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HD Scope⁺: A comprehensive solution providing more diagnostic details for obstetric and gynecologic diseases

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Introduction

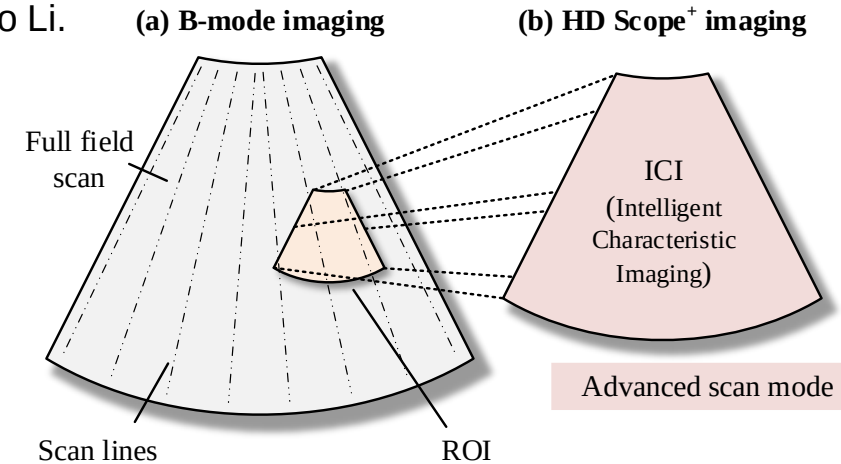
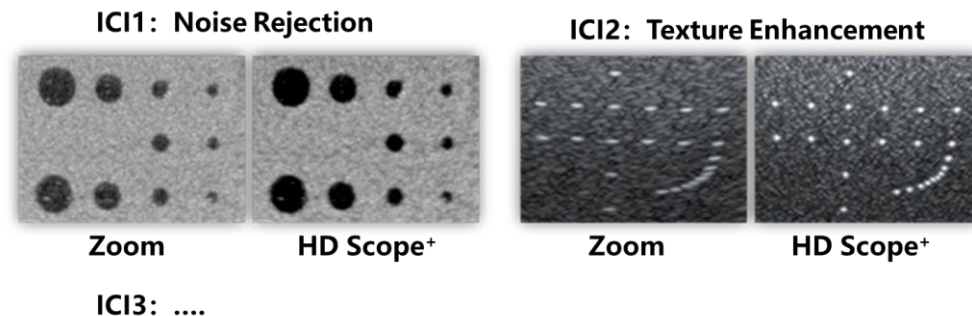
The conventional 2D imaging enables fast scanning with a wide field of view, which is suitable for the preliminary diagnosis of lesions and fetal anomaly detection. However, to enhance the accuracy of further diagnosis, we need to obtain more valuable diagnostic information from the region of interest (ROI).

Method

HD Scope⁺ focuses on localized precision imaging while enabling global imaging. It fully utilizes dual-channel architecture with advanced adaptive beamforming technology for intelligent characteristic imaging (ICI):

- 1. The ICI 'Noise rejection' can reject noise to purify the cystic lesion and liquid-filled organs.
- 2. The ICI 'Texture enhancement' can provide better spatial resolution and contrast resolution.
- 3. The ICI 'Margin enhancement' can delineate the organ or lesion contour more clearly.

As demonstrated below, HD Scope⁺ imaging significantly outperforms traditional zoom imaging due to its independent signal processing.



Result

Several typical obstetrics and gynecology cases were used to evaluate the clinical value of HD Scope⁺:

- 1. In 1st trimester fetal heart imaging, the ICI 'Noise rejection' enhances structural clarity and hemodynamic visualization.
- 2. In 1st trimester fetal anomaly imaging, the ICI 'Texture enhancement' improves renal visualization, showing clearer details of both kidneys.
- 3. In obstetrics imaging, the ICI 'Texture enhancement' enhances the contrast and resolution not only in the placenta but also in the gastrointestinal wall.

Conclusion

HD Scope⁺ advances ultrasound diagnostics through intelligent characteristic imaging technology, delivering exceptional structural clarity for fetal anomalies and gynecological lesions. In addition, its integrated doppler flow provides complementary hemodynamic assessment for further diagnosis.

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Figure1. HD Scope⁺ for fetal heart



Figure2. HD Scope⁺ for fetal kidney



Figure3. HD Scope⁺ for duodenal atresia