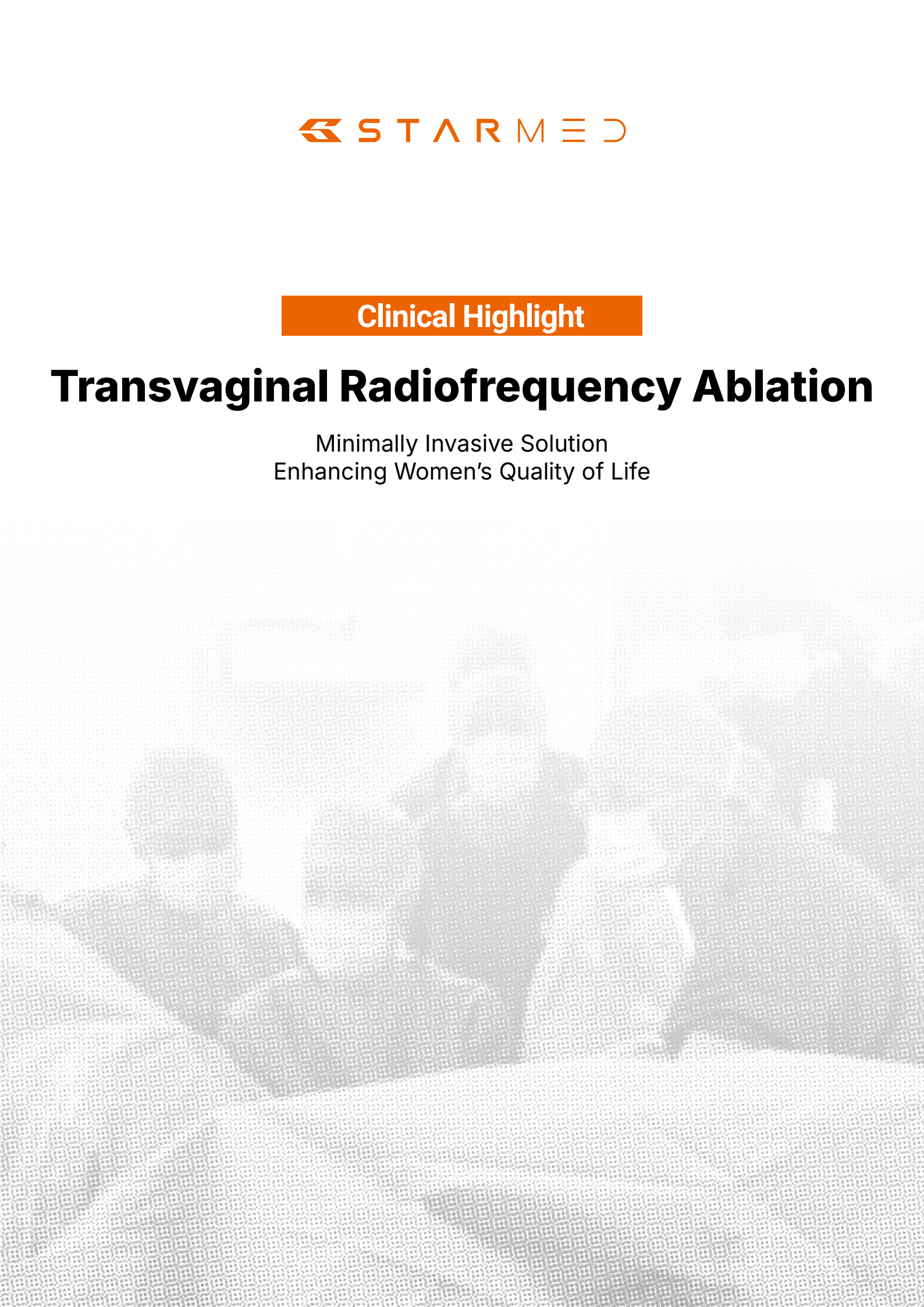
STARMED

Clinical Highlight

Transvaginal Radiofrequency Ablation

Minimally Invasive Solution
Enhancing Women's Quality of Life



Executive Summary

Uterine fibroids affect most women by menopause, yet treatment options remain limited for those wishing to preserve fertility while avoiding invasive surgery. Traditional procedures such as hysterectomy, myomectomy, and uterine artery embolization involve trade-offs including surgical risks, long recovery times, or uncertain reproductive outcomes.

Transvaginal Radiofrequency Ablation (TV-RFA) offers a clinically proven, uterus-sparing alternative. Guided by ultrasound, radiofrequency energy is delivered directly to fibroids without incisions, general anesthesia, or hospitalization. Often performed in an outpatient setting, TV-RFA typically takes less than 30 minutes, allowing most patients to return to daily activities within days.

Robust evidence from clinical trials, meta-analyses, and long-term follow-up studies demonstrates fibroid volume reduction often exceeding 90%, along with meaningful symptom relief and improved quality of life. Uterine integrity is generally preserved, and available data report successful pregnancies without cases of uterine rupture or ablation-related complications, with most women delivering vaginally.

