



**Faculdade de Medicina da  
Universidade de Coimbra  
Serviço de Urologia e Transplantação  
Renal dos HUC**



Pedro Nunes  
ptnunes@gmail.com

# **Etiopatogenia da disfunção sexual no Doente Oncológico: da doença aos tratamentos**



**SOCIEDADE  
PORTUGUESA DE ANDROLOGIA**



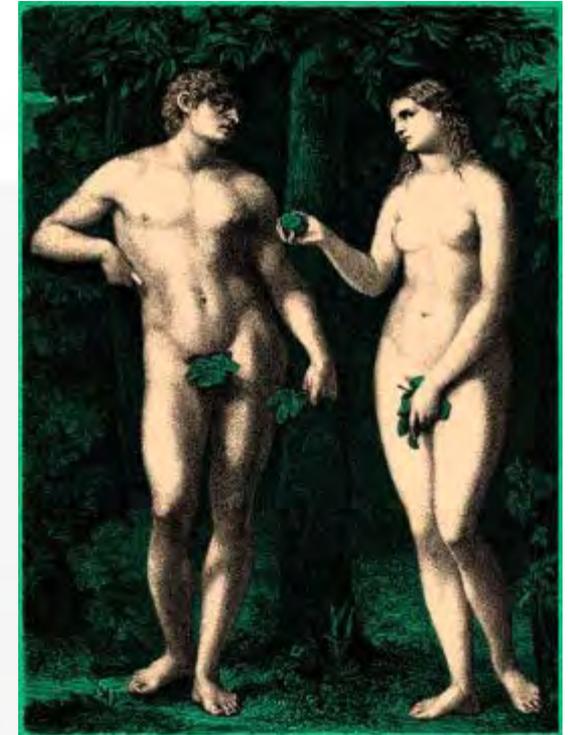
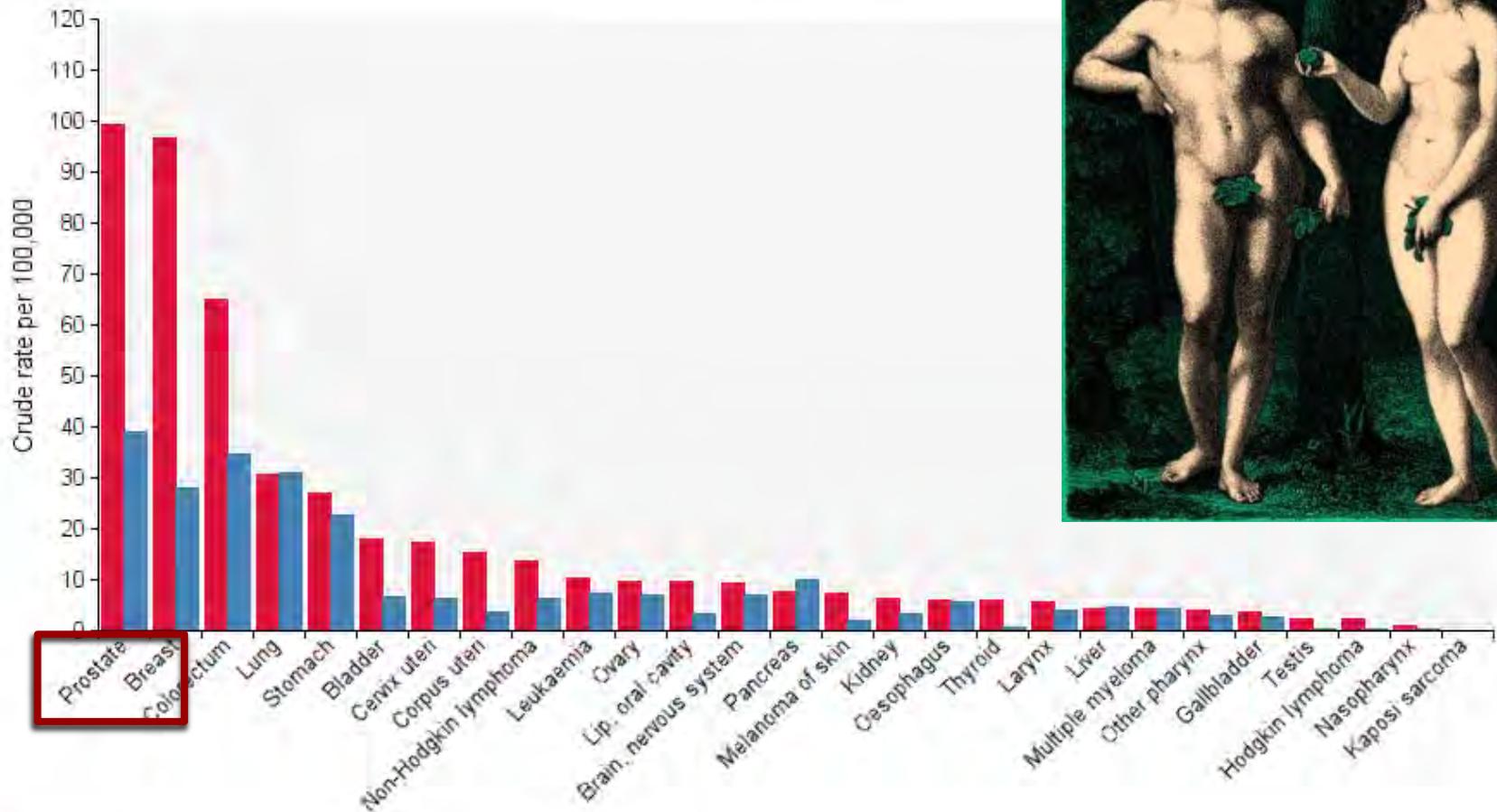






