SYNAPTIX MEDICAL
CONNECTED INNOVATION IN HEALTHCARE

HAL/RAR ULTRASOUND LOCATION SYSTEM

Product Catalog · 1st & 2nd Generation

Doppler-Guided Hemorrhoidal Artery Ligation (HAL) and Recto Anal Repair (RAR)



CONNECTED INNOVATION IN HEALTHCARE

Distributed in the UAE by AL.AMAL Medical & Laboratory Equipment Repairing, Dubai
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The HAL/RAR Technology

Minimally invasive, Doppler-guided treatment of hemorrhoidal disease

Introduction

The HAL/RAR minimally invasive technique has cured thousands of hemorrhoid patients with excellent therapeutic effects, and its high safety has earned the trust of patients. The Synaptix HAL/RAR Ultrasound Location System combines a wireless Doppler locator with a purpose-designed proctoscope to precisely identify and ligate the superior hemorrhoidal arteries, then suspend and fix prolapsed hemorrhoidal tissue — without excision.

Clinical Benefits

Efficacy

· HAL is suitable for treating bleeding, pain and itching.
· RAR is suitable for the repair of prolapsed mucosal tissue.
· HAL and RAR can be adjusted to the symptoms of each patient and are suitable for every hemorrhoid patient.

Patient Satisfaction

· Minimally invasive: does not damage the rectal mucosa and leaves no scars.
· Short hospital stay; ambulatory profile.

Safety

· Very few intraoperative and postoperative complications.
· Doppler-guided ligation ranked highest for efficacy, patient satisfaction and safety vs. conventional surgery.

Anal Cushion Preservation

· The entire surgical process does not involve removal of the hemorrhoid body; anal cushion function is fully preserved.

Efficacy / Safety / Satisfaction Profile

HAL/RAR Ultrasound Location System

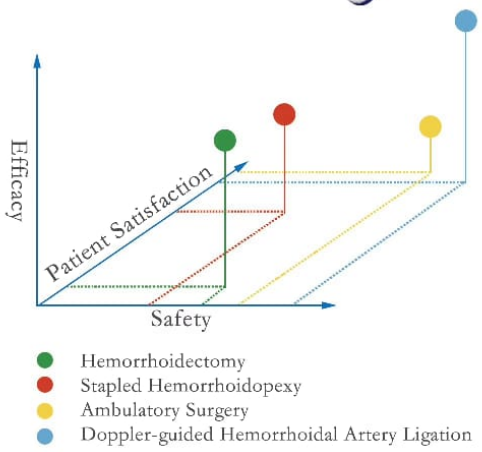


The HAL/RAR minimally invasive technique has cured thousands of hemorrhoid patients with excellent therapeutic effects, and its high safety has earned the trust of patients.

Efficacy:
HAL is suitable for treating bleeding, pain, and itching;
RAR is suitable for the repair of prolapsed mucosal tissue

Patient Satisfaction:
Minimally invasive: Does not damage the rectal mucosa and leaves no scars;
Short hospital stay.

Safety:
Very few intraoperative and postoperative complications.



Hemorrhoid artery ligation (HAL) and suspension (RAR) surgery can be adjusted according to the different symptoms of each patient, and HAL and RAR surgery are suitable for each hemorrhoid patient

First Generation — Wireless Doppler Locator

Original HAL/RAR platform · Locates, ligates, suspends

Gen 1 — At a Glance

The first-generation HAL/RAR ultrasound location system is a compact, battery-powered Doppler locator built around an arc-shaped operating window. Exclusively pioneered wireless Bluetooth technology delivers clearer Doppler signals to a paired speaker, making hemorrhoidal artery detection easier. Indicator LEDs show power status, probe recognition and undervoltage, while engraved markers indicate the location of hemorrhoid artery ligation and the operation direction of suspension surgery. The entire device supports sterilization.



Gen 1 locator — annotated controls (power / sound / indicators)



Gen 1 complete set with accessories

First Generation — Design & Features

Engineering Highlights

Wireless Bluetooth Technology

Domestic exclusive, original innovation. Less frequency attenuation and higher detection accuracy — Doppler signals are clearer and hemorrhoidal artery detection is easier.

Arc-Shaped Operation Window

Larger and more flexible operating angles with a built-in power source that is safe and portable; the entire device supports sterilization.

Easy Installation

Special design of probe sleeve; the hanging (ligation) window is larger and the angle is more flexible.

High-Brightness LED Lights

High brightness LEDs give a clearer surgical field of vision.

