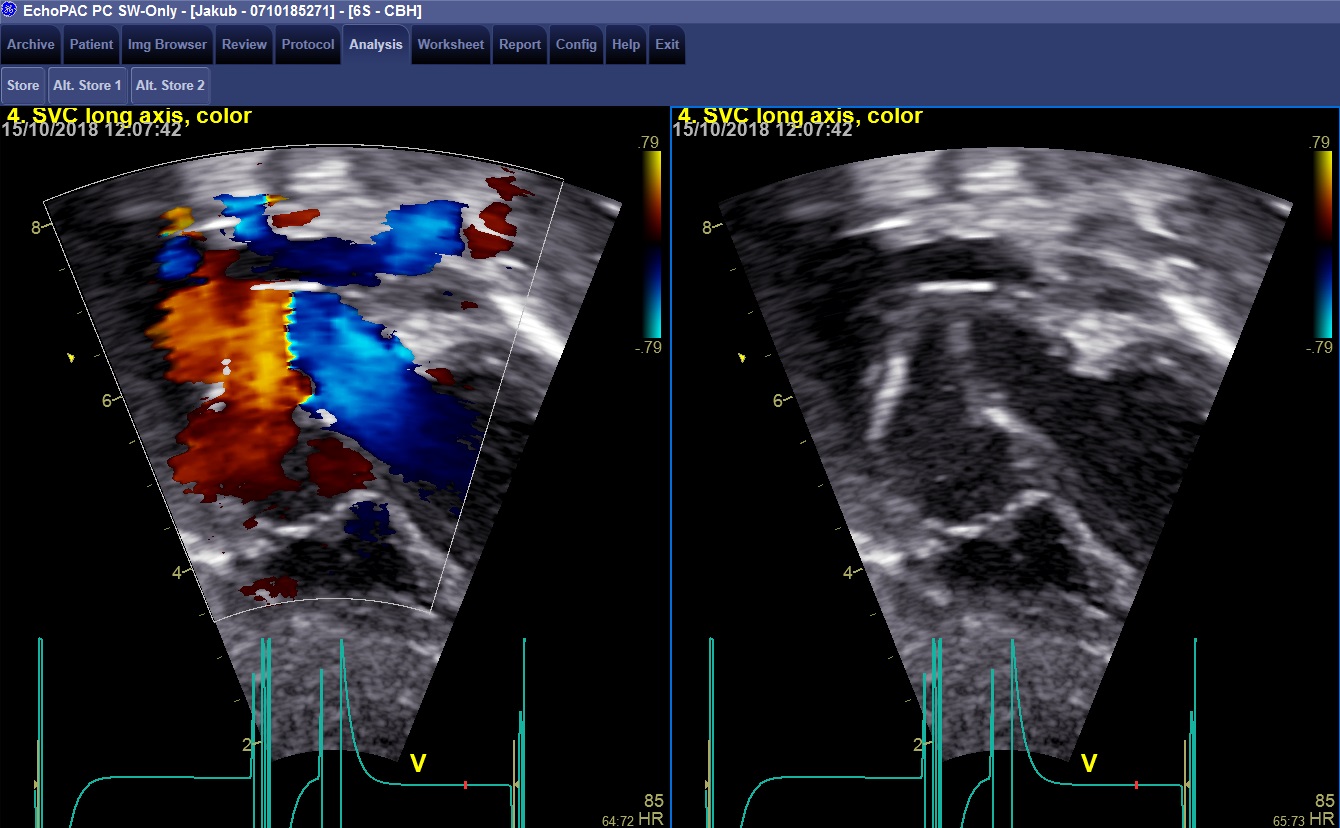
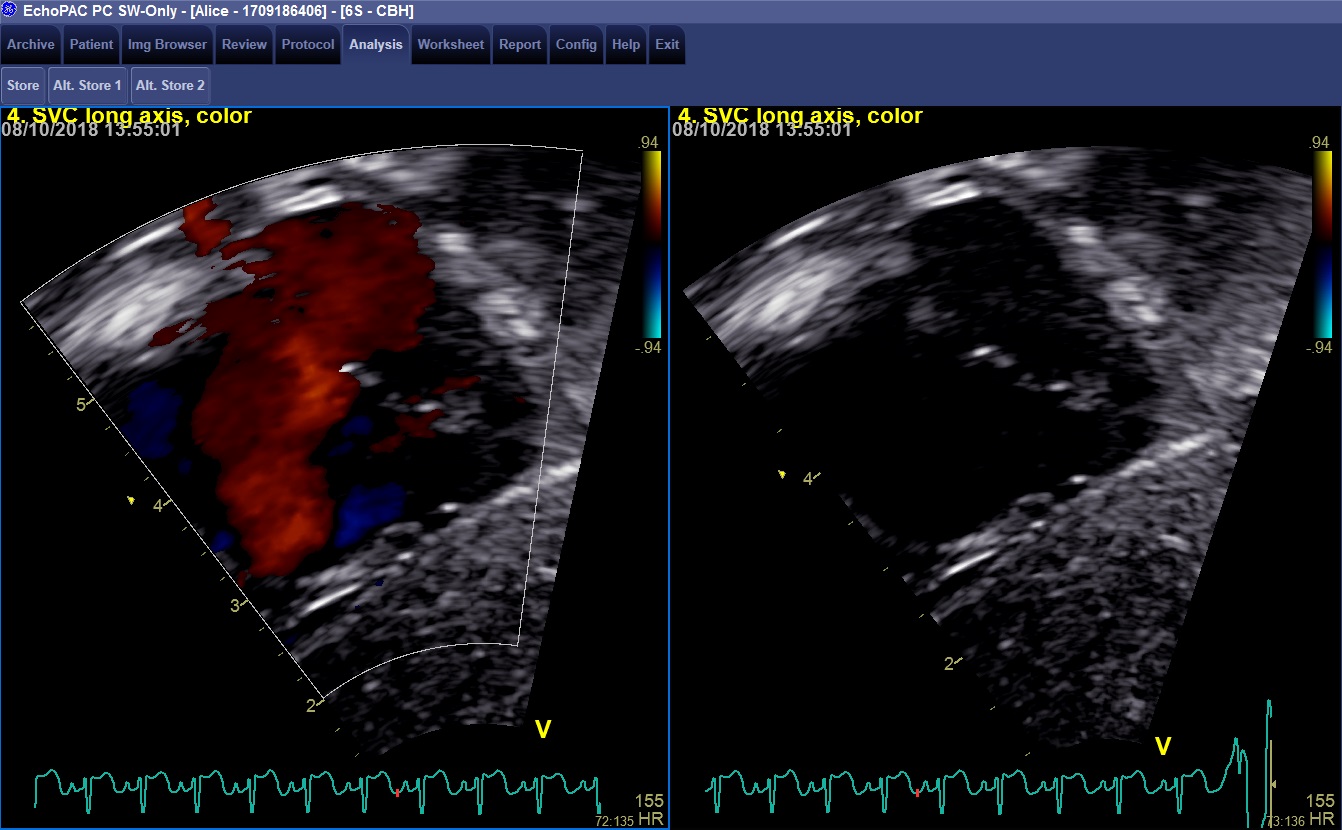