For providers, TV-RFA offers a streamlined workflow, minimal infrastructure needs, low complication and reintervention rates, and efficient patient throughput.

As healthcare prioritizes patient-centered, value-based care, the procedure is emerging as a safe, effective advancement that preserves the uterus, reduces treatment burden, and supports reproductive potential.

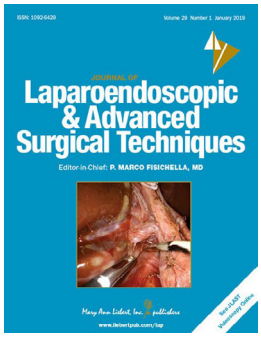
90.2%
fibroid volume reduction within 12–36 months[1]

>84.9%
reduction in symptom severity at 1 month[2]

5 Days
patient recovery after outpatient procedure[3]

11.5%
reintervention rate at 3 years[3]

3. Bradley LD, Pasic RP, Miller LE. (2019) Clinical performance of radiofrequency ablation for treatment of uterine fibroids: Systematic review and meta-analysis of prospective studies. Journal of Laparoendoscopic & Advanced Surgical Techniques, 29(12); 1507–1517. (doi: https://doi.org/10.1089/lap.2019.0550)



Transvaginal Radiofrequency Ablation of Myomas: Technique, Outcomes, and Complications

Victoria E. Rey, MD, Rocío Labrador, MD, María Falcon, MD, José Luis Garcia-Benitez, MD

J Laparoendosc Adv Surg Tech A. 2019 Jan;29(1):24-28.

Objectives

To evaluate the technique, complications, and outcomes of **transvaginal ultrasound-guided radiofrequency myolysis (TRFAM)** in patients with metrorrhagia due to fibroids

Methods

- **Prospective** observational study
- **205** patients with **symptomatic uterine type II/III submucosal or intramural cavity-distorting myomas**
- RFA procedure
  - **VIVA RF System (STARMED)** with star RF fixed electrode (17G, 35 cm long, 1 cm sharp tip)
  - **Moving shot technique** with transvaginal real-time US guidance

Results

Reduction of the Volume of Myoma After 1, 3, 6, and 12 Months of Transvaginal RFA

Before/After RFA months	Myoma volume, cm^3			P
	Mean (SD)	95% confidence interval	Crude difference mean(SD)	
Baseline (Pretreatment)	122.4 (182.5)	82.1-162.8		
After RFA				
1	85.2 (147.9)	52.5-117.9	-37.2 (77.9)	<.0001
3	67.3 (138.0)	36.3-98.2	-55.1 (83.1)	<.0001
6	59.3 (135.3)	20.9-89.6	-63.1 (89.1)	<.0001
12	49.6 (121.4)	18.5-77.1	-72.8 (93.2)	
1 versus 12			-17.9 (27.2)	.0001

Conclusion

Transvaginal ultrasound-guided radiofrequency myolysis (TRFAM) is **a safe, fast, minimally invasive, and effective technique** to treat metrorrhagia and reduce myoma volume

Highlight

- **Transvaginal ultrasound-guided radiofrequency myolysis (TRFAM)** is short, incisionless, and performed under sedation on an outpatient basis
- **No intraoperative complications**
- The mean volume reduction of myomas was **51.55% at 6 months and 60% at 12 months**
- **Optimal** patients are those with a myoma volume **<39 cm^3**

Transvaginal Radiofrequency Ablation: a Therapeutic Option for Managing Symptomatic Uterine Fibroids in Women with Reproductive Desires

Eugenia Marín Martínez, MD, Sara Cruz-Melguizo, MD, Gema Vaquero Argüello, MD, Virginia Engels Calvo, MD, Luisa De la Cruz Conty, MD, Tirso Pérez Medina, MD

Fertil Steril. 2024 Jul;122(1):20-30. Epub 2024 May 8.

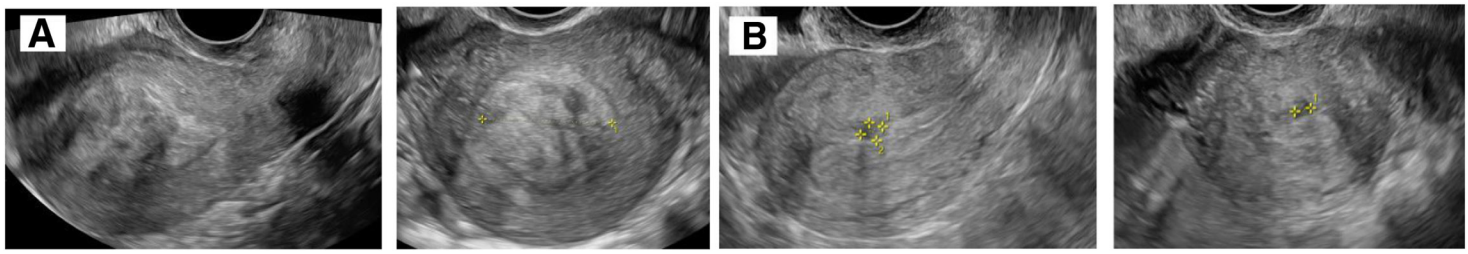
Objectives

To evaluate whether transvaginal radiofrequency (RF) ablation of fibroids is a technique that can be offered to women with reproductive desires

