Embolização de Artérias Uterinas:

Indicações e Resultados

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-Todos os anos, cerca de 300 mil mulheres no Brasil perdem o útero.

-200 mil destas histerectomia se devem a miomas.

-20% das mulheres brasileiras não têm mais útero - tratamentos alternativos

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Epidemiologia

- Tumoração mais frequente nas mulheres na menacme (problema de saúde pública):
  - Ocorre em 70-80% das mulheres
  - 30% das mulheres com mioma são sintomáticas
- É a principal causa de histerectomia na menacme;

Am J Clin Pathol. 1990 Oct;94(4):435-8
Fertil Steril. 1981 Oct;36(4):433-45

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ACOG PRACTICE BULLETIN

CLINICAL MANAGEMENT GUIDELINES FOR OBSTETRICIAN–GYNECOLOGISTS

NUMBER 96, AUGUST 2008

Replaces Practice Bulletin Number 16, May 2000 and Committee Opinion Number 293, February 2004

Alternatives to Hysterectomy in the Management of Leiomyomas

Summary of recommendations

- Level A (good and consistent scientific evidence)
  - Abdominal myomectomy is safe and effective alternative to hysterectomy for the treatment of women with symptomatic leiomyomas
  - UAE is a safe and effective option for appropriately selected women who wich to retain their uteri
  - GnRH have been shown to improve hematologic parameters, shorten hospital stay, and decrease blood loss, operating time, and postoperative pain, when given 2 to 3 months pre-operatively. Benefits should be weighted against their cost and side efects.
  - Several studies suggest that the infiltration of vasopressin into the myometrium decrease blood loss at time of myomectomy.

ACOG, 2008

Implicação médico-legal

Histórico

- Jacques Merland em 1974 realizou a primeira embolização uterina em paciente com mioma associado e hemorragia grave, em paciente não candidata a cirurgia.

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Histórico

- Ravina 1995, descreveu o primeira série de embolização para tratamento do mioma uterino

1: Lancet. 1995 Sep 9;346(8976):671-2.

Arterial embolisation to treat uterine myomata.

Ravina JH, **Herbreteau D**, **Ciraru-Vigneron N**, **Bouret JM**, **Houdart E**, **Aymard A**, **Merland JJ**.

Service de Gynécologie Obstétrique, Hôpital Lariboisière, Université Paris VII, France.

Haemorrhage, probably related to hypervascularisation, is the commonest complication of uterine myomata and is difficult to treat. 16 patients, aged 34-48 years, with symptomatic uterine myomata, for which a major surgical procedure was planned after failure of medical treatment, were treated by selective free-flow arterial embolisation of the myomata with Ivalon particles. With a mean follow-up of 20 months (range 11-48) in the responders, symptoms resolved in 11 patients; menstrual cycles returned to normal in ten of these. Three patients had partial improvement. Two failures required surgery. In 14 cases embolisation caused pelvic pain, which required analgesia in all.

PMID: 7544859 [PubMed - indexed for MEDLINE]

Federação Brasileira das Associações
de Ginecologia e Obstetrícia

Manual de Orientação
Cirurgia Endovascular
em
Ginecologia e Obstetrícia

2011

ÍNDICE

Indicações

- <u>Pacientes com desejo reprodutivo</u>:
  - Múltiplos miomas no útero - alta morbidade para o tratamento cirúrgico convencional (miomectomia).
  - Recorrências de miomas já submetidas a miomectomia pelas aderências cirúrgicas prévias e por inacessibilidade cirúrgica ao mioma.
  - Miomas volumosos - adjuvante para diminuição do nódulo e melhora da condição cirúrgica posterior.

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Federação Brasileira das Associações de Ginecologia e Obstetrícia

Indicações

- <u>Pacientes com prole definida</u>:
  - Mulheres que por desejo próprio solicitam o tratamento dos sintomas relacionados ao mioma uterino, porém sem a retirada do útero. Sexualidade e condição feminina.
  - Pacientes com morbidade cirúrgica elevada como por exemplo, diabéticas descompensadas, hipertensas, cardiopatas, obesas mórbidas e até pacientes que por opção religiosa são contra a transfusão sanguínea podem se beneficiar de um tratamento menos agressivo.

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Contra-indicações

- Absolutas
  - Coagulopatias
  - Insuficiência renal
  - Reação ao contraste iodado
  - Miomas pediculados
  - Neoplasia maligna ginecológica, exceto se paliação
  - Radioterapia pélvica pregressa
  - MIPA
  - Gestação em curso

Tratamentos

- Clínico (GnRH, antagonistas da progesterona)
- Cirúrgico aberto ou laparoscópico
  - Histerectomia
  - Miomectomia
- Histeroscopia
- Procedimentos guiados por imagem
  - Ablação percutânea
  - Criomiólise
  - Ultrasson focado de alta densidade
- Embolização da artéria uterina

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Vantagens da EAU

- Procedimento minimamente invasivo
- Menor tempo de internação
- Retorno precoce ao trabalho
- Menos dor e desconforto
- Custo

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Indicações

- Mioma uterino sintomático como alternativa à histerectomia quando outras opções convencionais falham ou não são possíveis.
  - Recidiva após miomectomia
  - Desejo de engravidar
  - Desejo de manter o útero
  - Risco cirúrgico elevado
  - Aversão à cirurgia

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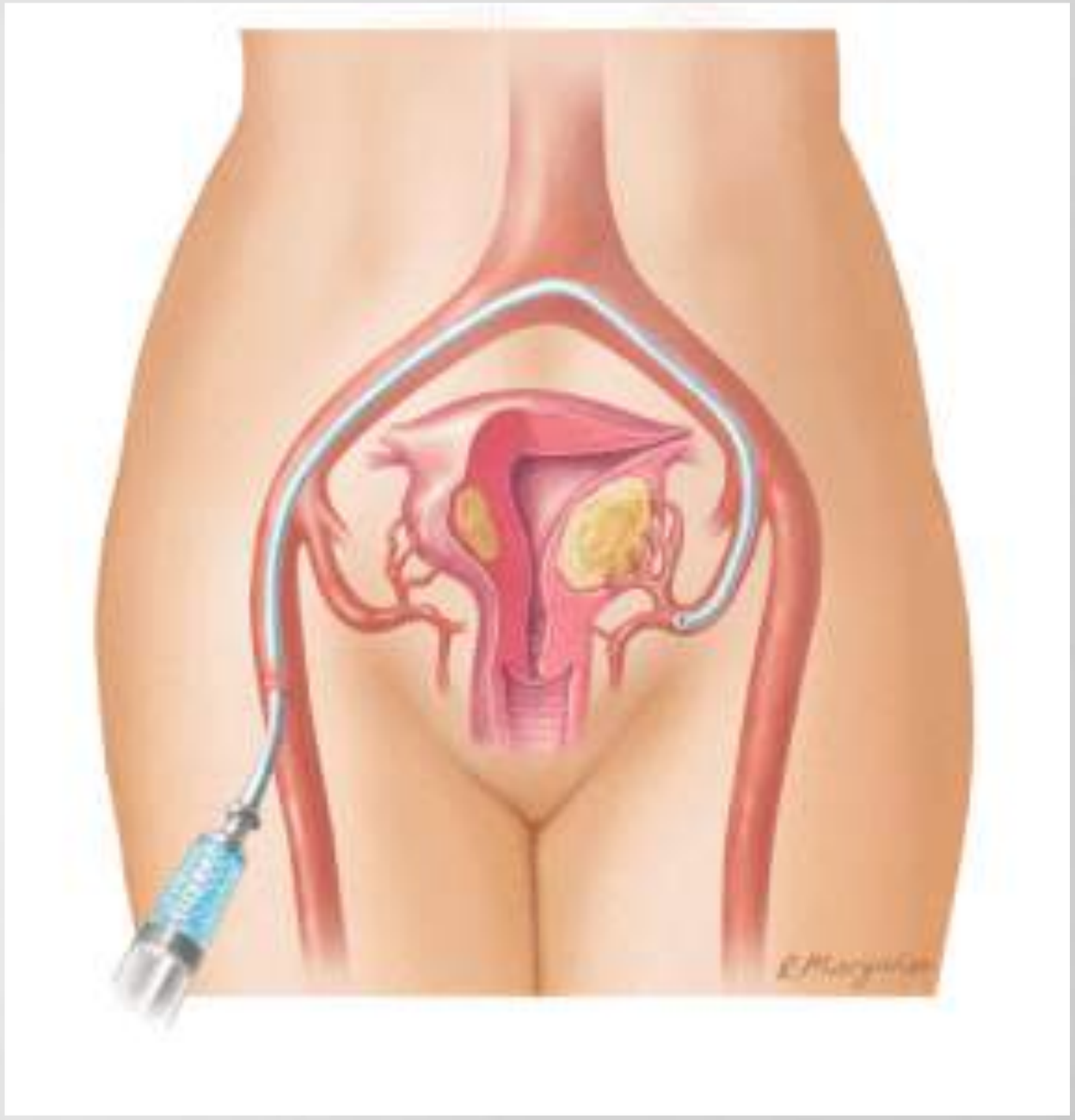
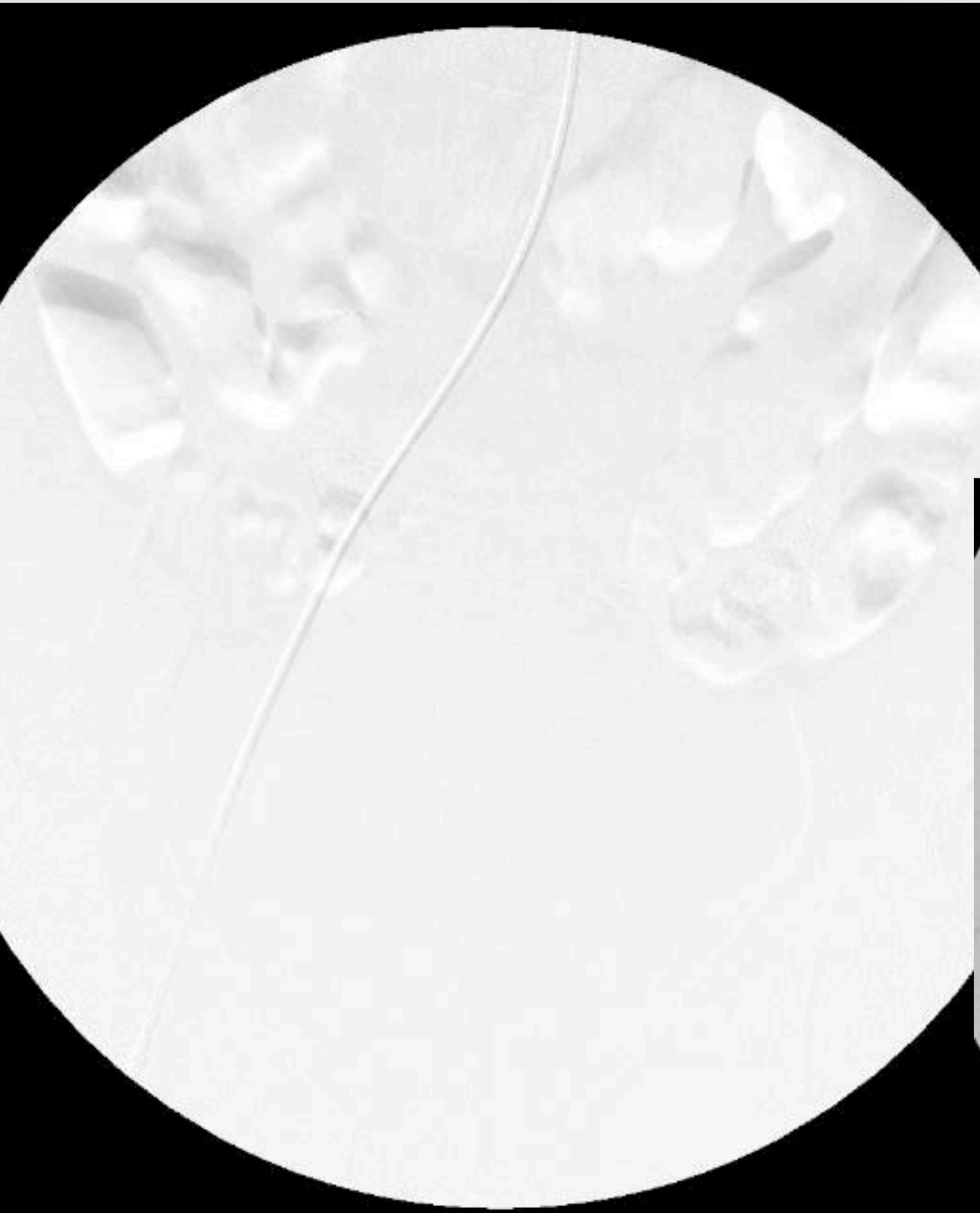
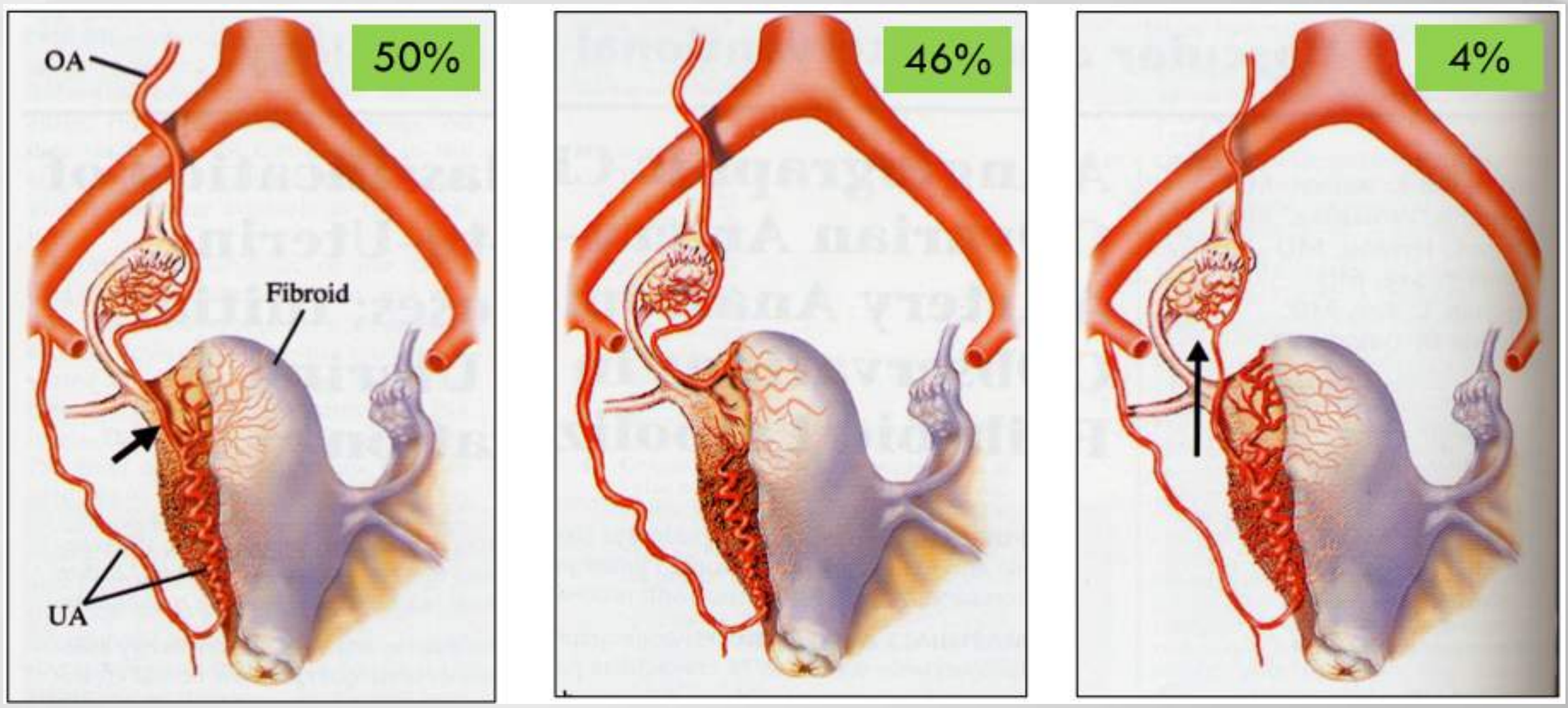
Técnica