Feature Gallery



The operation window features an arc-shaped design, providing more space, with a built-in power source that is safe and portable, and the entire device supports sterilization



wireless bluetooth technology
more flexible operation
Less frequency attenuation
Higher detection accuracy



Easy installation of the entire machine
Special design of probe sleeve
The hanging window is larger and the angle is more flexible



High brightness LED lights
Clearer surgical field of vision

Second Generation — Synaptix Smart Locator

Color LCD waveform display · Touch interface · LED illumination

Gen 2 — Key Upgrades

The second-generation system advances the proven Gen 1 Doppler platform into the Synaptix connected ecosystem. A full-color LCD presents the arterial waveform in real time with an intuitive touch menu, while integrated high-brightness LEDs illuminate the operative field. Pairing with the wireless Bluetooth speaker remains seamless, and the locator keeps the same arc-shaped, sterilizable design with the larger hanging window and flexible probe sleeve of Gen 1.



Gen 2 locator assembled with probe sleeve



Touch menu & real-time Doppler waveform



High-brightness LED illuminated field

Real-time waveform display

Arterial Doppler signal visualized on a color LCD for confident artery identification.

Touch menu interface

On-screen menu and volume control streamline operation in the sterile field.

Integrated LED illumination

Bright white LEDs built into the locator head light the surgical corridor.

Wireless audio feedback

Bluetooth speaker emits the pulsatile blood-flow sound used to guide ligation.

Clinical Application — HAL & RAR Procedures

The HAL (Hemorrhoid Artery Ligation) Process

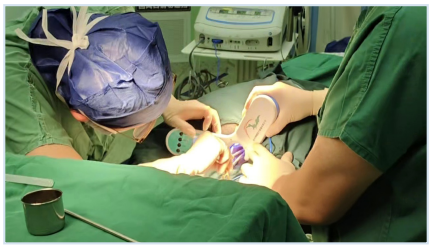
The HAL procedure involves ligating hemorrhoidal arteries to reduce blood supply to the hemorrhoids, leading to their shrinkage and a return to normal shape — effectively alleviating bleeding, pain and itching. Typically 5 to 8 hemorrhoidal arteries are ligated, varying with individual differences and severity. The probe sheath is gently inserted into the rectum, and the main unit is slowly rotated to locate arteries from pulsating blood-flow sound signals. The surgeon then performs figure-eight ligations with absorbable thread through the ligation window until the pulsation signal weakens or disappears; the sheath is retracted about 1 cm (remaining ≥0.8 cm above the dentate line) and the process repeated for a full rotation.

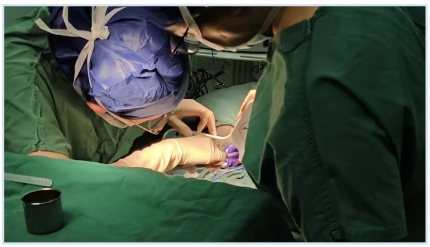
The RAR (Recto Anal Repair) Procedure

RAR is suitable for reducing the volume, suspending and fixing internal hemorrhoids of degrees II–IV. After ligation of the hemorrhoidal arteries, each prolapsed hemorrhoidal body is dealt with one by one: the first stitch of the suspension is positioned at the top of the hemorrhoid body, reaching into the submucosal layer, with the last stitch 5–10 mm above the dentate line. Approximately 5–6 continuous sutures with 7–10 mm spacing achieve volume reduction, suspension and fixation — with minimal complications and full preservation of the anal cushion.

Procedure Guide & In-Vivo Use







Step-by-step HAL/RAR technique *HAL ligation in the operating theatre* *Suspension suture placement (RAR)*

System Configuration

Reference configuration — HAL/RAR Ultrasound Location System

Items (产品名称)	Code	Qty (数量) / Notes
Host (Locator main unit)	P02	1
Probe (sterile sheath set)	P03	10
Bluetooth Speaker	P04	10
Needle holder (optional) + Knot pusher (optional)	P05	10

System items carry the corresponding UAE EDE classification codes P02 – P05 from the classification letter.

Host Unit — Gen 2 Display



Notes

· This configuration includes consumable probes and speakers for the first procedures.
· Needle holders and knot pushers available as optional accessories.
· Pricing is available upon request — please contact your Synaptix / AL.AMAL Medical representative for a formal quotation.
· Training materials, procedure kits and clinical support available on request.
· Lead time, warranty and delivery terms per quotation.