Methods

- 27 of the 78 women who underwent RF treatment for symptomatic fibroids between July 2018 and September 2021 wanted to become mothers and were included in the study
- Patients' symptoms were recorded using the Symptom Severity Scale (SSS), and a full gynecological exam, including 2D Doppler ultrasound, was performed
- Fibroids were classified according to the International Federation of Gynecology and Obstetrics (FIGO) and their vascularization was assessed via the Morphological Uterus Sonographic Assessment (MUSA)
- The inclusion criteria were adult women with FIGO types 3, 4, 5, and 6 fibroids (maximum volume of 145 cm^3) or complex FIGO types 0, 1, 2 fibroids based on hysteroscopy
- Women with pelvic inflammatory disease (<3 months), current pregnancy, abnormal endometrial biopsy, FIGO type 7 fibroids, or suspicious uterine tumor lesions were excluded

Figure 1



(A) Fibroid types 2–4 before radiofrequency ablation. **(B)** Fibroid type 1 at 6 months after radiofrequency ablation.
Marín Martínez. Transvaginal radiofrequency and pregnancy. F S Rep 2024.

Conclusion

Transvaginal RF ablation of uterine fibroids is a promising, low-risk procedure that effectively reduces fibroid volume and associated symptoms, without interfering with the ability to conceive or maintain a full-term pregnancy.

This method appears to offer an important alternative to more invasive treatments, such as myomectomy or hysterectomy, especially for women who wish to preserve their fertility. Larger studies are needed to confirm these findings, but the results from this study indicate that RF ablation is a safe, efficient, and minimally disruptive option for managing fibroids in reproductive-aged women.

Highlight

- A total of 27 women underwent transvaginal RF ablation for symptomatic fibroids
- Significant symptom reduction was noted six months post-treatment, with a mean 62.17% decrease in fibroid size
- Among patients attempting pregnancy, 73.68% successfully achieved motherhood
- There were no significant complications, including uterine rupture, premature births, or intrauterine fetal deaths
- Patients resumed normal activities within three days, and the procedure was done on an outpatient basis

Complications of transvaginal radiofrequency ablation of fibroids: A 5-year experience

Angel Santalla-Hernández, MD , Mariña Naveiro-Fuentes, MD, Rebeca Benito-Villena, MD, Jesus Villegas-Alcazar, MD, María Setefilla López-Criado, MD, Ana Lara-Serrano, MD, Jorge Fernández Parra, MD, Juan Luis Alcázar, MD, Irene Pelayo-Delgado, MD

Eur J Obstet Gynecol Reprod Biol X . 2023 Oct 10:20:100244.

Objectives

To describe the complications recorded after 115 cases of transvaginal radiofrequency ablation (TRFA) of fibroids over a 5-year period at Hospital Universitario Virgen de las Nieves in Granada, Spain

Methods

- Retrospective, descriptive, epidemiological study of 115 patients who underwent TRFA between June 2018 and March 2022
- Utilized the VIVA RF System with a 17G RF coagulation needle electrode TRFA was performed under general or epidural anesthesia
- Included patient age, main symptoms, fibroid characteristics (volume, FIGO type), and complications classified according to the Clavien-Dindo scale. Follow-up was conducted at 2, 6, and 12 months post-procedure

Table 2
General characteristics of myomas and complications in patients who underwent transvaginal radiofrequency ablation

Case	Type of myoma (FIGO)	Previous volume (cc)	Volume at 6 months (cc)	Clavien-Dindo	Type of complication	Time to onset	Treatment
1	4	172	84	**I**	Fever	2 days	Antipyretics
2	0	33	0	**I**	Discharge of debris	7 days	None
3	2	26	14	**I**	Diarrhea	2 days	Diet
4	2	20	24	**IIIb**	Intestinal perforation	3 days	Surgery. Intestinal resection
5	3	15	3	**I**	Dural puncture (wet tap)	Immediate	Analgesics and corticosteroids
6	2	94	19	**I**	Low back pain	Immediate	Analgesics
7	2	72	1,6	**I**	Discharge of debris	25 days	None
8	3	73	0	**II**	Urinary tract infection + fever	7 days	Antibiotics and antipyretics
9	2	136	167	**I**	Low back pain	Immediate	Analgesics
10	3	37	0	**I**	Low back pain	Immediate	Analgesics
11	4	73	41	**IIIb**	Hemoperitoneum	Immediate	Laparoscopic surgery

Conclusion

- TRFA is an effective treatment option for fibroids with relatively few associated complications, most of which are mild
- The study suggests the need for prospective studies involving larger patient groups and various surgeons to confirm these findings and ensure the technique's safety