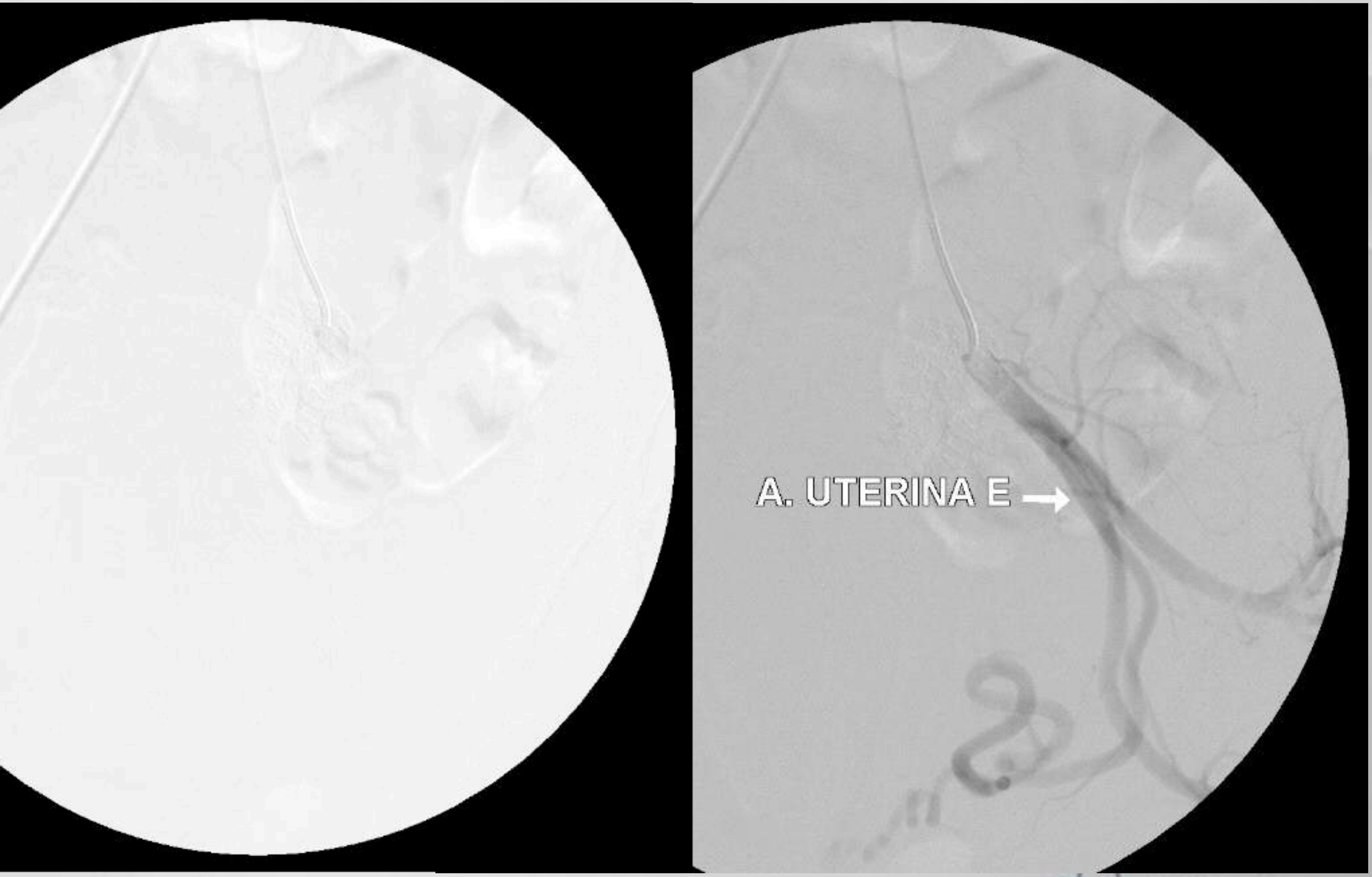

AORTOGRAFIA

Variações da artéria ovariano

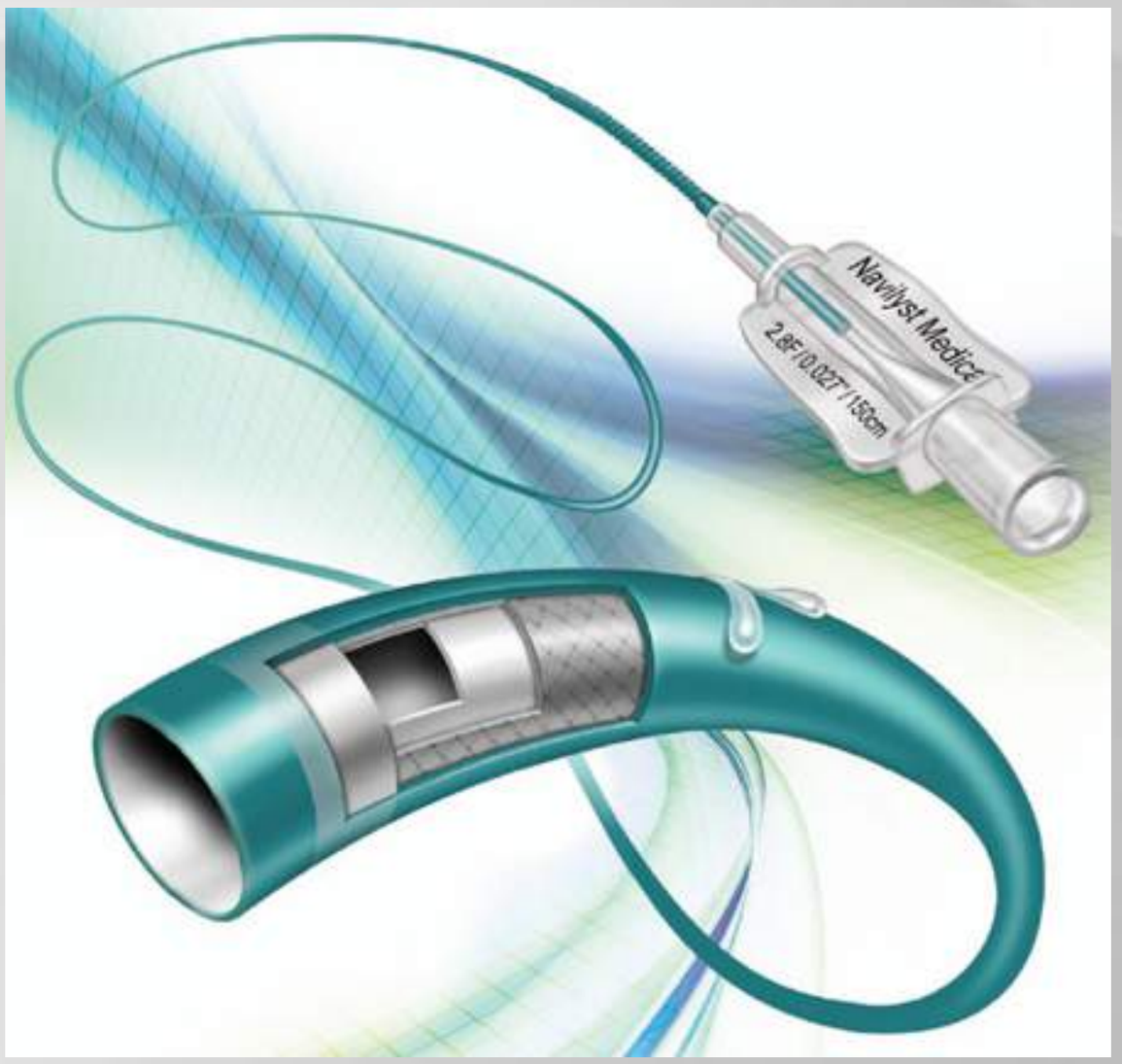


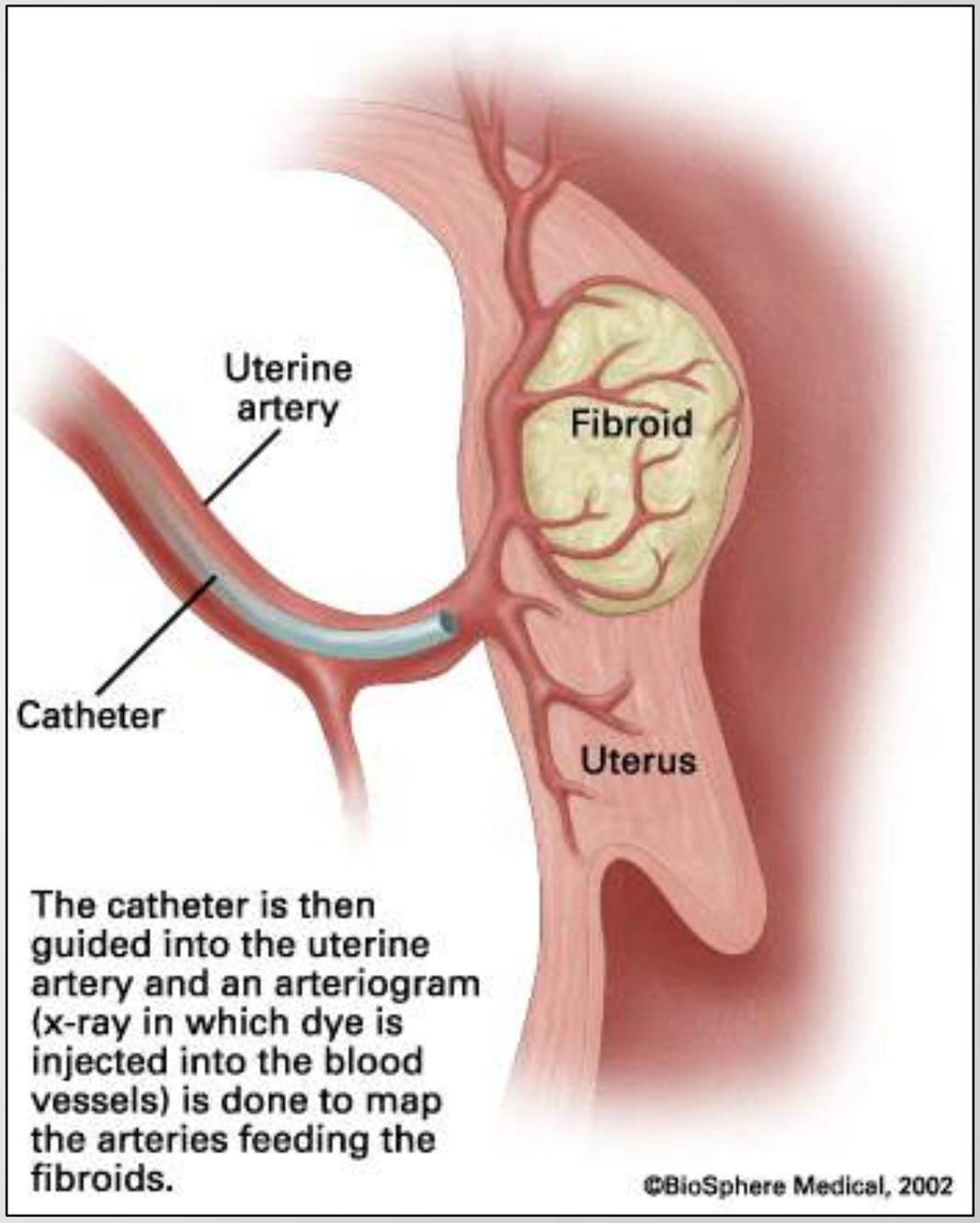
Tipo I - conexão através do ramo tubovariano com ou sem refluxo ao ovário
Tipo II - AO irriga diretamente o útero
Tipo III - o ovário é irrigado pela AU