United Arab Emirates — Emirates Drug Establishment (EDE)

Classification Letter — Disposable Hemorrhoid Staplers

Product: JIANGSU BRIGHTNESS Disposable Hemorrhoid Staplers (Device)
Manufacturer: Jiangsu Brightness Medical Devices Co., Ltd., China
Application No.: DRCLAS-2025-005647 · M.No.: 29/2025 dated 16/09/2025
Issue Date: 17/09/2025 Expiry Date: 16/09/2028
Classification: Clearance from UAE EDE as Medical Device — restricted to use by licensed healthcare professionals; import/export only by EDE-licensed medical stores.
Supply: EDE/DOH/DHA-licensed healthcare facilities within the UAE only; supply to patients within the UAE is not permitted under UAE law.
Software: Devices containing software that processes patient data must comply with UAE Federal Law No. (2) of 2019 (ICT in Health Fields) and EDE Ministerial Decree 51/2021.

United States — FDA Device Registration (Fiscal Year 2026)

Establishment Registration — Shenzhen Sponge New Material Co., Ltd.

Address: Pingshan Linhui Road, 21 Zhongcheng Medical Industry Park, Block A, 6/F, Shenzhen, Guangdong, 518118, China Owner/Operator No.: 10094571
Verification: OUA — issued 12/09/2025, valid to 31/12/2026 (FDA listing verification at accessdata.fda.gov).
Listings — D583639 (NAB) Hemostatic & external sponges: Absorbing Hemostatic Sponge, Nasal Plug Sponge (Phyyixs), Negative Pressure Sponge, Trauma Dressing, Eye Spear / Ophthalmic Sponge, Filter Sponge, Gelatin Hemostatic Sponge, Applicator Sponge · D583640 (MHW) PVA Nasal Pack / Dressing · D583641 (KXF) Cotton Swab D583642 (KXG) Sampling Swab, Disposable Oral Swab, Adhesive Bandage · D583643 (FRL) Wiping Sheet · D583644 (EHK) Disinfectant Brush · D583645 (MNL) Cleaning Stick · D583646 (EXB) Guide Strip · D583647 (LYA) Nasal Plug

Full classification letters, registration certificates and quality documents (ISO, CE) are available upon request.

Complementary Anorectal & Wound Care Range

Complete procedure kits alongside the Synaptix HAL/RAR system

Disposable Hemorrhoid Staplers — Jiangsu Brightness

Item Description	Codes	Regulatory Reference
Disposable Hemorrhoid Stapler	PAH32 · PAH34 · PAH36 · PAH32-TF · PAH34-TF · PAH32-ST · PAH34-ST · PAH36-ST	**UAE EDE DRCLAS-2025-005647 (exp. 16/09/2028)**
Anorectal Introducer	P02	**UAE EDE DRCLAS-2025-005647**
Circular Anal Dilator	P03	**UAE EDE DRCLAS-2025-005647**
Purse-String Suture Anoscope	P04 · P04-T	**UAE EDE DRCLAS-2025-005647**
Threader	P05	**UAE EDE DRCLAS-2025-005647**

Category	Products	FDA Listing / Product Code
Hemostatic Sponges	Absorbing Hemostatic Sponge · Gelatin Hemostatic Sponge · Applicator Sponge · Nasal Plug Sponge (Phyyixs) · Negative Pressure Sponge · Eye Spear / Ophthalmic Sponge · Filter Sponge	**D583639 (NAB) · D583640 (MHW)**
Wound & Nasal Dressings	Trauma Dressing · PVA Nasal Pack / Dressing (compression dressing)	**D583640 (MHW)**
Applicators & Swabs	Cotton Swab (non-sterile) · Sampling Swab · Disposable Oral Swab · Adhesive Bandage (sterile) · Wiping Sheet	**D583641 (KXF) · D583642 (KXG) · D583643 (FRL)**
Care & Hygiene Accessories	Cleaning Stick (endoscope brushes) · Disinfectant Brush · Guide Strip · Nasal Plug (intranasal septal splint)	**D583644 (EHK) · D583645 (MNL) · D583646 (EXB) · D583647 (LYA)**

Regulatory Traceability

Every product line in this catalog is traceable to its registration: Jiangsu Brightness disposable hemorrhoid staplers and accessories are cleared by the UAE Emirates Drug Establishment under Application DRCLAS-2025-005647 (valid to 16/09/2028); Shenzhen Sponge hemostatic, dressing and applicator products are listed with the US FDA under Establishment Registration Owner/Operator No. 10094571, FY2026 (verification valid to 31/12/2026). Certificates are available upon request.

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