**Cancro: vagina / vulva / colo uterino / útero / trompas / ovários**  
**13,4% de todas as neoplasias femininas**

Portugal: Both sexes, all ages



■ Incidence  
■ Mortality



# VIVER A SEXUALIDADE NA NEOPLASIA

- **FUNÇÃO SEXUAL** faz parte da definição de saúde da OMS
- A sua alteração afecta profundamente a QoL
- A prevalência de disfunção sexual em doentes com cancro varia entre 20 a 90% - nem sempre resolvida após o tratamento
- Todos os tratamentos alteram a função sexual (QT /RT / HT / CIR...)
- Em 70% dos doentes a função sexual pode ser melhorada
  - *Ganz 1998; Varricchio 2000; Ganz 2001; Aziz 2002*



# CANCRO & SEXUALIDADE

CANCRO

TRATAMENTOS

CRENÇAS E MITOS

RELIGIÃO

ORIENTAÇÃO SEXUAL

RELAÇÃO MÉDICO-DOENTE

APOIO FAMILIAR

ASPECTOS PSICO-SOCIAIS

CO-MORBILIDADES

FUNÇÃO SEXUAL PRÉVIA

INFORMAÇÃO E APOIO

.....

## Sexuality and cancer

For people with cancer, their family and friends





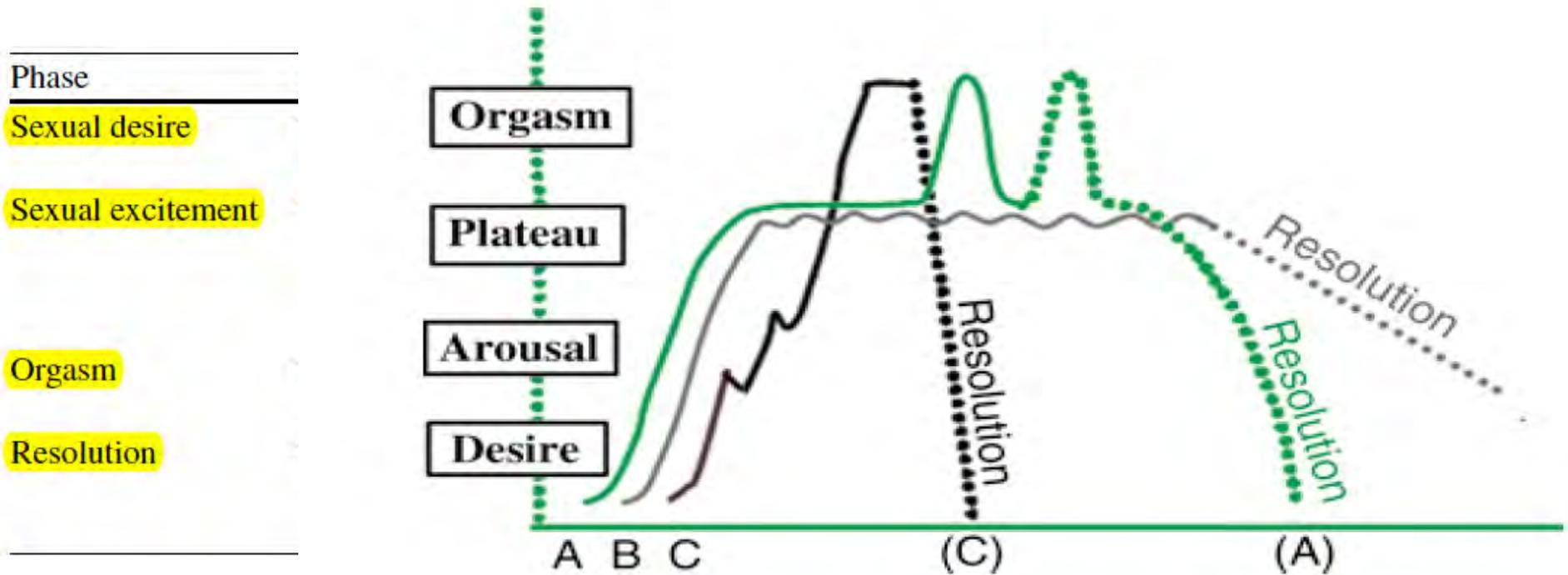
# ONCOLOGIA – FACTOS não MITOS

- ➔ **ACTIVIDADE SEXUAL NÃO AUMENTA A PROBABILIDADE DE PROGRESSÃO TUMORAL**
- ➔ **CANCRO NÃO É UM CASTIGO DE PRÁTICAS SEXUAIS ANTERIORES**
- ➔ **EVICÇÃO DO SEXO NÃO VAI CURAR A DOENÇA**