Razavi MK, et al. Radiology 2002



Angiografia Inicial: Uterina Esquerda


Navilyst Medical
2.8F 10.027" 150cm



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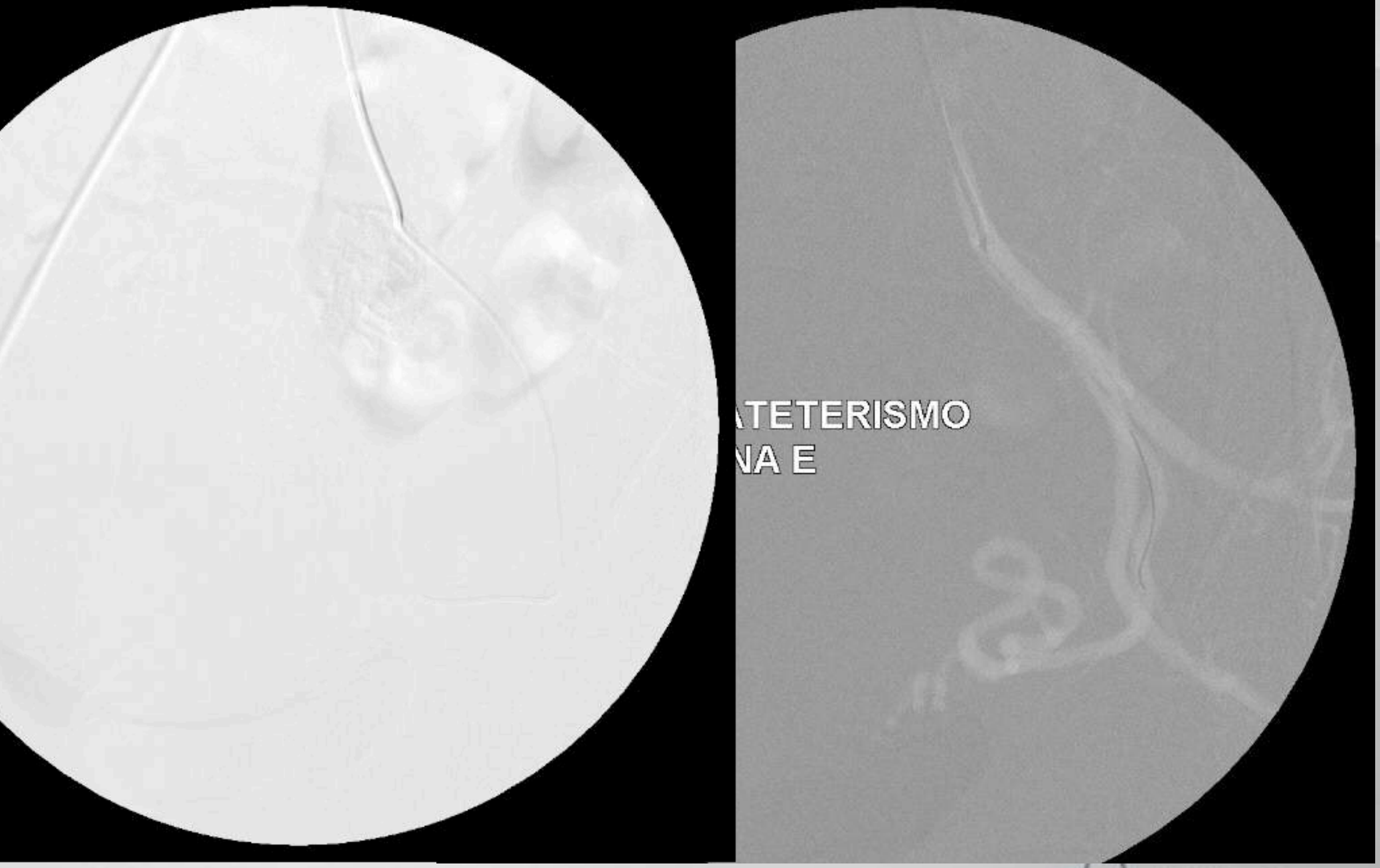
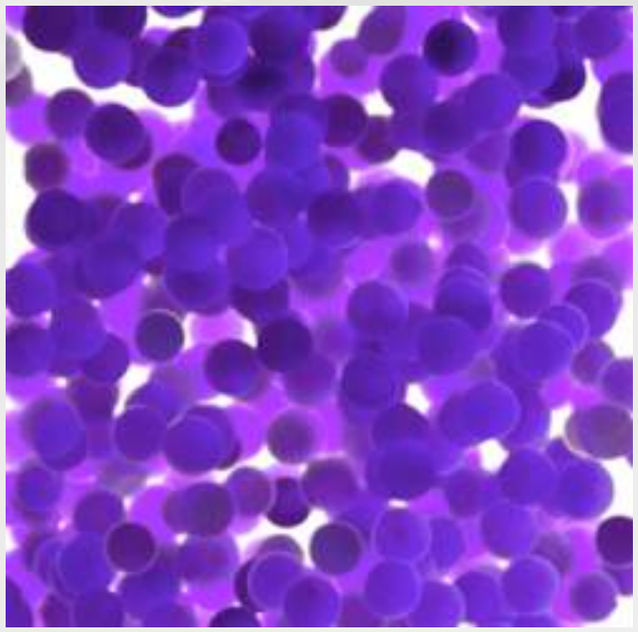
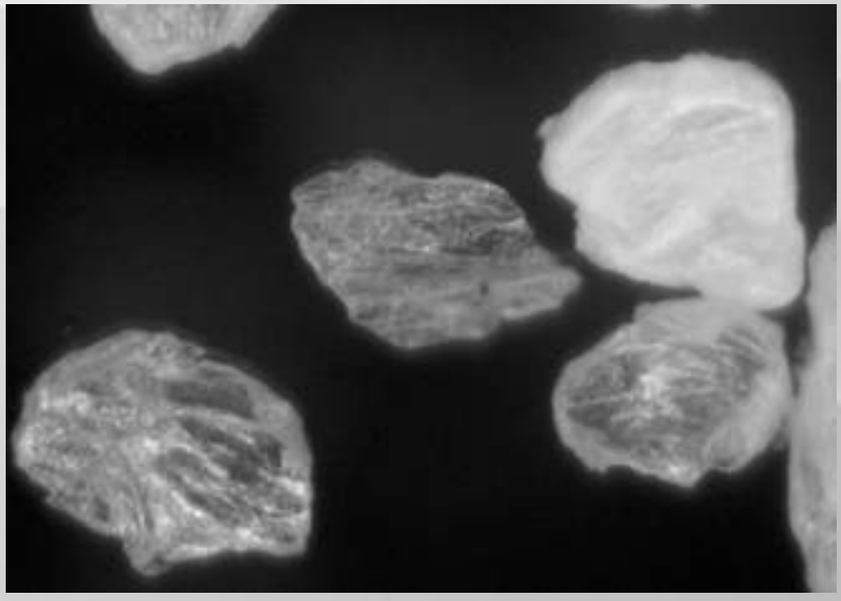
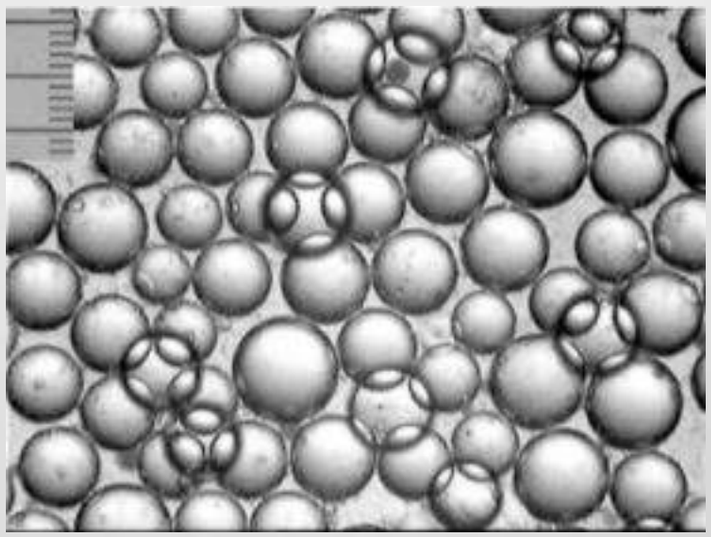


Microcateterismo: Uterina Esquerda

Partículas







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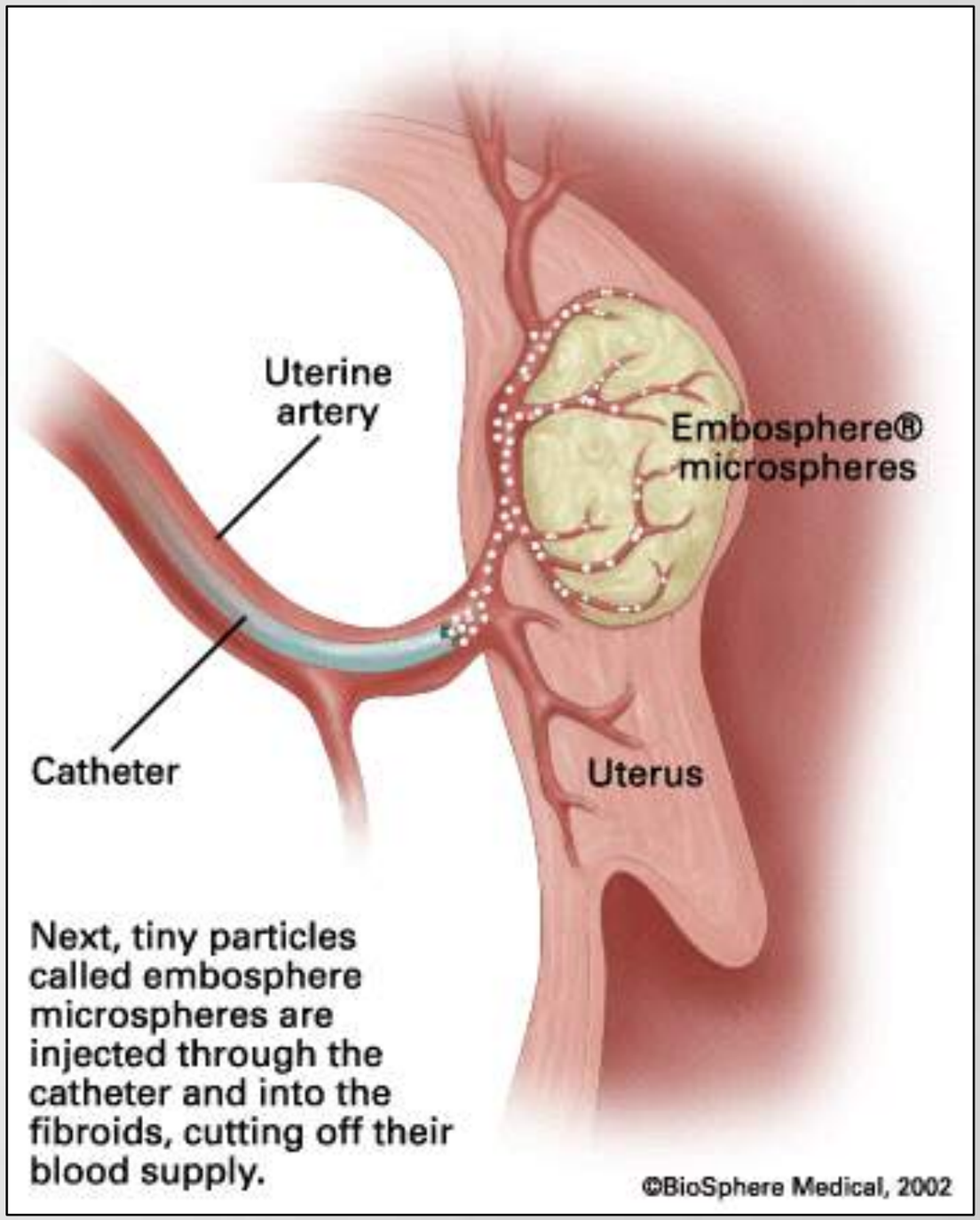
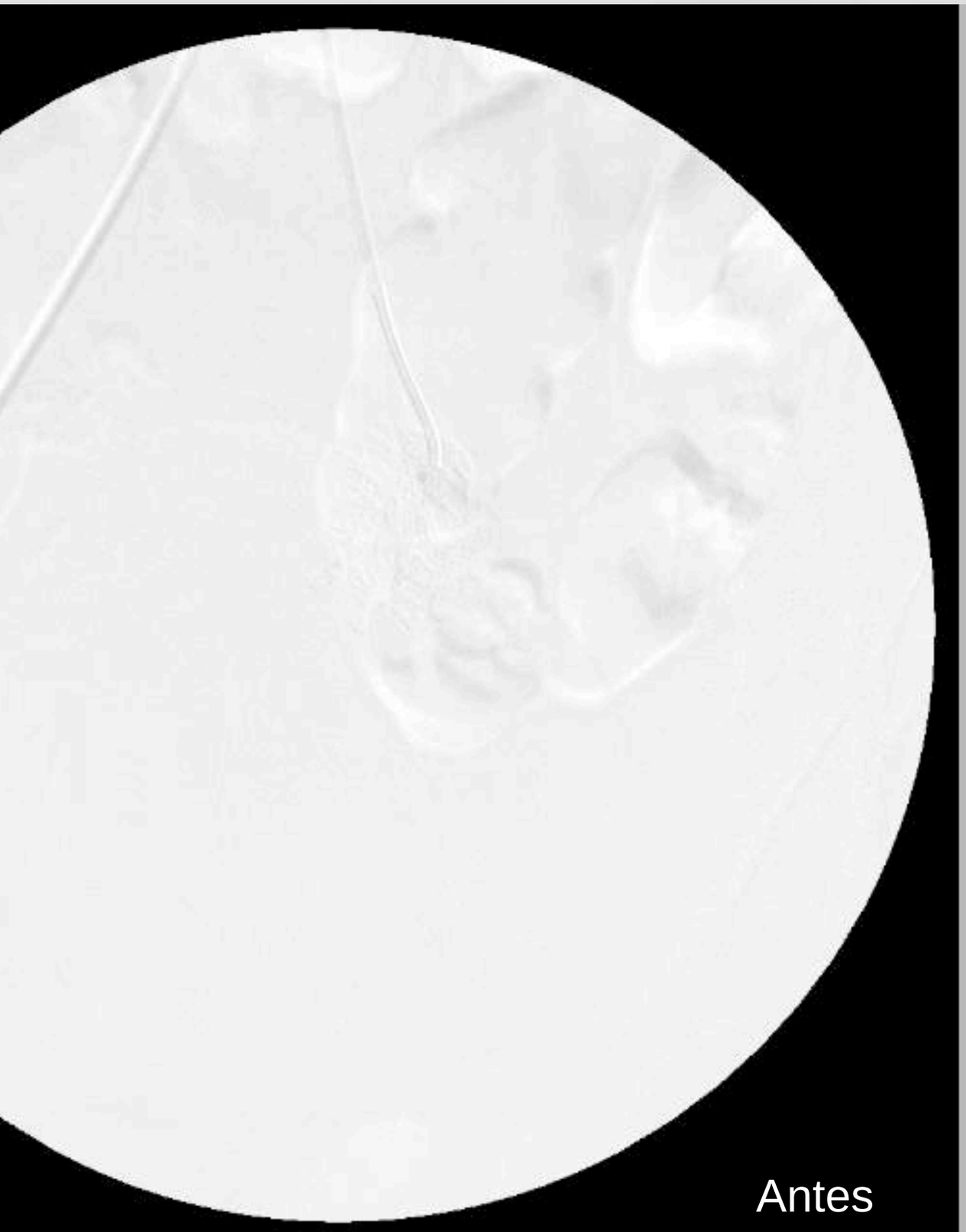
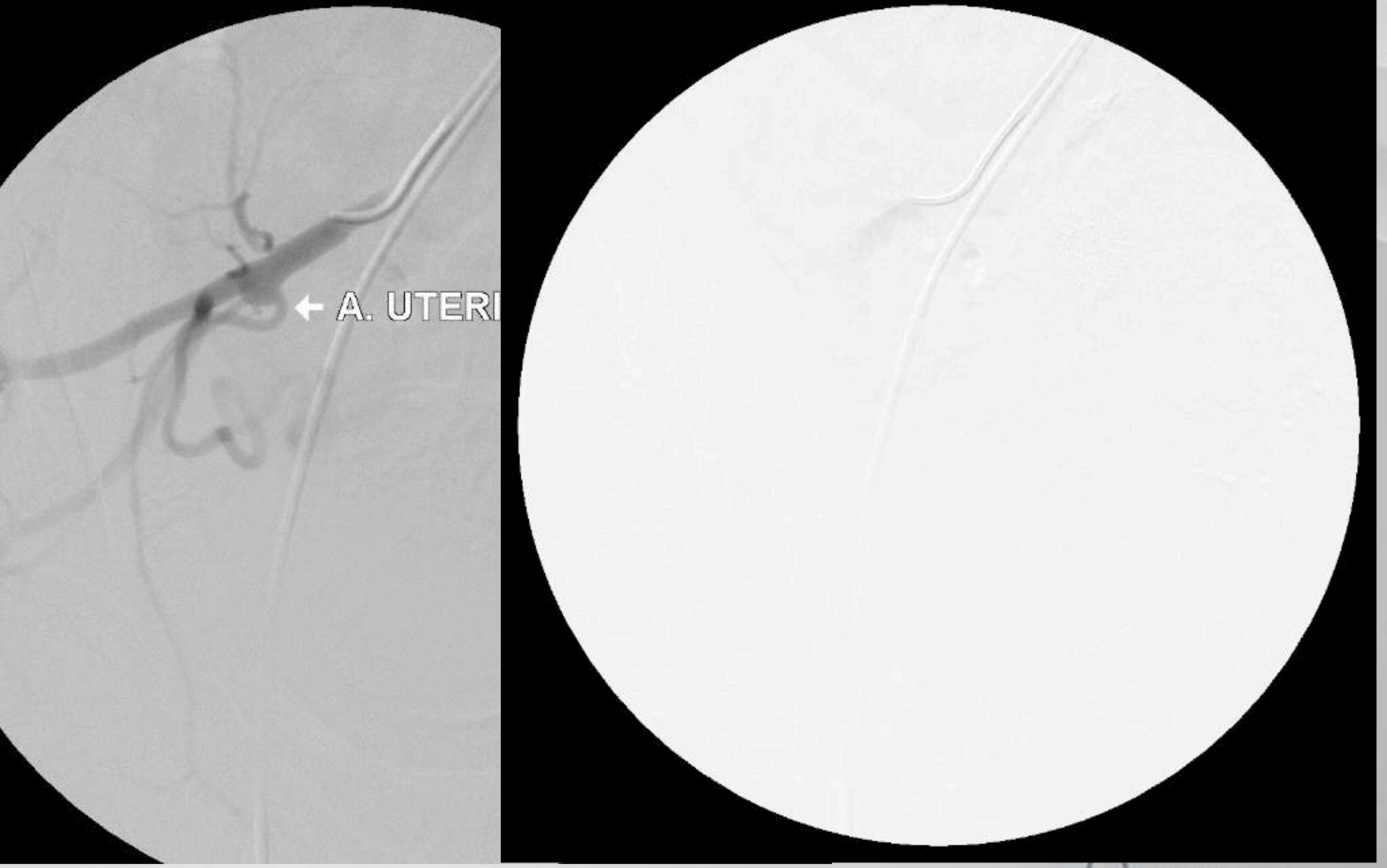

