Clinical value of a standard imaging model in 4D hysterosalpingo-contrast-sonography
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Objective
To explore the establishment of a standard imaging model of 4D HyCoSy whereby the gynecologist can accurately evaluate oviduct patency and observe the oviduct development and morphology according to standard images, so as to better inform patients and develop an accurate treatment strategy.

Methods
The preoperative 4D HyCoSy images for 22 patients (42 fallopian tubes were retrospectively analyzed. One to four images were captured by an experienced sonologist according to operation results for every case, namely the proximal tubal development phase, the middle or distal tubal development phase, oviduct umbrella dispersion phase and pelvic dispersion phase. Oviduct patency was diagnosed by a gynecologist and a sonologist according to the captured images. Sensitivity, specificity, and diagnostic coincidence rate of the two clinicians were calculated, and the coincidence rates compared.

Results
Diagnostic sensitivity, specificity, and coincidence rate of tubal patency were 89.5 and 73.7%; 91.3 and 87%, 90.5 and 80.9% for the sonologist and gynecologist, respectively. There was no statistical difference in diagnostic coincidence rate between the two specialists (p=0.687, p > 0.05).

Conclusion
4D HyCoSy is a satisfactory and accurate method for evaluating the patency of fallopian tubes. The establishment of a standard imaging model of 4D HyCoSy, potentially of high value in clinical practice, is warranted.