Highlight

- TRFA offers a minimally invasive option for treating fibroids, particularly for patients seeking to avoid conventional surgery
- A total of 11 complications were recorded out of 115 procedures (9.6%), with most classified as mild (Clavien-Dindo type I)
- Key to avoiding significant complications includes ensuring a clear ultrasound image, maintaining safety margins, and providing appropriate anesthesia to prevent patient movement during the procedure

Uterine Myoma Position-based Radiofrequency Ablation (UMP-b RFA): 36 months follow-up clinical outcomes[1]

Alessandro Fasciani ,MD, Giovanni Turtulici, MD, Alessio Pedullà, MD, Rodolfo Sirito, MD

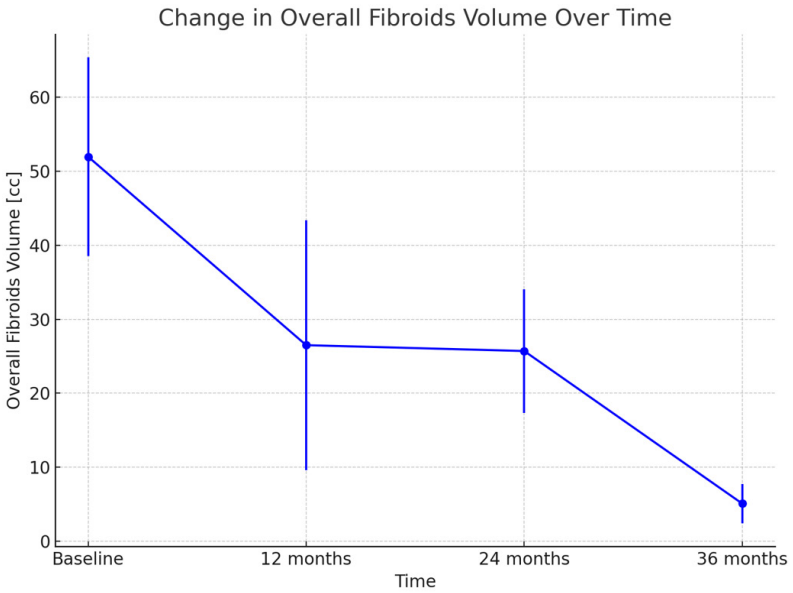
Eur J Obstet Gynecol Reprod Biol. 2023 Feb:281:23-28. Epub 2022 Dec 6.

Objectives

The study aims to assess the efficacy of Uterine Myoma Position-based Radiofrequency Ablation (UMP-b RFA) at 36 months by analyzing a new uterine fibroid ablation technique that provides personalized radiofrequency energy delivery based on myoma localization

Methods

- A prospective observational cohort study was conducted in a community-based secondary care medical center
- Included 61 premenopausal women with 112 symptomatic uterine myomas
- Ablation method:
  Vaginal ultrasound – guided RFA, Laparoscopic RFA, Hysteroscopic RFA, combined VU+ H RFA and VU + L RFA
- Outcomes evaluated at 12, 24, and 36 months post-procedure:
  myoma size, symptomatology, quality of life (UFS-QOL questionnaire), satisfaction with surgery, reintervention, and complication rates



Conclusion

- UMP-b RFA is a safe, effective, and minimally invasive solution for treating symptomatic fibroids
- Successfully avoided hysterectomy or myomectomy in over 80% of women with myomas averaging less than 5 cm in diameter

Highlight

- Personalized, position-based radiofrequency ablation for uterine myomas
- High rates of symptom reduction and patient satisfaction
- Minimally invasive approach with minimal complications and quick recovery

Outcomes of transvaginal radiofrequency ablation for symptomatic leiomyomas

Daniela Escalante Ariza, MD, Isabel Rodríguez García, MD, José Alejandro Ávila Cabreja, MD, Esther Hidalgo Carmona, MD

J Gynecol Obstet Hum Reprod. 2024 Jun 6;53(8):102812.

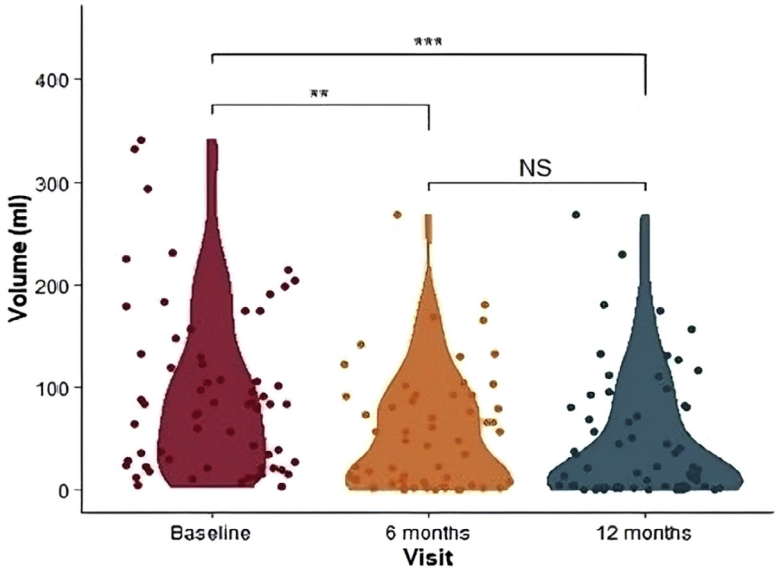
Objectives

The effect of **transvaginal radiofrequency ablation (RFA) for leiomyomas in symptomatic patients and to evaluate post-procedure follow-up** outcomes