Uterine artery
Embosphere® microspheres
Catheter
Uterus
Next, tiny particles called embosphere microspheres are injected through the catheter and into the fibroids, cutting off their blood supply.
©BioSphere Medical, 2002



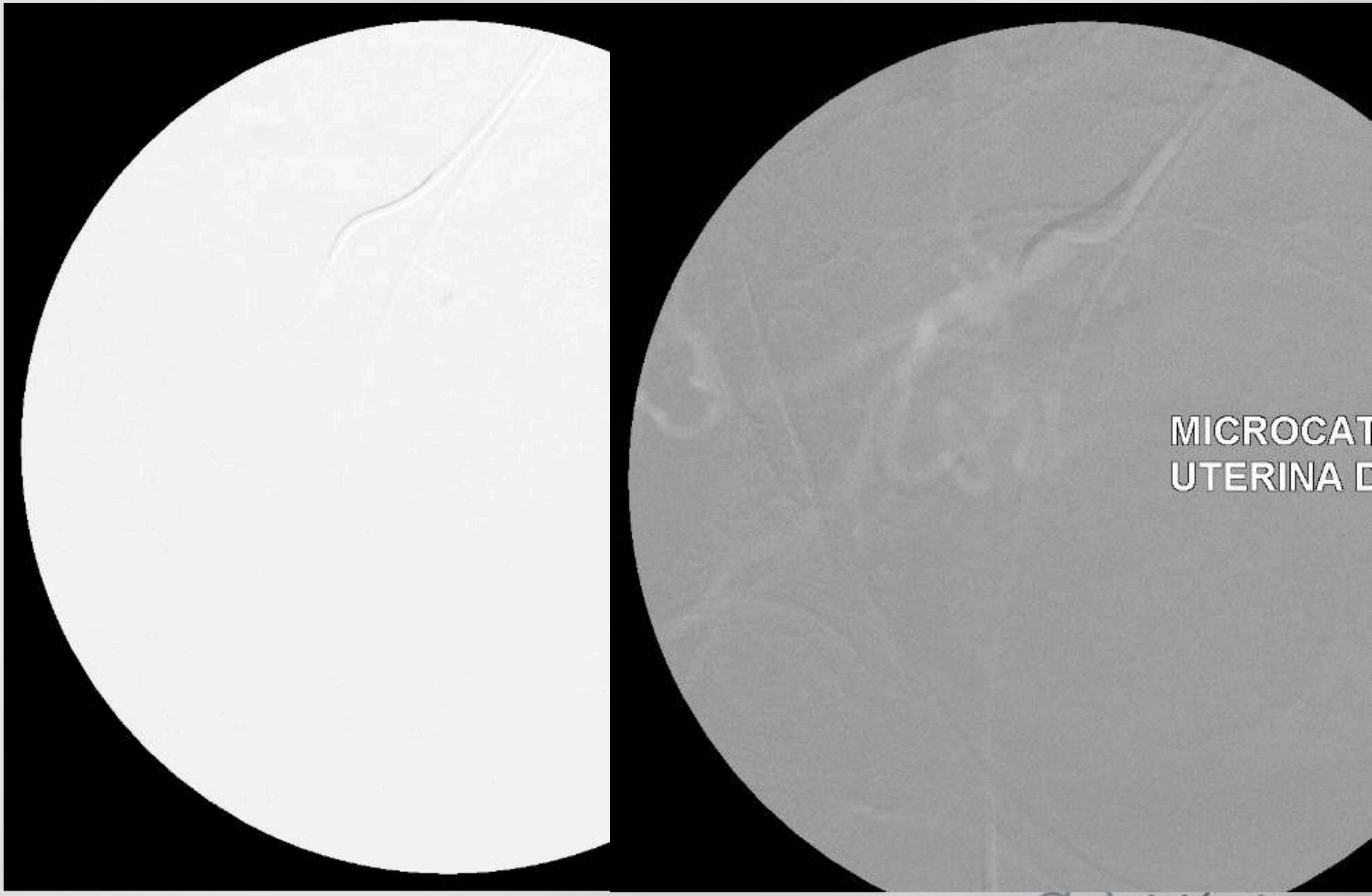
Antes

Após

Uterina Esquerda



Angiografia Inicial: Uterina Direita



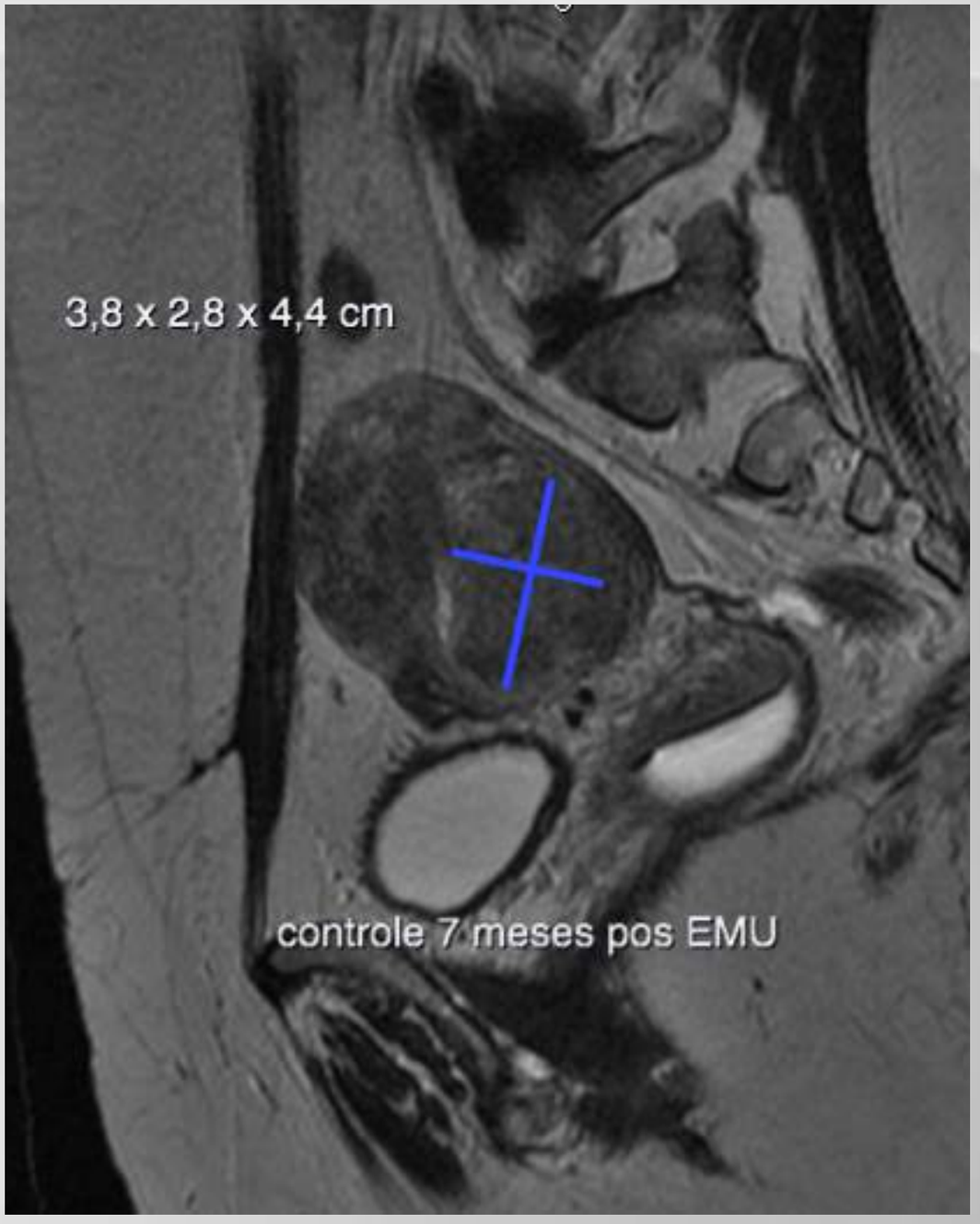
Microcateterismo: Uterina Direita

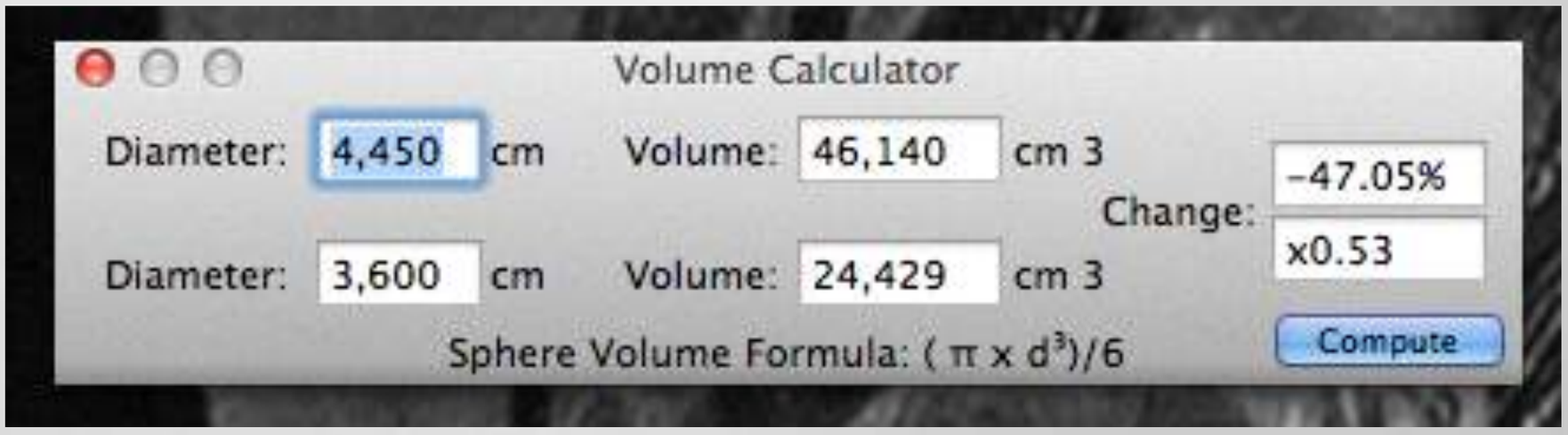
Antes

Após

Uterina Direita

Resultados





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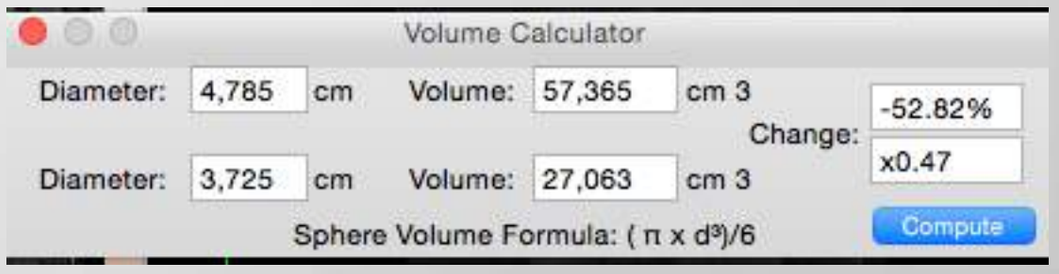
pré