Image S1a

Image S1b

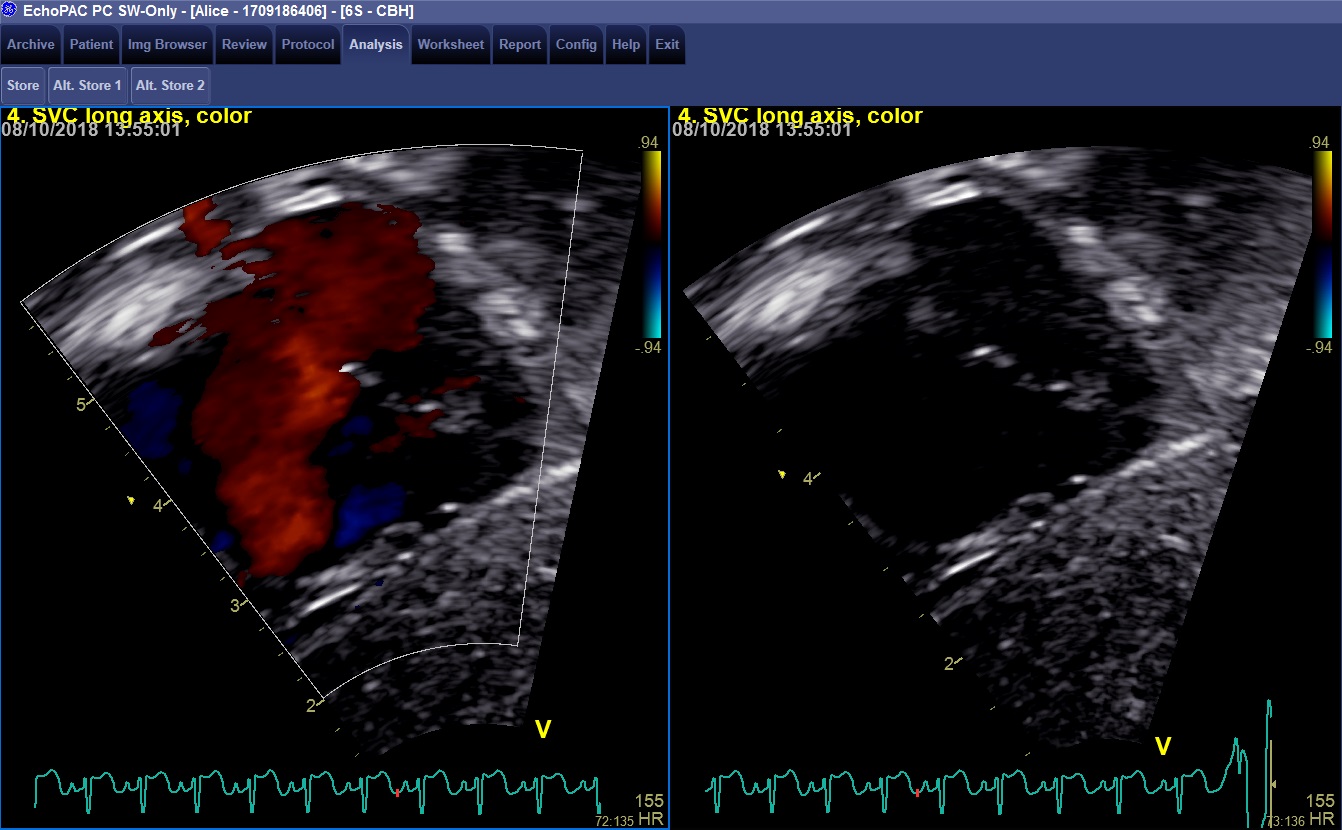
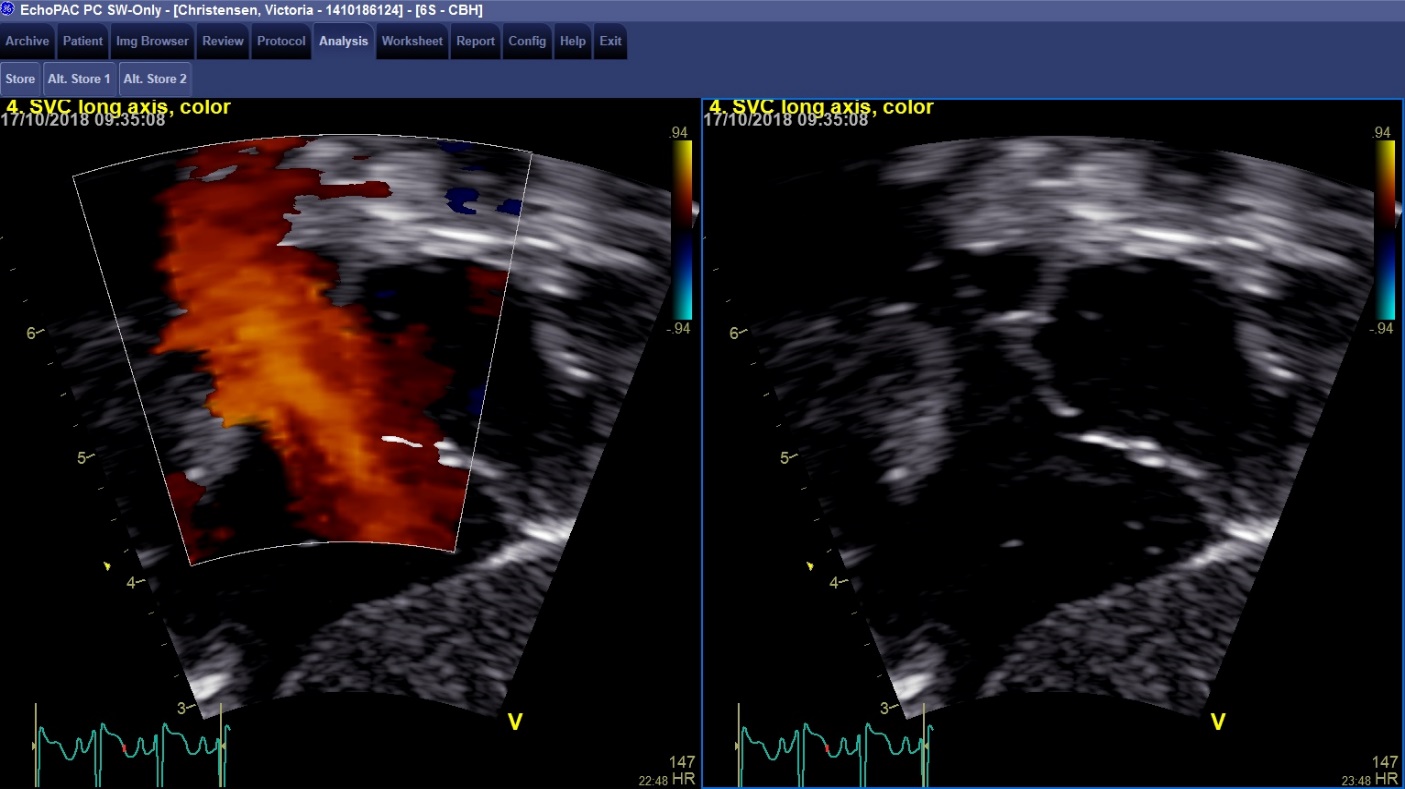


Image S2a



Image S3

Image S4



**Supplemental table S3:** Age-dependent prevalence of interatrial communications

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Week Numbers of newborns* | *1 (0-7 days)*  *N=112* | *2 (8-14 days)*  *N=288* | *3 (15-21 days)*  *N=59* | *4 (22-28 days)*  *N=29* | *4 (29-30 days)*  *N=7* |
| *IAC present* | *84 (75.0%)* | *245 (85.1%)* | *51 (86.4%)* | *27 (93.1%)* | *7 (100%)* |