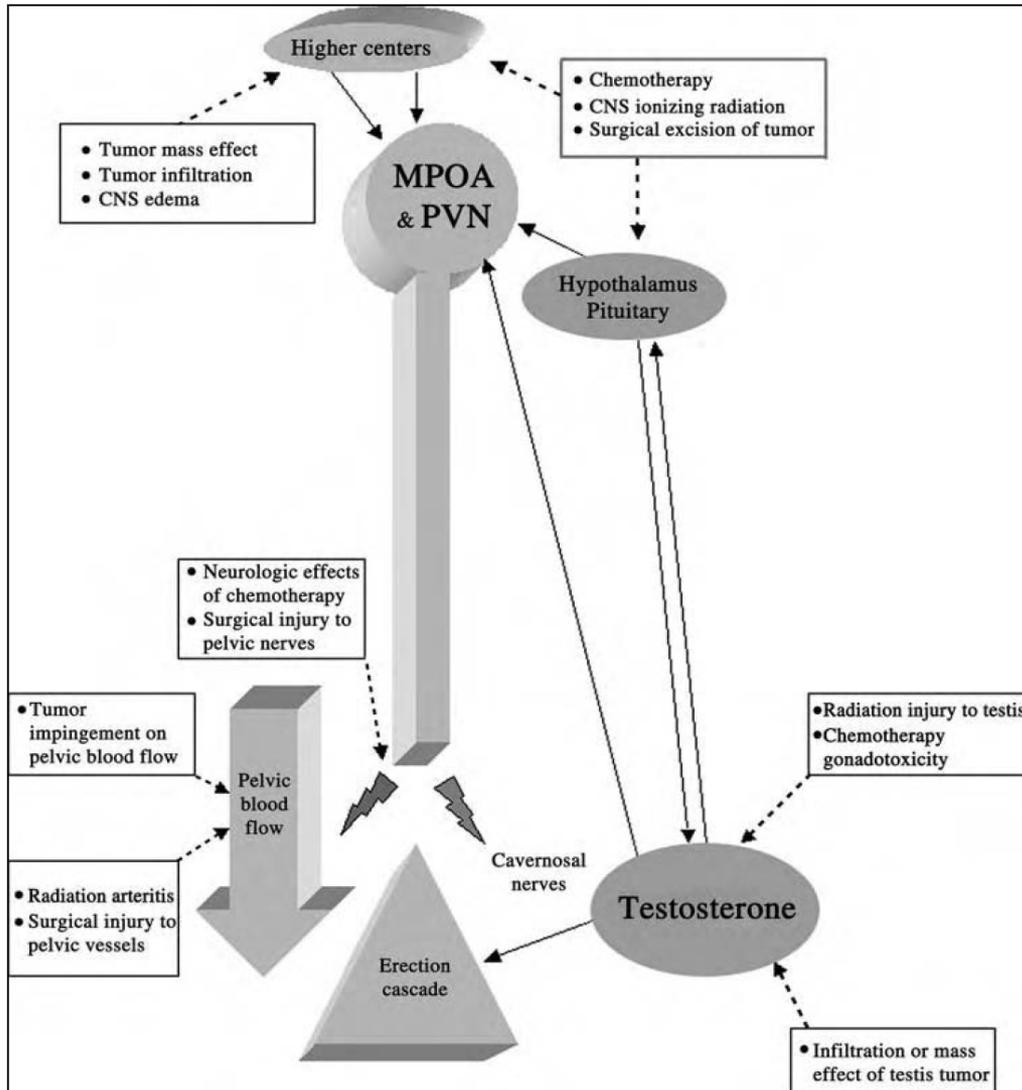
# RESPOSTA SEXUAL



**Fig. 10.1** Masters and Johnson model of sexual response. Adapted from Kaplan [5]



# EFEITOS