controle 3 meses pós EAU



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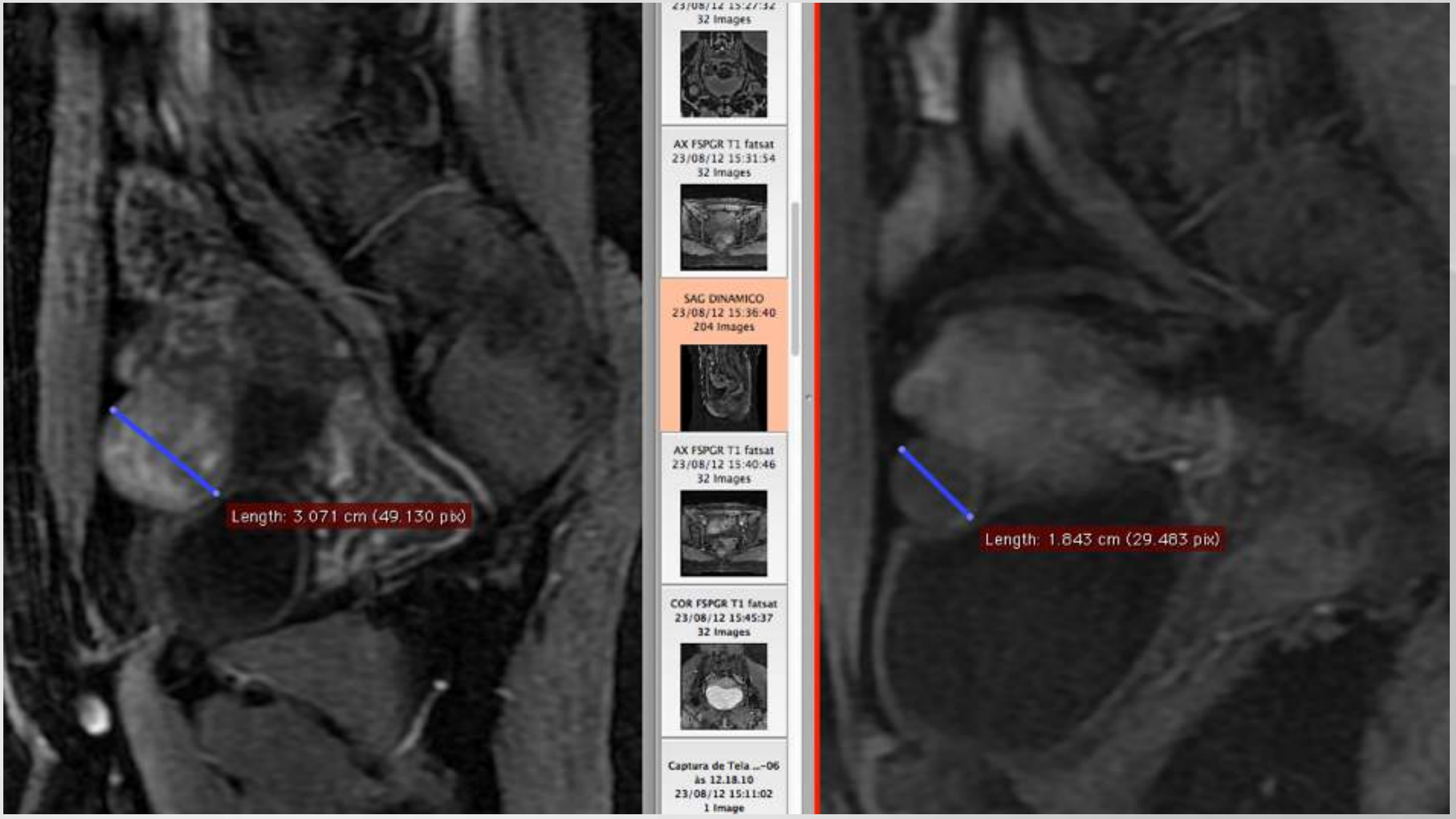
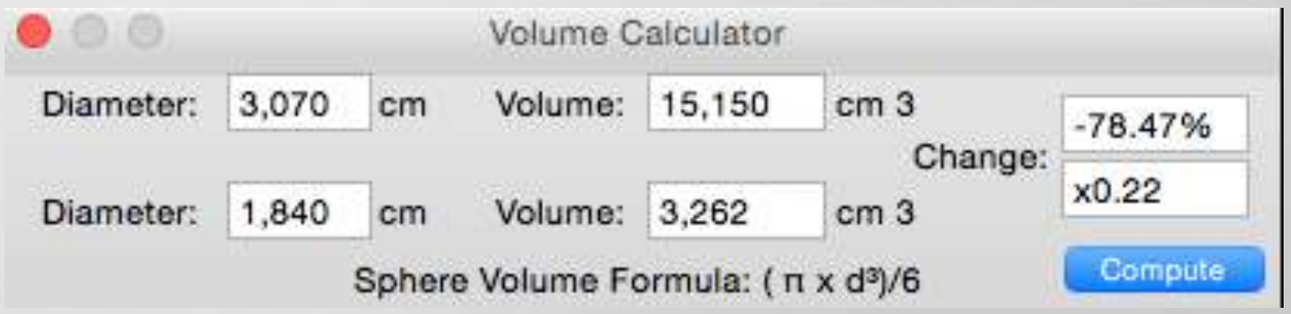


Antes

Controle de 6 Meses



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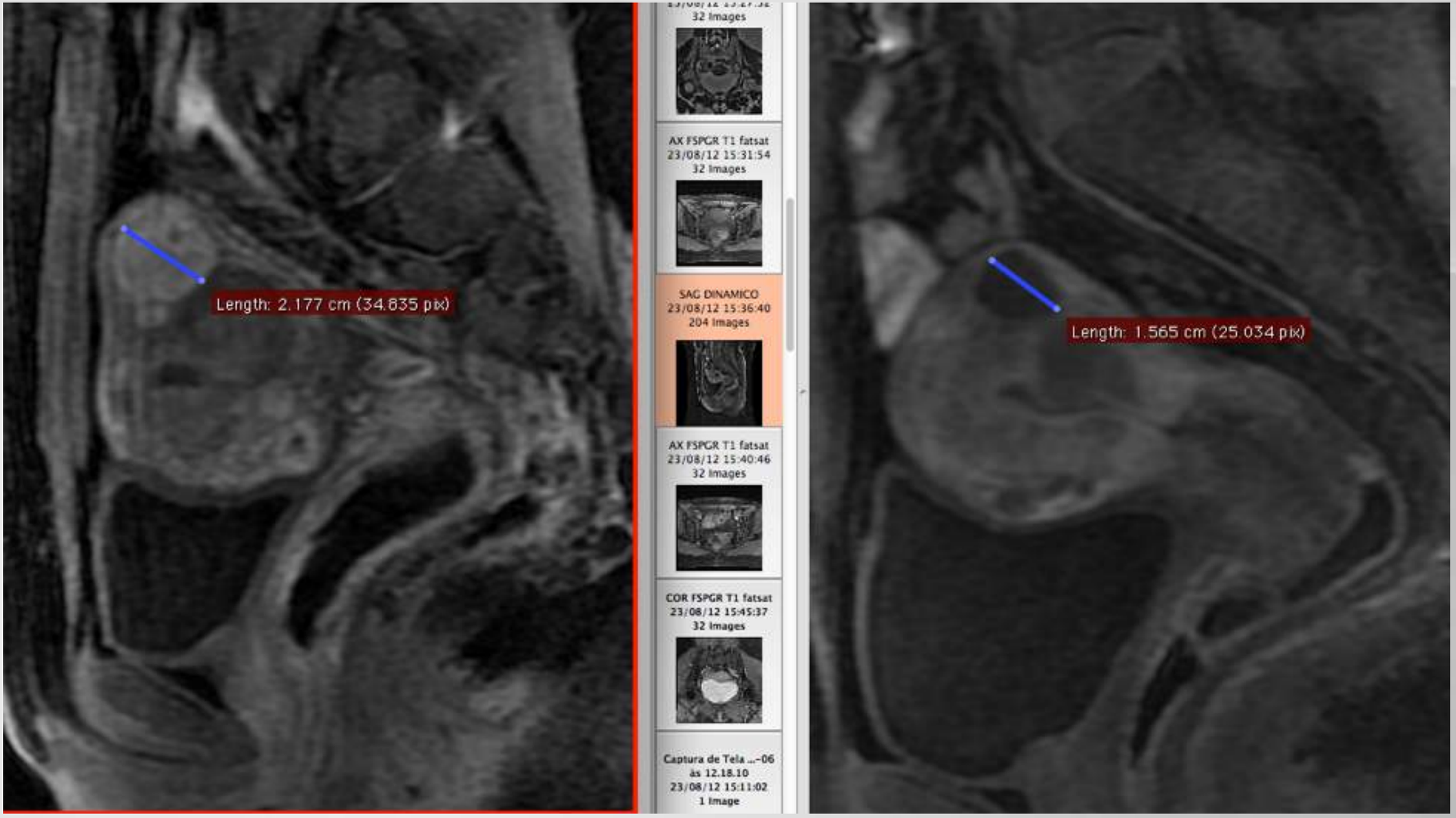
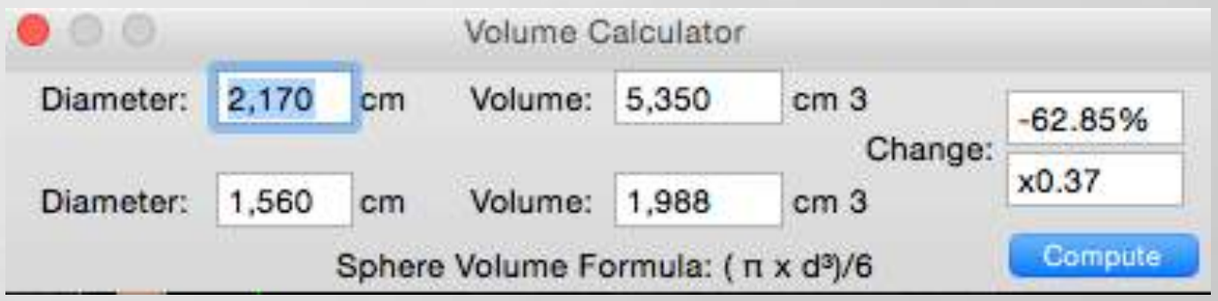


Antes

Controle de 6 Meses



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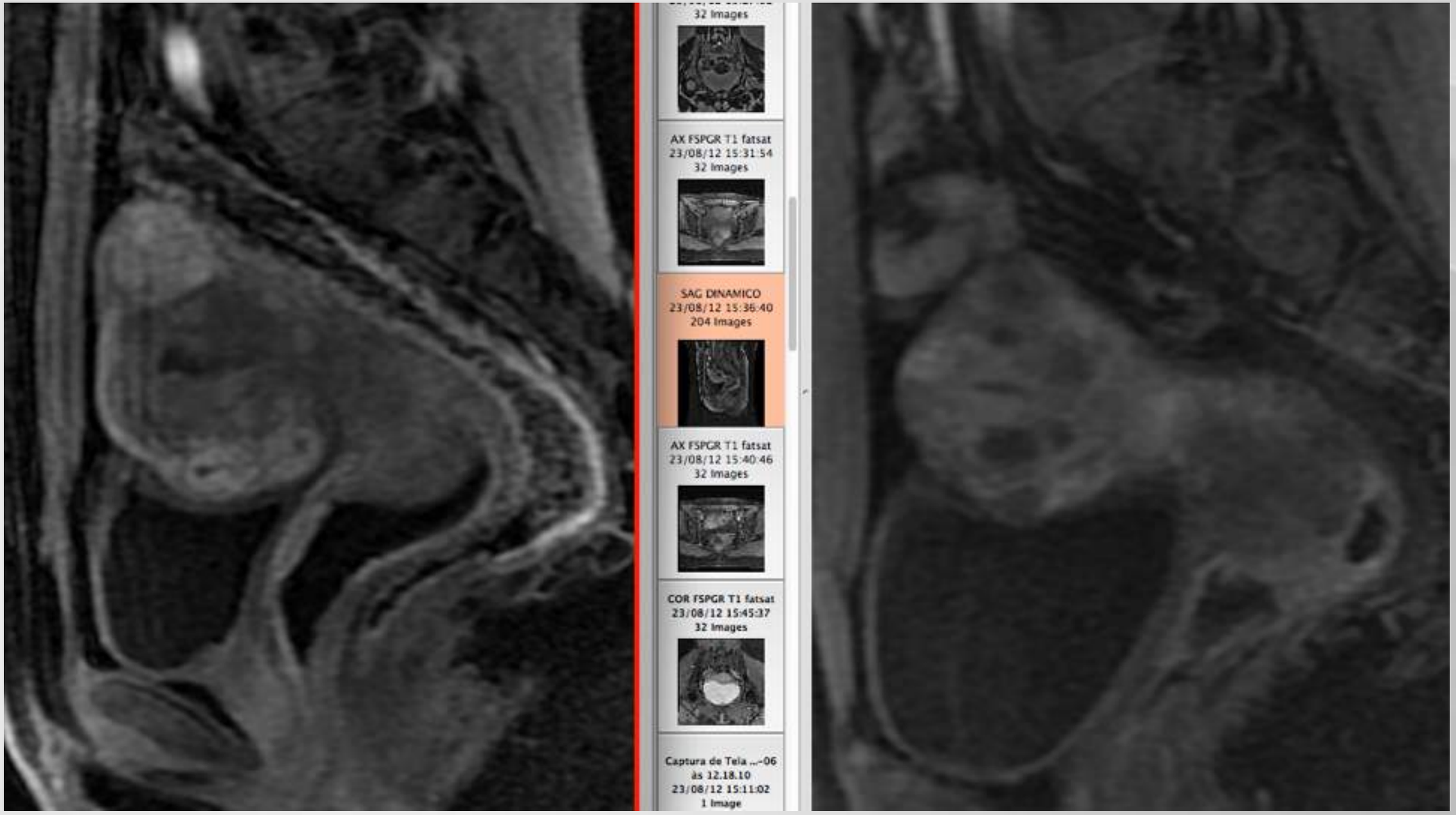

Antes

Controle de 6 Meses

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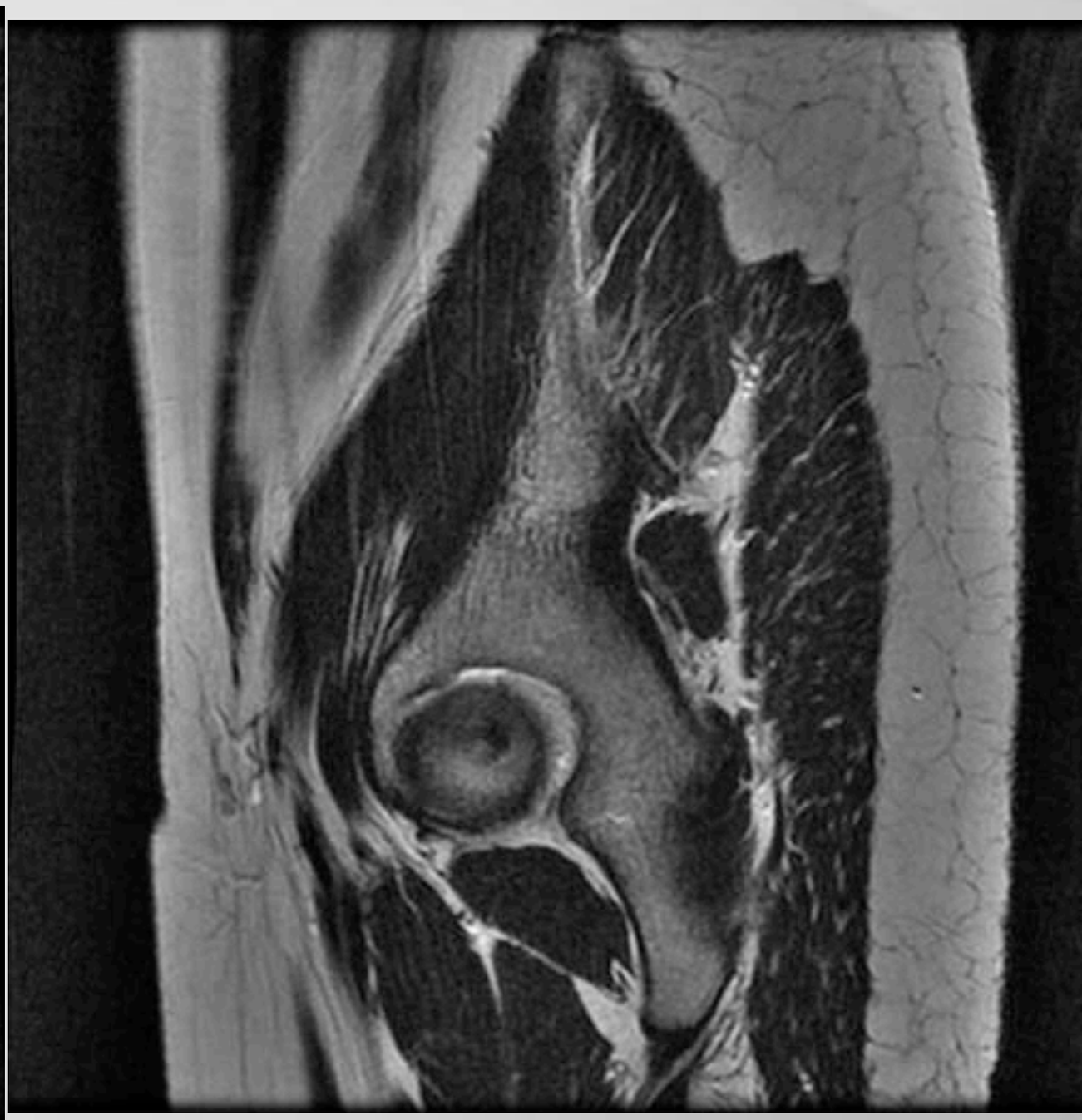
pre



controle pos 3 meses de EAU

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Indicações- miomas volumosos