Methods

- 63 patients who underwent transvaginal RFA between January 2016 and December 2022
- Symptomatic leiomyomas, particularly those who could not undergo hysteroscopic myomectomy or preferred a fertility-preserving option
- Data collected included patient age, parity, leiomyoma location, and volume assessed by transvaginal ultrasound before the procedure as well as at 6 months, and 12 months post-treatment

Fig. 1. Differences between leiomyoma volumes at each medical visit.



Conclusion

- The study concludes that transvaginal RFA is a well-tolerated and effective minimally invasive treatment for leiomyomas
- Particularly for women who wish to preserve fertility
- Factors such as smaller initial leiomyoma volume and age over 40 were associated with better treatment outcomes

Highlight

- The study found that the mean leiomyoma volume significantly decreased from **83.3 cm^3 at baseline to 42.4 cm^3 at 6 months and 19.2 cm^3 at 12 months post-procedure.**
- Symptom improvement was reported by **74.1% of women at 6 months and by a higher percentage at 12 months, with the mean volume reduction rate reaching 79.5%**
- 8 **pregnancies were reported post-procedure,** with successful outcomes in most cases

Combined Treatment of Uterine Leiomyoma and Ovarian Endometrioma: Transvaginal Ultrasound-Guided Radiofrequency Ablations in Five Steps

Alessandro Fasciani, MD

Videoscopy, volume 33, issue 1

Objectives

To demonstrate the possibility and effectiveness of using transvaginal ultrasound-guided radiofrequency (RF) ablation for the combined treatment of uterine fibroid and ovarian endometrioma in a single minimally invasive intervention

Methods

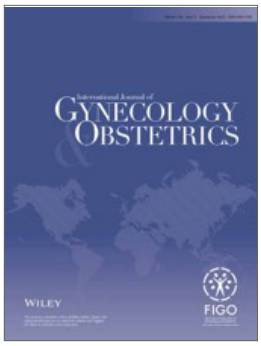
- A 42-year-old woman with menorrhagia and pelvic pain due to a 3 cm posterior uterine fibroid and a 3 cm right ovarian endometriotic cyst was treated
- The procedure involved transvaginal RF ablation of the uterine myoma and ovarian endometrioma
- The surgical steps included:
  1. Myoma biopsy (histology)
  2. Myoma RF ablation
  3. Cyst aspiration (cytology)
  4. Washing of the cyst
  5. RF ablation of the cystic walls

Conclusion

- This is the first documented case of a combined and simultaneous treatment of a uterine fibroid and an endometriotic ovarian cyst using transvaginal ultrasound-guided RF ablations

Highlight

- Combined treatment of both uterine leiomyoma and ovarian endometrioma in a single session.
- Minimally invasive procedure with a significant reduction in fibroid size and no recurrence of the cyst.
- Positive patient outcomes and high satisfaction with the procedure.



Obstetric Outcome after Ultrasound Guided Transvaginal Radiofrequency Ablation of Uterine Myomas

Santalla-Hernández Angel, MD, Manzanares Sebastián, MD, Naveiro-Fuentes Mariña, MD, López-Criado María Setefilla, MD, Fernández-Parra Jorge, MD

Obstet Gynecol Int J. 2023;14(6):160-164.

Objectives

The purpose of this study is to report the obstetric outcomes of eight pregnancies that occurred after women with uterine fibroids conceived following transvaginal radiofrequency ablation (RFA)

Methods

- Between July 2018 and June 2022, 115 premenopausal women were treated
- The patients were premenopausal women with symptomatic uterine fibroids that did not respond to medical treatments or were not suitable for other surgical options
- The fibroids were classified as types 0 to 4 according to the FIGO (International Federation of Gynecology and Obstetrics) classification.
- The treatment was conducted using transvaginal ultrasound-guided radiofrequency ablation (RFA) A bipolar RF generator and an internally cooled electrode were utilized for fibroid reduction
- Data collected included information on pregnancies, conception methods (e.g., natural or assisted), and various obstetric outcomes
- Collected data were systematically analyzed to assess the efficacy of the RFA treatment and it's impact on reproductive and obstetric outcomes.