DO CANCRO E SEUS TRATAMENTOS NA FUNÇÃO SEXUAL





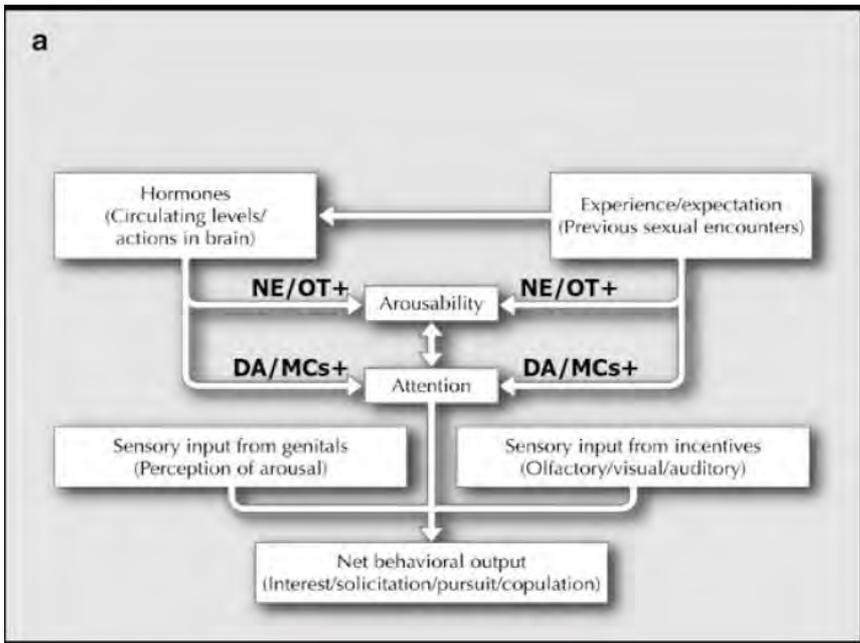
**Table 1.** Categories of female sexual dysfunction (17,18).