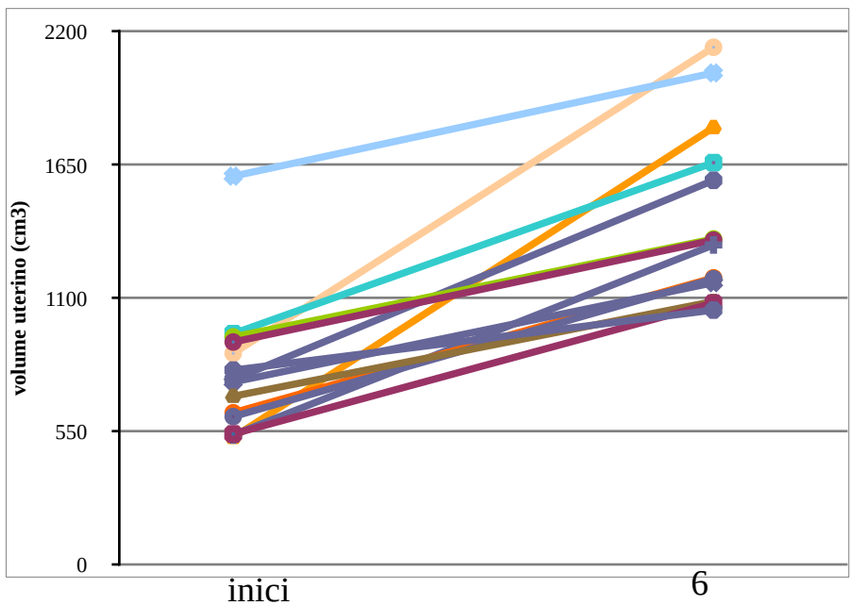
Felipe Nasser[1]
Breno Bourbi Affonso[2]
Selmo Glauber de Jesus-Silva[2]
Diogênio de Oliveira Coelho[3]
Eduardo Zlotnik[4]
Marcos de Lorenzo Messina[5]
Edmund Chada Baracat[6]

Embolização de mioma uterino em mulheres portadoras de miomas volumosos

Uterine fibroid embolization in women with giant fibroids

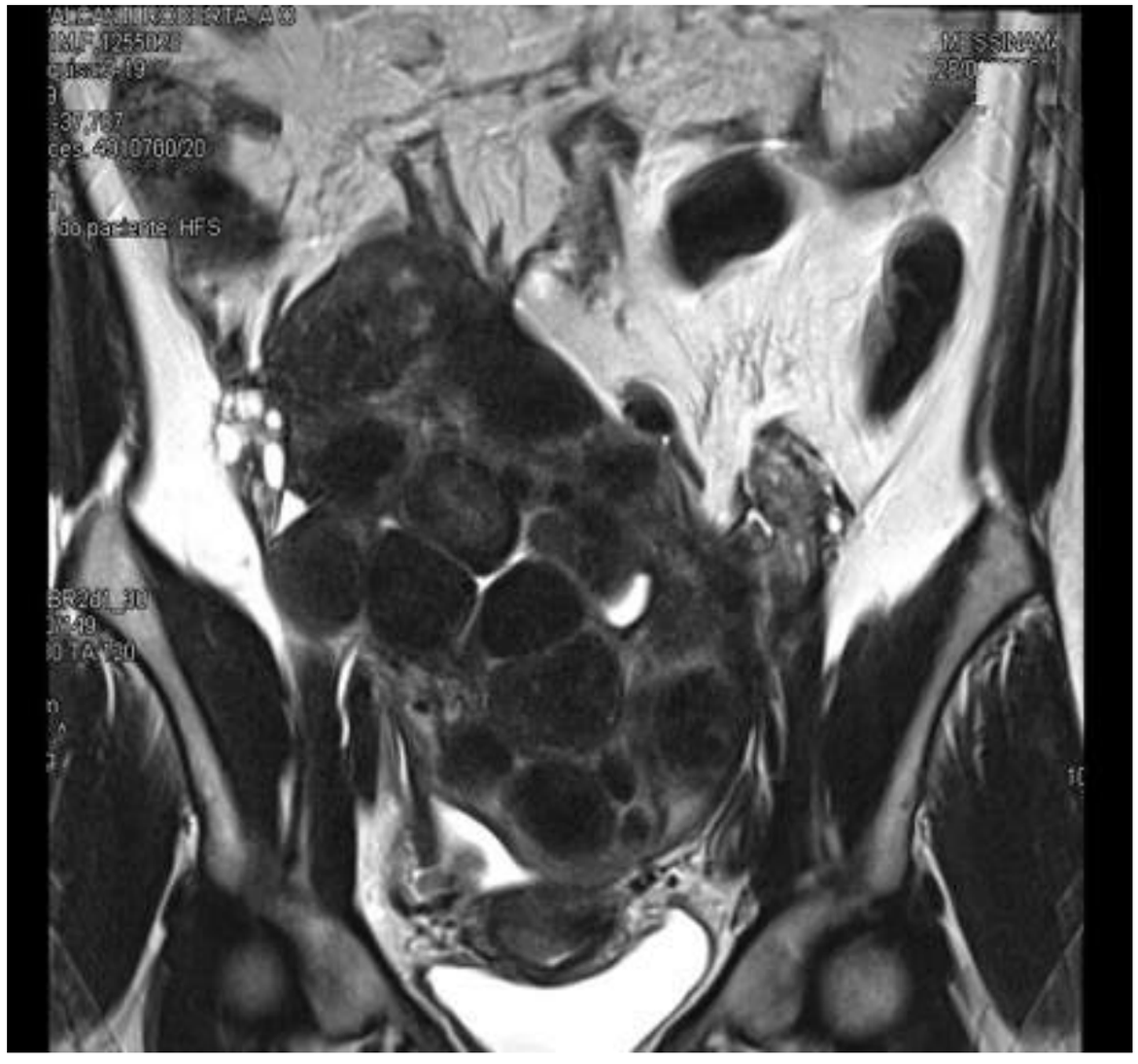
RBGO,2010

Artigo original

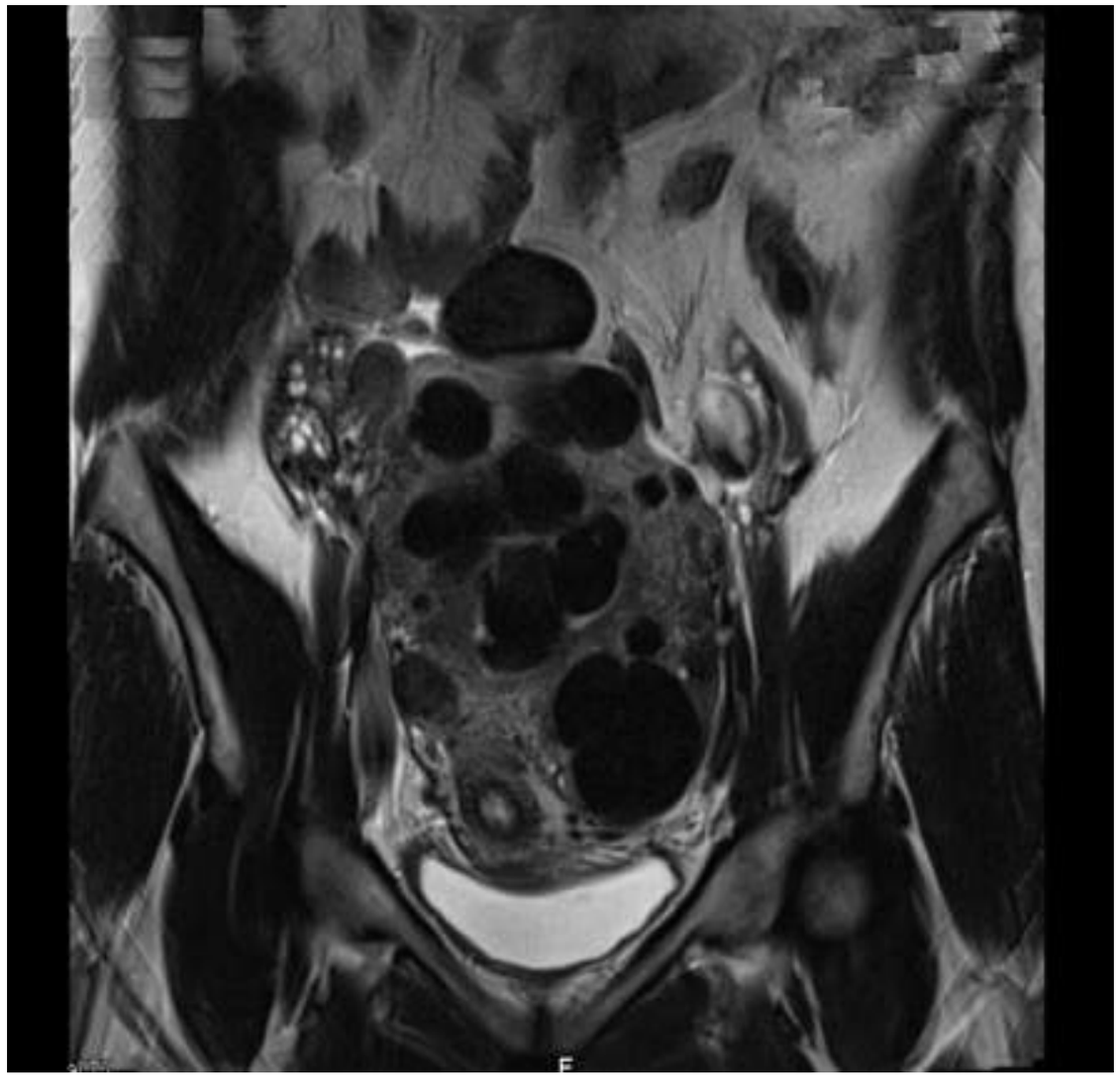


- 26 pacientes com volume uterino >1000 cm3
- Média etária 36 anos
- Volume inicial 1400 cm3(1045 a 2137 cm3)
- Volume final 799 cm3(525 a 1604 cm3)
- 1 insucesso clínico com HTA
- 1 miomectomia preservação fertilidade
- 9,2 frascos de esféras/paciente

EMUT úteros volumosos



1920 cm3



910 cm3

Nasser et. al, *RBGO 2010*

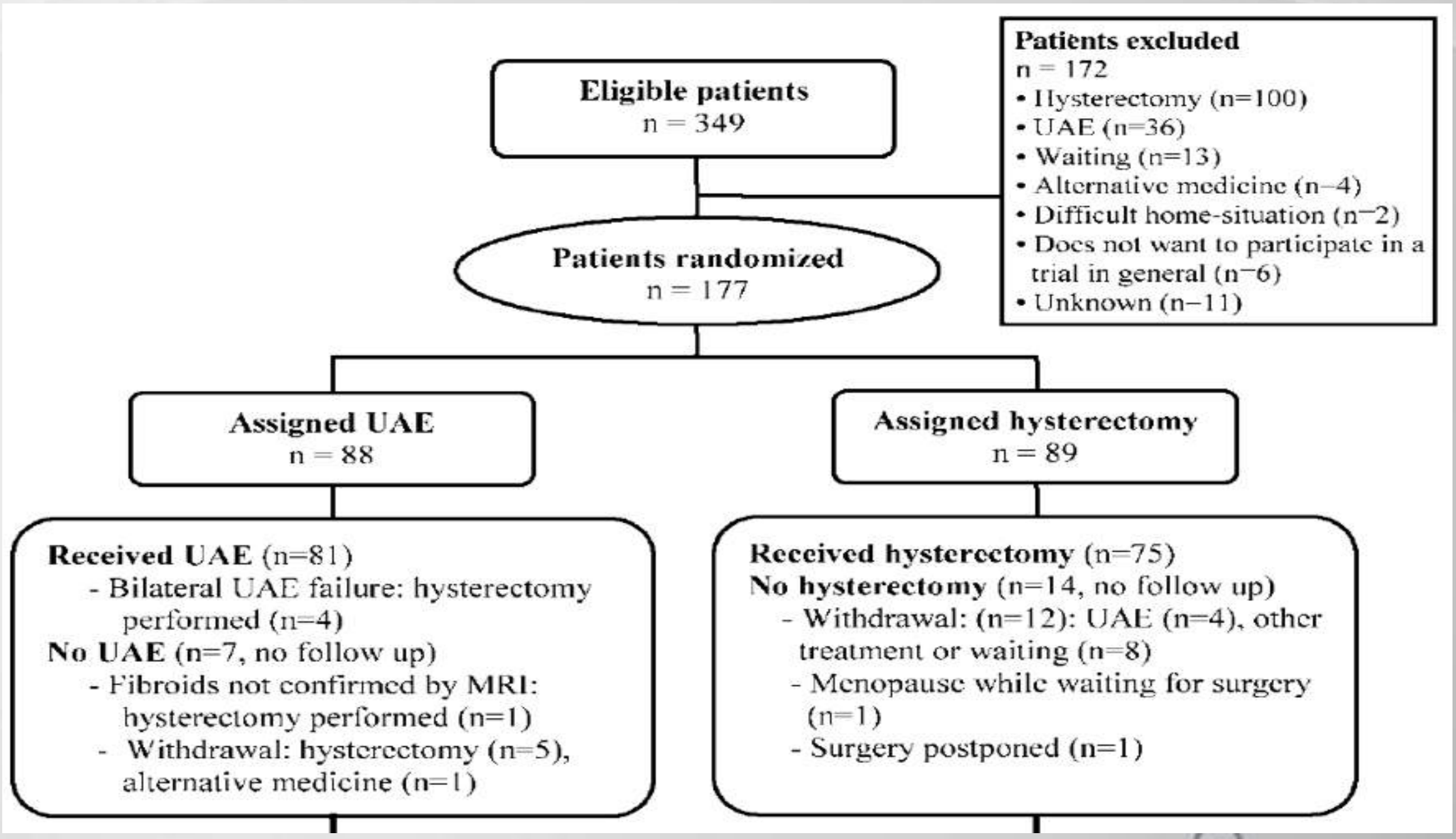
Embolização x Histerectomia

Symptomatic Uterine Fibroids:

Treatment with Uterine Artery Embolization or Hysterectomy—Results from the Randomized Clinical Embolisation versus Hysterectomy (EMMY) Trial[1]

Purpose:	To prospectively evaluate health-related quality of life (HRQOL) outcomes for uterine artery embolization (UAE) and hysterectomy up to 24 months after the intervention in terms of mental and physical health, urinary and defecatory function, and overall patient satisfaction.
Conclusion:	Both UAE and hysterectomy improved HRQOL. No differences were observed between groups regarding HRQOL at 24-month follow-up. On the basis of HRQOL results, the authors determined that UAE is a good alternative to hysterectomy.