Table 1 Obstetric outcomes after transvaginal radiofrequency ablation

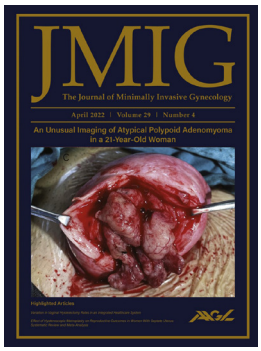
Case	1	2	3	4	5	6	7	8
Age (y)	38	35	35	39	43	33	35	35
Parity	0	0	0	0	0	0	0	0
Main symptom	Infertility	Infertility	Infertility Dysmenorrhea	Infertility	Infertility Heavy menstrual bleeding	Heavy menstrual bleeding	Infertility	Infertility Heavy menstrual bleeding
FIGO Type	2	4-Feb	3	3	3	4-Feb	2	4
Initial size (cm3)	16.7	22.2	169	17.5	49	29.3	48.9	46.1
Size at conception (cm3)	0	1.63	105	14.3	59.8	10	24.2	27.5
Reduction rate	100%	92,2%	38%	19%	-22%	65.50%	51.40%	40.40%
Time ablation to conception (months)	36	17	17	7	22	8	14	4

Conclusion

This study suggests that minimally invasive transvaginal RFA is effective in reducing fibroid size and does not appear to carry significant obstetric risks. Although the number of pregnancies reported is limited, the data indicate that conception and full-term pregnancy are achievable, with no specific complications associated with the procedure

Highlight

- 115 women with symptomatic fibroids were treated with transvaginal RFA between 2018 and 2022.
- Eight pregnancies occurred after the procedure, six resulting in live births.
- The cesarean section rate was high, with two-thirds of the live births delivered by C-section.
- There were no obstetric complications directly linked to the RFA procedure, and all newborns showed normal development.
- Fibroid volume reduction averaged 43%, with 50% of the patients experiencing more than 50% reduction.



Efficacy, Complications, and Factors Predictive of Response to Treatment with Transvaginal Radiofrequency Ablation for Symptomatic Uterine Myomas

Ángel Santalla-Hernández, MD, Mariña Naveiro-Fuentes, MD, Rebeca Benito-Villena, MD, María Setefilla López-Criado, MD, Aida González-Paredes, MD, Jorge Fernández-Parra, MD

J Minim Invasive Gynecol. 2022 Jun;29(6):743-752.

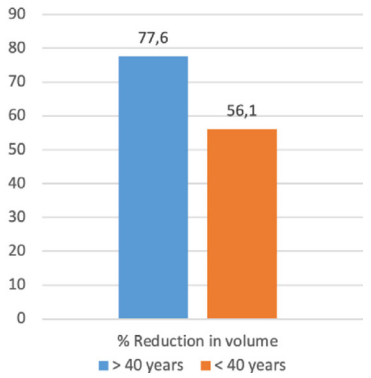
Objectives

To evaluate the efficacy of **transvaginal radiofrequency ablation** in reducing symptoms and decreasing myoma volume and to identify prognostic factors that may predict the response to treatment

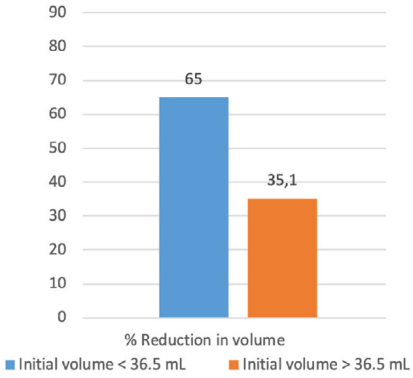
Methods

- Prospective case series for 59 patients with myomas
- Transvaginal RFA procedure
  - **VIVA RF System (STARMED)** with star RF fixed electrode (17G, 35 cm long, 1 cm active tip)

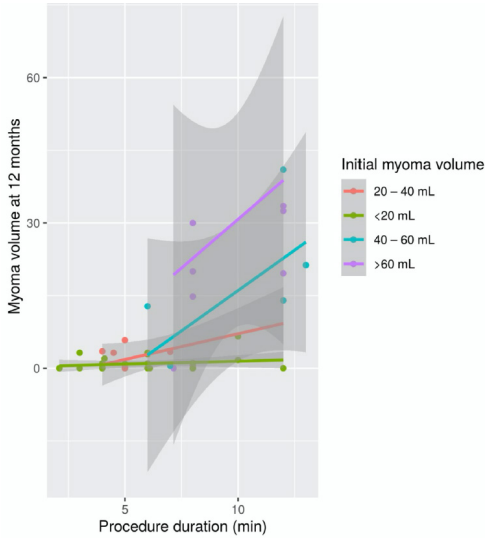
Results



(A)



(B)



(C)

(A) Patients older than 40 years showed **a larger mean reduction in myoma** volume **(77.6%)** than younger patients (56.1%)

(B) Patients with **a smaller initial myoma volume (<36.5 mL)** showed **a larger mean reduction** in volume at 12 months follow-up **(65%)** compared to those with a larger initial myoma volume **(35.1%)**

(C) Procedure duration had no apparent influence on final myoma volume in initially small myomas (<20 mL) For **larger myomas,** the relationship between treatment duration and final myoma volume was inverse, given that the final volume was larger in myomas that required longer procedures

