

# HDlive Flow Silhouette Mode for the Diagnosis of Uterine Sarcoma

<sup>1</sup>Toshiyuki Hata, <sup>2</sup>Kenji Kanenishi, <sup>3</sup>Tamaki Tanaka, <sup>4</sup>Megumi Ito, <sup>5</sup>Nobuhiro Mori

## ABSTRACT

We present our initial experience of using the HDlive Flow silhouette mode to construct an image of uterine sarcoma. Two-dimensional sonography showed a heterogeneous uterine mass with central, irregular cystic areas. The HD-flow demonstrated only peripheral vascularities around the mass. However, the HDlive Flow silhouette mode with HDlive silhouette mode clearly depicted abnormal penetrating vessels from peripheral vessels in the mass. The HDlive Flow silhouette mode provides a novel, unique sonographic appearance of uterine sarcoma, and may facilitate its diagnosis and localization of abnormal blood vessels in the mass.

**Keywords:** Diagnosis, HDlive Flow silhouette mode, HDlive silhouette mode, Uterine sarcoma.

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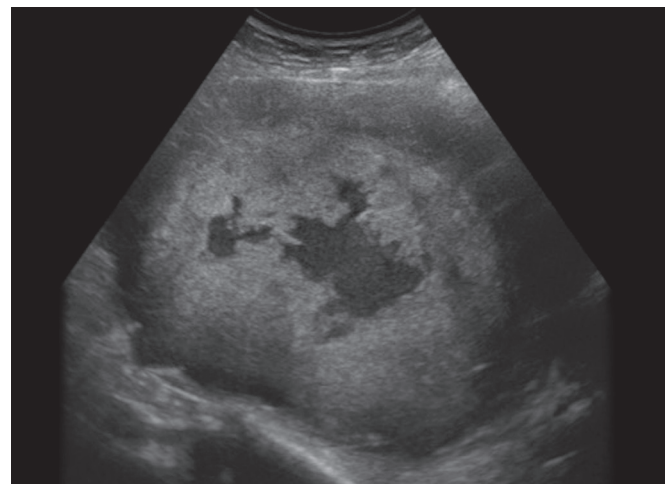
## INTRODUCTION

Two-dimensional sonographic appearances of uterine sarcoma reveal enlarged, echogenic masses with cystic lesions, but these features are not specific to uterine sarcoma, being similar to those of uterine leiomyoma.<sup>1,2</sup> Hypervascularity depicted by color/power Doppler ultrasound is sometimes highly suggestive of the diagnosis of uterine sarcoma, but not in all cases.<sup>3</sup>

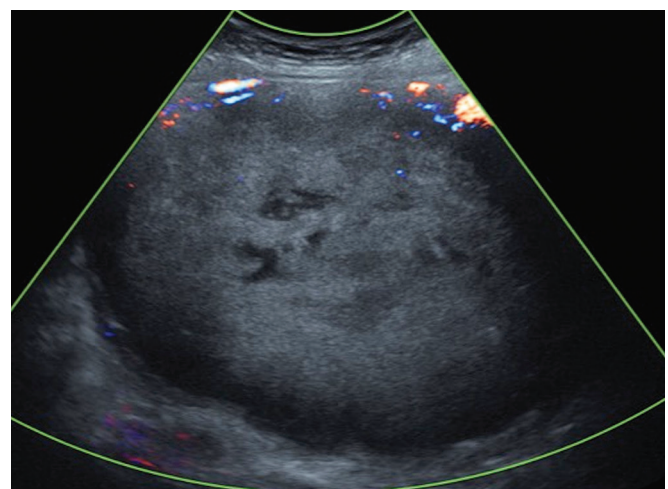
Cutting-edge technology, the HDlive Flow silhouette mode, provides vitreous-like clarity of blood flow in both the normal fetal heart and in the presence of congenital heart diseases as well as uterine arteriovenous malformation. It can preserve and present an outline and the borders of blood flow, but the core remains semitransparent.<sup>4,5</sup> This picture of the month presents our initial experience

of using the HDlive Flow silhouette mode to construct an image of uterine sarcoma.

A 66-year-old Japanese woman, gravida 4, para 2, was referred to our university hospital because of abdominal distention and a lower abdominal tumor. Two-dimensional sonography showed a heterogeneous uterine mass with central, irregular cystic areas (Fig. 1). The HD-flow demonstrated only peripheral vascularities around the mass (Fig. 2). However, the HDlive Flow silhouette mode with the HDlive silhouette mode clearly depicted abnormal penetrating vessels from peripheral vessels in the mass (Fig. 3). Moreover, magnetic resonance imaging revealed



**Fig. 1:** High-grade endometrial stromal sarcoma of the uterus. Two-dimensional sonography shows a heterogeneous uterine mass with central, irregular cystic areas

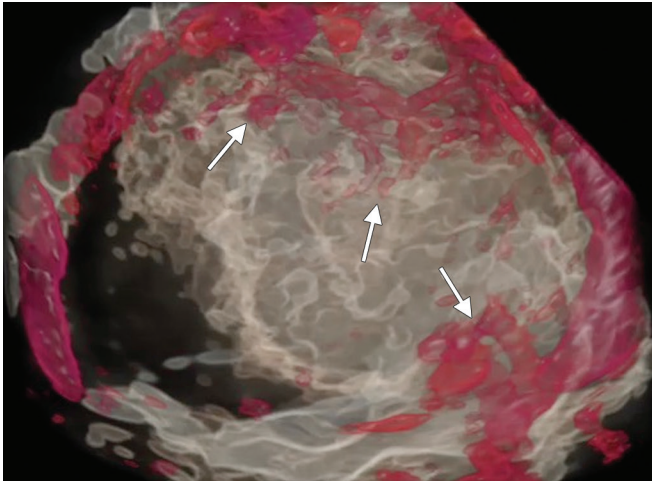


**Fig. 2:** HDflow demonstrates only peripheral vascularities around the mass

<sup>1</sup>Professor and Chairman, <sup>2</sup>Associate Professor, <sup>3-5</sup>Assistant Professor

<sup>1-5</sup>Department of Perinatology and Gynecology, Graduate School of Medicine, Kagawa University, Miki, Kagawa, Japan

**Corresponding Author:** Toshiyuki Hata, Professor and Chairman, Department of Perinatology and Gynecology Graduate School of Medicine, Kagawa University, Miki Kagawa, Japan, Phone: +810878912174, e-mail: toshi28@med.kagawa-u.ac.jp



**Fig. 3:** HDlive Flow silhouette mode with HDlive silhouette mode clearly depicts abnormal penetrating vessels (arrows) from peripheral vessels in the mass

suspected right iliac bone metastasis. Uterine sarcoma was strongly suspected before the operation. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was conducted. The final diagnosis was endometrial stromal sarcoma, high-grade, stage IVB (pT1bNXM1).

The HDlive Flow silhouette mode with HDlive silhouette mode clearly shows the spatial relationships

among the mass of the uterine sarcoma, penetrating abnormal tumor vessels, and surrounding myometrial vessels. This technique provides a novel, unique sonographic appearance of uterine sarcoma, and may facilitate its diagnosis and localization of abnormal blood vessels in the mass.

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