EMMY Trial



Radiology. 2008 Mar;246(3):823-32. Epub 2008 Jan 9.

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EMMY Trial

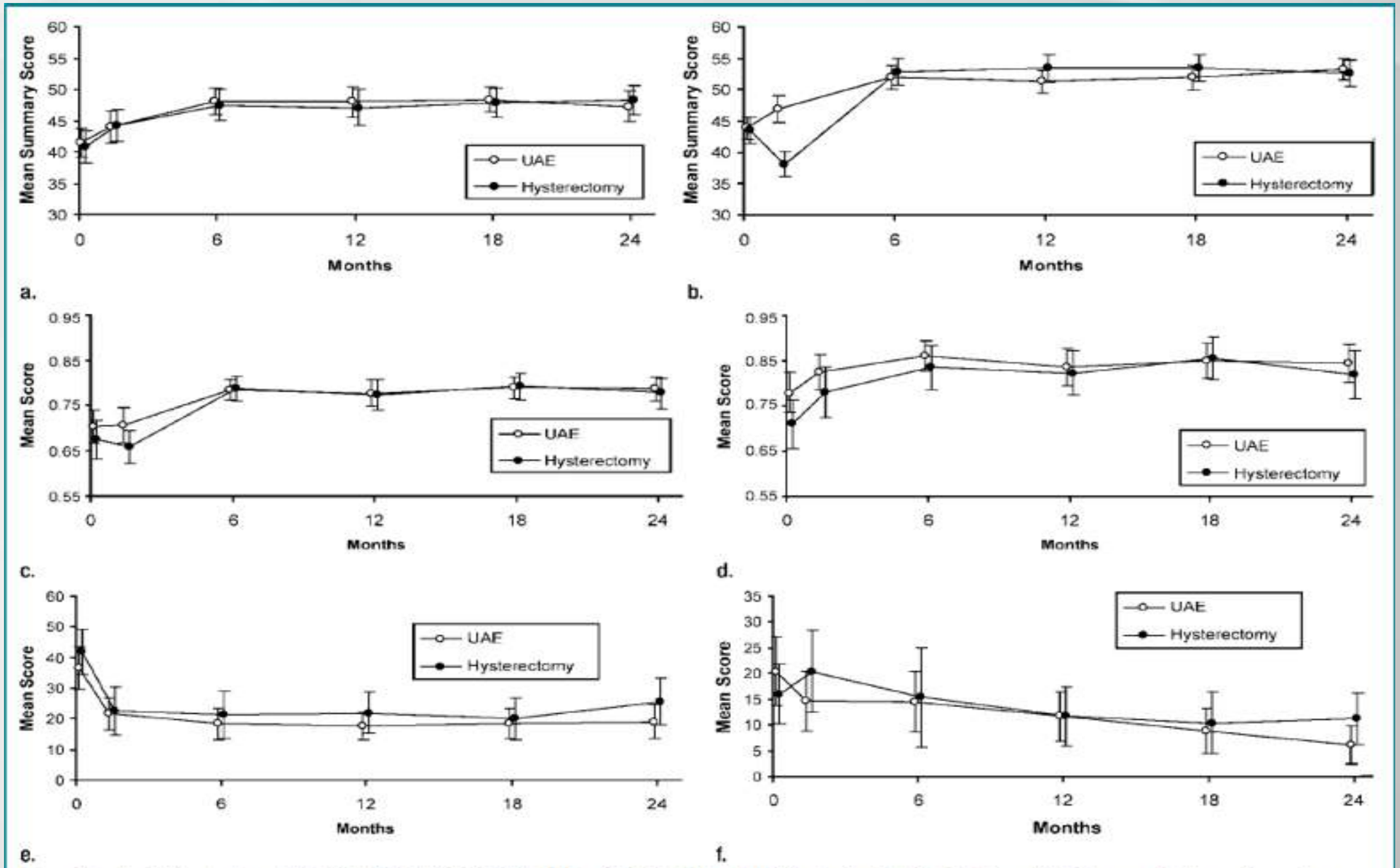

Figure 2: **(a–f)** Graphs show **(a)** SF-36 MCS, **(b)** SF-36 PCS, **(c)** EuroQol 5D, **(d)** Health Utilities Index Mark 3, **(e)** UDI, and **(f)** DDI scores. Patterns of scores in patients in the UAE group are similar to those in patients in the hysterectomy group. In both groups, scores improve during follow-up when compared with scores at baseline.

Radiology. 2008 Mar;246(3):823-32. Epub 2008 Jan 9.

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EMMY Trial - resultados

- Tanto a Histerectomia como EMU melhoram significativamente a qualidade de vida, não havendo diferença entre os dois métodos
- EMU preveniu 76,5% das histerectomias no grupo embolização
- Grau de satisfação de moderada a muito satisfeito em 24 meses:
  - 92% EMU
  - 90% histerectomia

Radiology. 2008 Mar;246(3):823-32. Epub 2008 Jan 9.

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EMMY Trial

Uterine and dominant fibroid volume reduction in UAE patients was 48.2% and 60.5%, respectively

Am J Obstet Gynecol. 2007 Jun;196(6):519.e1-11 .

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Discussão

- Perguntas
- Dúvidas
- alguém tem alguma experiência com a embolização?

Avaliação de Custo-efetividade

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Uterine-Artery Embolization versus Surgery for Symptomatic Uterine Fibroids

The REST Investigators

Table 4. Results of Cost-Minimization Analysis and Sensitivity Analysis.*

Variable	Embolization Group (N=106)	Surgical Group (N=51)	Difference†
		mean (95% CI)	
Cost-minimization analysis			
Mean cost per patient per year — £	1727 (1511 to 1943)	2673 (2402 to 2944)	951 (329 to 1480)
Mean cost excluding patients with missing data			
Number of patients	93	44	
Cost per patient — £	1751 (1522 to 1980)	2702 (2414 to 2989)	948 (398 to 1432)
Sensitivity analysis‡			
Cost of MRI and ultrasonography doubled — £	2027 (1811 to 2242)	2683 (2414 to 2952)	658 (131 to 1137)
Cost of MRI and ultrasonography doubled, plus cost of embolization agent (£95) — £	2098 (1880 to 2316)	2684 (2415 to 2952)	599 (41 to 1186)
Cost of hospital stay reduced to 65% (£316) — £	1379 (1233 to 1525)	1844 (1700 to 2018)	468 (113 to 828)
Cost per inpatient day reduced to 50% (£243) — £	1229 (1110 to 1348)	1489 (1349 to 1628)	257 (−89 to 571)

* £1.00 equals $1.80. Calculations were based on the following unit-cost estimates updated to 2004 prices: uterine-artery embolization, £1.53 per minute; surgery, £3.08 per minute; embolic agent, £75 per bottle (times four bottles); hospital stay, £485.55 per day; magnetic resonance imaging (MRI), £152.53 per scan; ultrasonography, £17.50 per scan; and outpatient consultation, £77 per visit.

† The differences in costs between the surgical group and the embolization group were calculated with the use of a bootstrap method, so the differences between the groups are not simple numerical ones.

‡ One-way sensitivity analyses were performed on key unit-cost components by varying one measure at a time.

N Engl J Med. 2007 Jan 25;356(4):360-70.

Published in final edited form as:
J Comp Eff Res. 2014 September ; 3(5): 503–514. doi:10.2217/cer.14.32.

Cost-Effectiveness of Uterine-Preserving Procedures for the Treatment of Uterine Fibroid Symptoms in the United States

Anne H. Cain-Nielsen, M.S.[a], **James P. Moriarty, M.Sc.**[b], **Elizabeth A. Stewart, M.D.**[c,d], and **Bijan J. Borah, Ph.D.**[b,d,*]

[a]Department of Biostatistics, Sc of Michigan, Ann Arbor, MI

[b]Division of Health Care Policy hester, MN

[c]Division of Reproductive Endo t of Obstetrics and Gynecology, Mayo Clinic, Rochester, MN

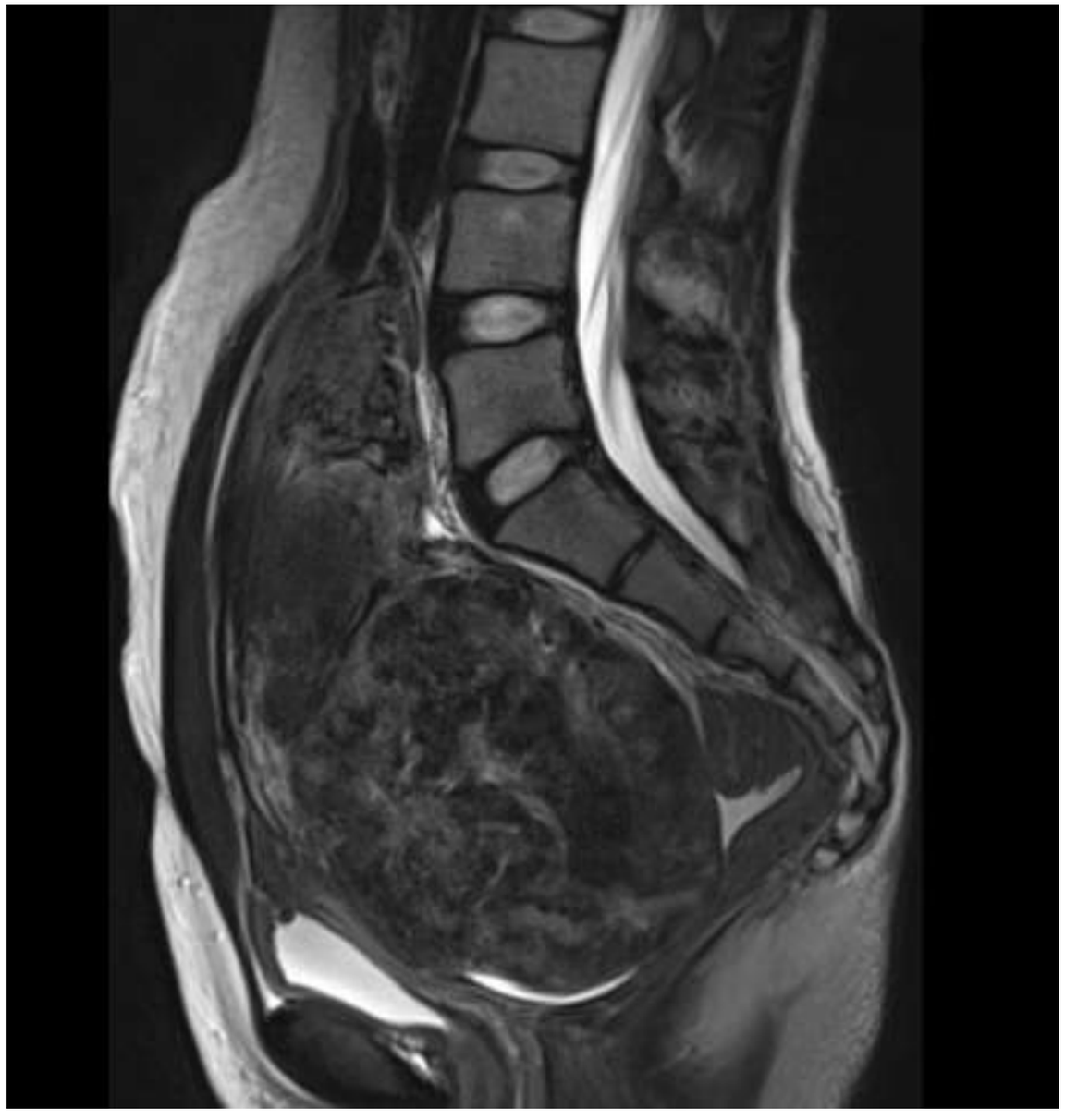
[d]College of Medicine, Mayo Clinic, Rochester, MN

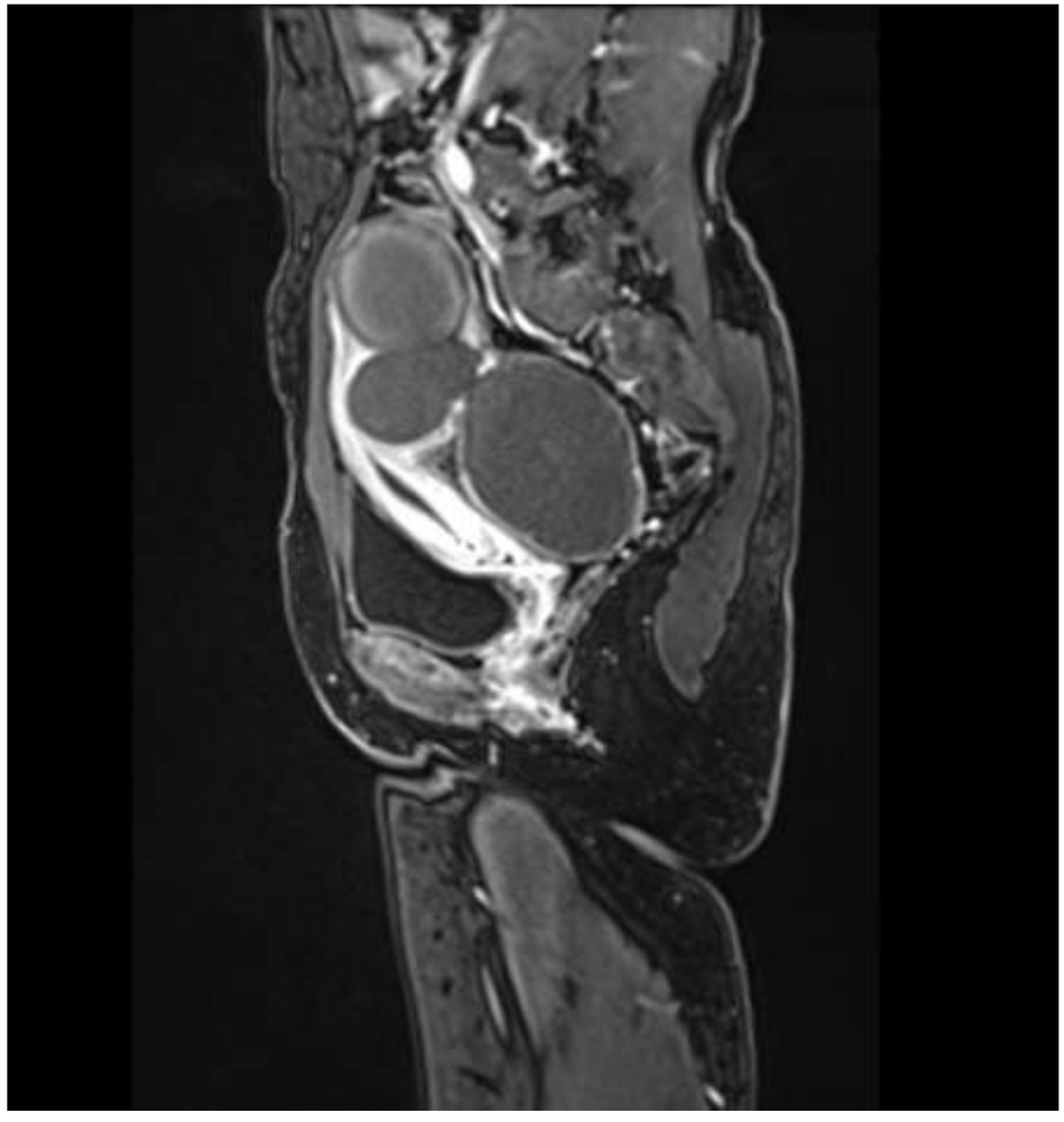
Our base-case scenario showed that myomectomy was preferred over MRgFUS and UAE. However, the difference in effectiveness between the three treatments was minimal. When

Conclusions—Myomectomy, MRgFUS, and UAE were similarly effective in terms of QALYs gained. Depending on assumptions about costs and willingness-to-pay for additional QALYs, all three treatments can be deemed cost-effective in a five year time frame.