Conclusion

Radiofrequency ablation is an effective, safe, and well-tolerated technique. **Patient's age (older than 40 years) and smaller initial volume** of the myoma may behave as factors predictive of a positive outcome

Highlight

- **At 12 months,** the mean reduction in myoma volume was more than **80%**
- Among the patients, there have been **3 pregnancies** to date, 2 of which were spontaneous and 1 of which occurred after assisted reproductive techniques

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A Prospective Intervention Trial on Tailored Radiofrequency Ablation of Uterine Myomas[2]

Alessandro Fasciani, MD, Giovanni Turtulici, MD, Giacomo Siri, MD, Simone Ferrero, MD, Rodolfo Sirito, MD

Medicina (Kaunas) 2020 Mar 12;56(3):122.

Objectives

To investigate the use of **radiofrequency myolysis (RFM)** for the treatment of fibroids through less invasive access by combining transvaginal ultrasound, hysteroscopy and laparoscopy

Methods

- **Prospective** observational study in single-center, self-controlled study
- **54 premenopausal patients** with **106 fibroids** (diameters ranging 1.2 - 7.7 cm)
- RFA procedure
  - **VIVA RF System (STARMED)** with VIVA RF electrode (17G, 35 cm long, 10 mm or a variable exposed tip)
  - RFM was performed in three ways: Vaginal Ultrasound-guided RFM**(VU-RFM)**, Laparoscopic RFM**(L-RFM)** and Hysteroscopic-RFM**(H-RFM)**

Results

Improvement in outcomes through follow-up

	Mean at Baseline (95%CI)	Precentage Variation (95%CI) at 1 Month	Precentage Variation (95%CI) at 12 Months	*P* Value
Fibroid volume (cm^3)	35.4 (22.0-48.8)	-51.3% (37.3-62.2)	-70.7% (59.9-78.9)	<0.001
Fibroid diameter (cm)	3.44 (3.0-3.9)	-20.1% (12.5-27.1)	-37.1% (29.5-43.8)	<0.001
VAS	4.4 (3.1-5.7)	-45.3% (26.0-59.5)	-74.3% (63.1-82.1)	<0.001
UFS-QOL Symtom Severity Score	38.9 (27.3-50.5)	-84.9% (76.2-90.4)	-74.3% (27.3-50.5)	<0.001
UFS-QOL total score	67.2 (57.7-76.8)	+38.2% (19.9-59.2)	+44.9% (17.1-79.3)	<0.001

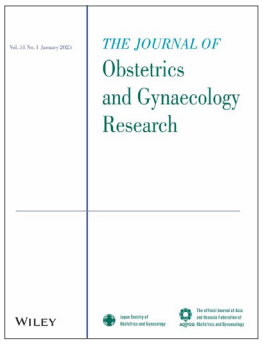
Effects of time have been adjusted for age and number of total fibroids for patient.

Conclusion

Radiofrequency can be considered **a minimally invasive and safe method for the treatment of uterine myomas** through the customization and possible combination of **transvaginal, laparoscopic or hysteroscopic accesses** ensuring less pain, fewer complications and earlier recovery

Highlight

- **Reduction of volume and diameter** of fibroids in post-RFM
  - 1 Month: 51.3% and 20.1%
  - 12 Months: 73.5% and 37.1%
- At 12 months after RFM, **all parameters for symptoms were significantly improved** over baseline scores (UFS-QOL symptom severity Score, VAS score, UFS-QOL total score)



Clinical Outcomes after 2-Year Follow-Up of Transvaginal Radiofrequency Ablation of Symptomatic Uterine Fibroids

Ángel Santalla-Hernández, MD, Mariña Naveiro-Fuentes, MD, María Setefilla López-Criado,MD, Roi Naveiro-Flores, MD, Jorge Fernández-Parra, MD

J Obstet Gynaecol Res. 2025 Jan;51(1):e16216.

Objectives

The aim of this study was to evaluate **the efficacy after 2 years follow-up** of transvaginal radiofrequency ablation (TVRA) to treat myomas, and to **identify factors predictive of the response to the treatment**

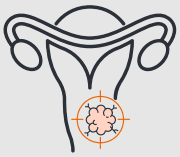
Methods

This is a prospective cohort study of a **2-year follow-up of 65 patients who underwent TVRA** for the treatment uterine fibroids at Virgen de las Nieves University Hospital in Granada, Spain. Ultrasound mean fibroid volume, symptom severity scale, total bleeding days, complications, pregnancy outcomes were recorded.

Statistically **Significant Improvements in Symptoms and Bleeding** were Observed at 6, 12, and 24 Months after the Procedure.

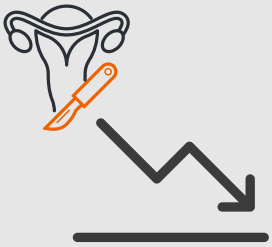
Predictive Factors for Outcomes

Age (>40 years)

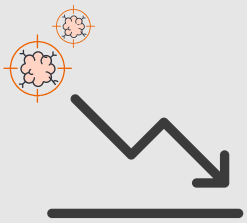


Initial Fibroid Size

Timing of RFA



Low Surgical Intervention Rate
(7.7% of patients after 24 months)



Substantial Fibroid **Volume Reduction**
(> 80% at 12 months)

Conclusion & Highlight

- Transvaginal radiofrequency ablation is an effective and safe technique for the treatment of myomas after 2 years of follow-up, which improves the symptoms of the patients and decreases the final volume of the myoma.
- Transvaginal radiofrequency ablation provides a direct pathway from the vaginal fornix to the fibroid, enabling the treatment of any fibroid, irrespective of its position or its distance from the uterine cavity, with ease.
- In the ablation method used in the transvaginal approach (that is called "Moving Shot Technique"), Multiple 1cm diameter ablation shots are performed by moving the needle within the fibroid.

Pregnancy Outcomes After Transvaginal Radiofrequency Ablation of Leiomyomas

Victoria E. Rey, MD, Maria M. Falcon, MD, Ida Ferrara, MD, and Gabriel Yanes, MD

Obstet Gynecol. 2025 Mar 1;145(3):346-353.

Objectives

To evaluate **pregnancy outcomes** after transvaginal radiofrequency ablation of leiomyomas.

Methods

We conducted a retrospective review of the medical records of **226 pregnant patients after transvaginal radiofrequency ablation of leiomyomas** from January 1, 2017, to February 28, 2022.

Results

65.5%
Achieved Pregnancy through Assisted Reproductive Technologies (ART)

26.4%
Cesarean Delivery Rate

34.5%
Spontaneous Pregnancies

No Instance of Uterine Rupture, Placental Abruption, or Fetal Growth Restriction

Conclusion & Highlight

- Pregnancy outcomes after transvaginal radiofrequency ablation of leiomyomas were **similar to those of a general population with no instances of uterine rupture, placental abruption, or fetal growth restriction.**
- The study found that larger leiomyomas were associated with a longer time to pregnancy, and shorter intervals between RFA and pregnancy were linked to a higher miscarriage rate.

Technology Differentiation and Procedural Innovation

Overview

STARMED's TV-RFA portfolio delivers precision, safety, and versatility in fibroid treatment. Its fixed, bipolar, and adjustable electrodes support diverse anatomical needs, while the advanced RF generator enables predictable energy delivery, real-time monitoring, and efficient workflows. All components are single-use and compatible with varied clinical settings.

Key features and operational value of STARMED generator.

VIVA RF Generator

Feature

- Advanced ablation system with temperature and impedance control
- Designed for specific STARMED electrodes in multiple indications
- Intuitive user interface
- Audible alert tones for procedure ease and safety
- Automatic shut-off safety control
- Dedicated mode for Thyroid RFA
- Dedicated mode for Uterine Fibroid RFA
- Tract Ablation Mode to help prevent bleeding and seeding
- Real-time impedance feedback
- System self-test for patient safety

Clinical and operational value

- Customizable energy delivery modes for tailored procedures
- Improved safety with real-time alerts and auto shut-off
- Accurate intraoperative metrics for better decision-making
- Facilitates consistent outcomes and efficient workflows

Key features and clinical benefits of STARMED electrodes.

star RF Electrode-Fixed

Feature	Clinical and operational value
▪ Fixed-length active tip	▪ Enables precise, 360° RF energy delivery
▪ Dual insulation coating (Teflon, PET)	▪ Reliable percutaneous access
▪ Triangular sharp tip for low resistance insertion	▪ Minimizes carbonization and thermal spread
▪ Internal tip cooling to prevent charring	▪ Real-time temperature and impedance monitoring
▪ Cable clip and drape clamp for secure setup	▪ Customizable sizes for diverse clinical scenarios

star RF Electrode-Bipolar

Feature	Clinical and operational value
▪ Bipolar configuration (active & passive integrated)	▪ Safer for patients with contraindications to monopolar RF
▪ No grounding pad required	▪ Minimizes risk of skin burns and unintended current flow
▪ Internal tip cooling system	▪ Supports real-time monitoring and post-op hemostasis
▪ Triangular sharp tip for efficient insertion	▪ Ideal for anatomically sensitive applications
▪ Cable clip and drape clamp for procedure stability	

VIVA RF Electrode_V2

Feature	Clinical and operational value
▪ Adjustable tip exposure (6 levels: 5–30 mm)	▪ Treats tumors of various sizes with one electrode
▪ High-performance PI insulation coating	▪ Reduces inventory and increases procedural efficiency
▪ Triangular-tip for enhanced percutaneous access	▪ Enhances ultrasound visibility and precision
▪ Internal cooling system	▪ Ensures safe and consistent ablation
▪ Optional X-ray markers	▪ Flexible gauge and length options
▪ Ergonomic design with cable clip and clamp	

STARMED

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