Embolização x Miomectomia

EMUT pré miomectomia





Cardiovasc Intervent Radiol. 2012 Jun;35(3):530-6. doi: 10.1007/s00270-011-0228-5. Epub 2011 Jul 20.

Uterine artery embolization versus myomectomy: impact on quality of life--results of the FUME (Fibroids of the Uterus: Myomectomy versus Embolization) Trial.

Manyonda IT[1], Bratby M, Horst JS, Banu N, Gorti M, Belli AM.

Author information

Abstract

PURPOSE: This study was designed to compare quality of life (QoL) outcomes after uterine artery embolization (UAE) or myomectomy.

METHODS: Women with symptomatic fibroids diagnosed by ultrasound who wished to preserve their uterus were randomized to myomectomy (n=81) or UAE (n=82). Endpoints at 1 year were QoL measured by a validated questionnaire, hospital stay, rates of complications, and need for reintervention.

RESULTS: UAE patients had shorter hospitalization (2 vs. 6 days, p<0.001). By 1 year postintervention, significant and equal improvements in QoL scores had occurred in both groups (myomectomy n=59; UAE n=61). There had been two (2.9%) major complications among UAE versus 6 (8%) among myomectomy patients (not significant). By 2 years, among UAE patients (n=57) there were eight (14.0%) reinterventions for inadequate symptom control compared with one (2.7%) among myomectomy patients (n=37). Half of the women who required hysterectomy had concomitant adenomyosis missed by US.

CONCLUSIONS: UAE and myomectomy both result in significant and equal improvements in QoL. UAE allows a shorter hospital stay and fewer major complications but with a higher rate of reintervention.

McPherson *et al. Trials* 2014, **15**:468
http://www.trialsjournal.com/content/15/1/468

TRIALS

STUDY PROTOCOL Open Access

A randomised trial of treating fibroids with either embolisation or myomectomy to measure the effect on quality of life among women wishing to avoid hysterectomy (the FEMME study): study protocol for a randomised controlled trial

Klim McPherson[1], Isaac Manyonda[2], Mary-Ann Lumsden[3], Anna-Maria Belli[2], Jon Moss[4], Olivia Wu[5], Lee Middleton[6] and Jane Daniels[6*]

Methods/Design

Study design

The FEMME trial is a randomised, open, multi-centre trial comparing UAE with myomectomy in women with symptomatic uterine fibroids.

Primary outcome

The FEMME trial's primary outcome is to measure the QoL women with symptomatic uterine fibroids experience two years after they have been treated with UAE or myomectomy, through the disease-specific Uterine Fibroid Symptom Quality of Life (UFS-QoL) questionnaire.

Secondary outcomes

The FEMME trial's secondary outcomes are:

1. EuroQoL EQ-5D score and visual analogue scale score;
2. Menstrual blood loss, assessed using the Pictorial Blood loss Assessment Chart (PBAC). This is a validated and well-used assessment of menstrual blood loss in women with uterine fibroids;
3. Pregnancy outcomes - pregnancy will be reported by the woman in the first instance. The research nurse or trial coordinator will collect further information with respect to timing of pregnancy, biochemical pregnancy (positive pregnancy test), incidence of miscarriage, outcome of pregnancy, gestational age at delivery or miscarriage, complications of pregnancy, and labour;
4. Adverse events - all adverse outcomes considered to be related to the study protocol or intervention will be collected. Since adverse outcomes may occur many months after intervention, these data will continue to be collected throughout the study;
5. Length of hospital stay;
6. Time to return to work or usual activity;
7. Further treatment for incomplete removal or recurrence of symptoms, including hysterectomies;
8. Ovarian reserve - blood samples will be taken from the women in each treatment arm for the measurement of the plasma levels of Anti-Müllerian hormone (AMH), a compound used as a proxy measurement of ovarian reserve, to determine if there is any difference at six weeks, six months, and twelve months post-procedure.

Embolização x Fertilidade

Table IV Review of the pregnancy outcomes previously reported after definitive uterine artery embolization for fibroids.

Authors	Treated women (*n*)	Mean age at embolization (years)	Mean follow-up (months)	Patients wishing to conceive (*n*)	Obtained pregnancies (pregnant women)	Mean age of pregnant women (years)	Time to conceive (months)	Pregnancy outcome
Bradley et *al.* (1998)	8	37.5			1 (1)		1	
Hutchins et *al.* (1999)	305				2 (2)			1 MS, 1 VB
Ravina et *al.* (2000)	184				12 (9)	36	13	5 MS, 3 VB, 4 CS
McLucas et *al.* (2001)	400	41		139	17 (14)			5 MS, 3 VB, 7 CS, 2 OP
Vashisht et *al.* (2001)	21				1 (1)	29	11	1 CS
Ciraru-Vigneron and Ravina (2001)	5				5 (4)			1 MS, 1 ET, 2 VB, 1 CS
Goldberg et *al.* (2002)	2				2 (2)	37	48	2 CS
Kovacs et *al.* (2002)	1	35		1	1	35	21	1 OP
Walker and Pelage (2002)	400		16.7	24	13 (12)			2 MS, 1 ET, 1 EP, 8 VB, 1 CS
Ravina et *al.* (2003)	454				32 (29)			6 MS, 1 ET, 10 VB, 13 CS, 2 OP
Trastour et *al.* (2003)	1	33		1	1	33	16	1 CS
D'Angelo et *al.* (2003)	1	29		1	2 (1)	29	13	1 VB, 1 CS
Honda et *al.* (2003)	10			10	5			
Pelage and Walker (2003)	122			24	17 (12)	36		6 MS, 1 EP, 10 UD
Kostal et *al.* (2004)	1			1	1	41		1 CS
Pietura et *al.* (2005)	1			1	1	41	4	1 CS
Carpenter and Walker (2005)	671			79	26 (24)	37	30	7 MS, 2 ET, 1 EP, 2 VB, 14 CS
Kim et *al.* (2005)	94		35	6	8 (5)	30.7	18	1 ET, 5 VB, 2 CS
Pron et *al.*, (2005)	555	43		164	24 (21)	34	15	4 MS, 2 ET, 9 VB, 9 CS
Walker and McDowell (2006)	1200			108	56 (33)	37.4		17 MS, 3 ET, 1 EP, 9 VB, 24 CS, 2 SB
Siskin et *al.* (2006)	77	43.9			2			1 MS, 1 ET
Holub et *al.* (2007)	102			27	17 (14)	31.9	9.3	7 MS, 1 ET, 2 VB, 6 CS, 1 OP
Mara et *al.* (2008)	58	32.4	26.2	26	17 (13)	32.8	18	9 MS, 1 ET, 1 EP, 2 VB, 3 CS, 1 OP
Pinto Pabon et *al.* (2008)	100	39.7	20.33	57	11	35	15	3 MS, 4 VB, 4 CS
Holub et *al.* (2008)	112			39	28 (20)	32.3	9.1	14 MS, 2 ET, 1 EP, 2 VB, 8 CS, 1 OP
Kim et *al.* (2008)	87	36.6	45	19	15 (12)			3 MS, 5 ET, 1 EP, 1 VB, 5 CS
Dutton et *al.* (2007) and Hirst et *al.* (2008)	972	43.8	55.2		37 (27)	38		15 MS, 1 ET, 2 EP, 4 VB, 15 CS
Redecha et *al.* (2013)	98			11	8 (7)	34	13	1 MS, 6 VB, 1 CS
	6042				362			107 MS, 22 ET, 9 EP, 74 VB, 124 CS, 2 SB, 8 OP, 10 UD

MS, miscarriage; EP, ectopic pregnancy; ET, elective termination of pregnancy; VB, vaginal birth; CS, Cesarean section; UD, unspecified delivery; OP, ongoing pregnancy; SB, Stillbirth.

Embolização x Fertilidade

quando

selecionadas
apenas
mulheres que
desejavam engravidar,
tratadas por EAU

738

Human Reproduction, Vol.29, No.3 pp. 490–501, 2014

Márcio Medeiros

Embolização x Fertilidade

quando

selecionadas
apenas
mulheres que
desejavam engravidar,
tratadas por EAU

738

36,3%
engravidaram

Human Reproduction, Vol.29, No.3 pp. 490–501, 2014

Márcio Medeiros

Embolização x Fertilidade

19,6% levaram seus filhos para casa

quando

selecionadas apenas mulheres que desejavam engravidar, tratadas por EAU

738

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Embolização x Fertilidade

19,6% levaram seus filhos para casa

40 - 61% na miomectomia

quando selecionadas apenas mulheres que desejavam engravidar, tratadas por EAU

738

36,3% engravidaram

Human Reproduction, Vol.29, No.3 pp. 490–501, 2014

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Radiologia Intervencionista na saúde da mulher

- *Mioma uterino*
- *Adenomiose*
- *Varizes pélvicas*
- *Tumores ginecológicos*
- *Malformação arteriovenosa*
- *Acretismo placentário*
- *Sangramento operatório*

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Varizes Pélvicas

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Image size: 1024 x 1024
View size: 795 x 603
WL: 512 WW: 512
0251 (39 y , 32 y)
Abdomen fr — UNKNOWN
09062008100216
1
Zoom: 78% Angle: 0
Im: 1/30
Uncompressed
NOT FOR MEDICAL USAGE
09/06/08 11:28:15
Made In OsiriX

Image size: 1024 x 1024
View size: 606 x 606
WL: 128 WW: 256

0251 (39 y , 32 y)
Abdomen fr — UNKNOWN
090620081100216
1

Zoom: 59% Angle: 0
Im: 1/33
Uncompressed

NOT FOR MEDICAL USAGE

09/06/08 11:29:10
Made In OsiriX

ADENOMIOSE

Cardiovasc Intervent Radiol. 2012 Jun;35(3):523-9. doi: 10.1007/s00270-011-0254-3. Epub 2011 Aug 18.

Uterine artery embolization to treat uterine adenomyosis with or without uterine leiomyomata: results of symptom control and health-related quality of life 40 months after treatment.

Froeling V[1], Scheurig-Muenkler C, Hamm B, Kroencke TJ.

⊕ Author information

Abstract

PURPOSE: To evaluate the clinical outcome for uterine adenomyosis with or without uterine leiomyomata 40 months after uterine artery embolization (UAE).

METHODS: Forty women aged 39-56 years (median 46 years) with symptomatic uterine adenomyosis and magnetic resonance imaging findings of uterine adenomyosis with or without combined uterine leiomyomata underwent UAE. Self-perceived changes in clinical symptoms were assessed, and residual symptom severity and health-related quality of life (HRQOL) after UAE were evaluated. Clinical failure was defined as no symptomatic improvement or second invasive therapy after UAE. Results were stratified by the extent of uterine adenomyosis at baseline magnetic resonance imaging.

RESULTS: Patients were followed for a median of 40 months (range 5-102 months). UAE led to symptomatic control after UAE in 29 (72.5%) of 40 patients while 11 women underwent hysterectomy (n=10) or dilatation and curettage (n=1) for therapy failure. No significant difference between women with pure uterine adenoymosis and women with uterine adenomyosis combined with uterine leiomyomata was observed. Best results were shown for UAE in uterine adenomyosis with uterine leiomyomata predominance as opposed to predominant uterine adenomyosis with minor fibroid disease (clinical failure 0% vs. 31.5%, P=0.058). Throughout the study group, HRQOL score values increased and symptom severity scores decreased after UAE. Least improvement was noted for women with pure adenomyosis.

CONCLUSIONS: UAE is clinically effective in the long term in most women with uterine adenomyosis. Symptomatic control and HRQOL were highest in patients with combined disease of uterine adenomyosis but leiomyomata predominance.

Obrigado!

ANGIONEURO
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FIM

Complicações

- Relacionadas:
  - ao acesso vascular;
  - ao uso de contraste;
- Falência ovariana transitória ou não (5%)
- Infecção uterina (<1%)
- Infarto uterino (<1%)
- Corrimento vaginal
- Expulsão transcervical do mioma

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Complicações

- Morbidade global:
  - EAU: 5%
  - Miomectomia 38,6%
  - Histerectomia 40,1%

Obstet Gynecol. 2002 Nov;100(5 Pt 1):873-80

Am J Obstet Gynecol. 2000 Dec;183(6):1448-55

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Contra-indicações

- Absolutas:
  - Suspeita de malignidade (pode ser realizado com função paliativa ou adjuvante)
  - Gravidez
  - Infecção ginecológica
- Relativas
  - Miomas subserosos pediculados (base <50% do diâmetro do mioma)
  - Endometriose severa e miomatose discreta
  - Sinais de degeneração hemorrágica importante
  - Mioma cervical (irrigação parasita)
  - Miomas muito grandes (redução sub ótima do volume uterino)
  - Uso de GnRH
  - Radioterapia pélvica
  - Contraindicações a procedimentos endovasculares:
    - Coagulopatia
    - Alergia grave a contraste
    - Insuficiência renal

J Vasc Interv Radiol 2009; 20:S307–S311

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Redução de volume

- Decrease in uterine volume:
  - 588.6 cm3 to 393.1 cm3
  - 33.5% decrease (P <0,001).
- Reduction in fibroleiomyoma volume:
  - 69.4 cm3 to 41.4 cm3
  - 40.4% decrease (P <0,001).

Radiology. 2000 Oct;217(1):228-35

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Resultados

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