Diagnostic categories	
Sexual desire/interest disorder	++
Subjective sexual arousal disorder	
Combined sexual arousal disorder	
Genital arousal disorder	
Persistent sexual arousal disorder	
Orgasmic disorder	
Vaginismus	
Dyspareunia	++

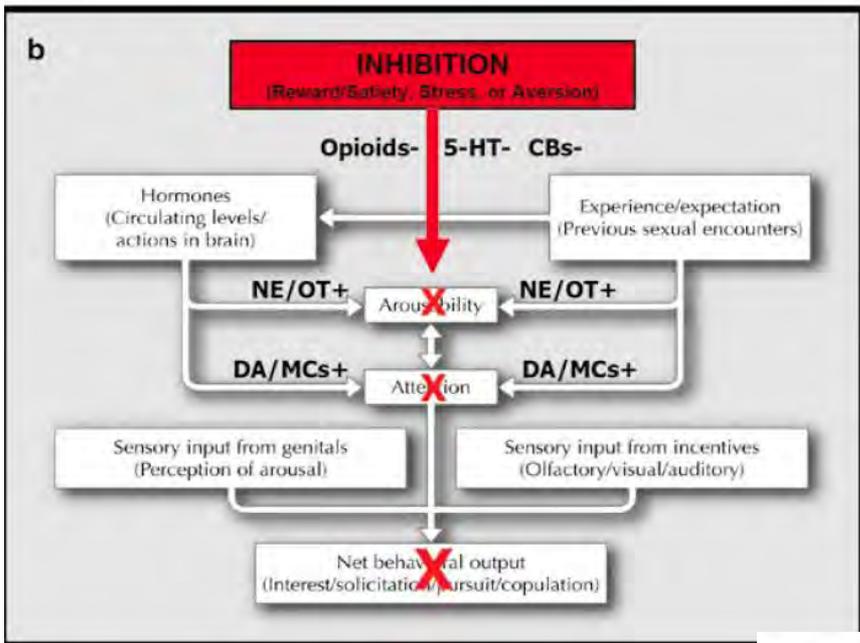
## DISFUNÇÕES SEXUAIS E DOENÇA ONCOLÓGICA

### Disf Sexuais Masculinas

Líbido	++
Erecção	++
Ejaculação	
Orgasmo	



# LÍBIDO



James G. Pfaus



# O Percurso ...

- Pré-diagnóstico
- Diagnóstico
- Terapêutica
- Recuperação
- Sobrevivência a longo prazo



# Pré-diagnóstico e Diagnóstico

- Ansiedade / medo
- Exames e outros procedimentos
- Enfrentar uma doença mortal
- “Trocar a vida pelo sexo”
- Manter a sexualidade perante o cancro

**25% dos doentes submetidos a Biópsia prostática apresentam DE aguda**

*Amnon et al 2001*



# TUMOR



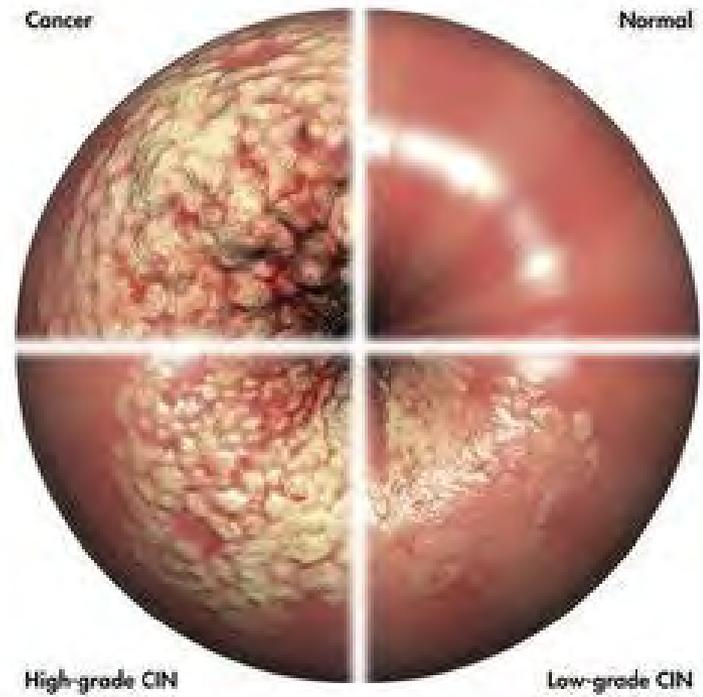
# Sintomas que afectam a sexualidade

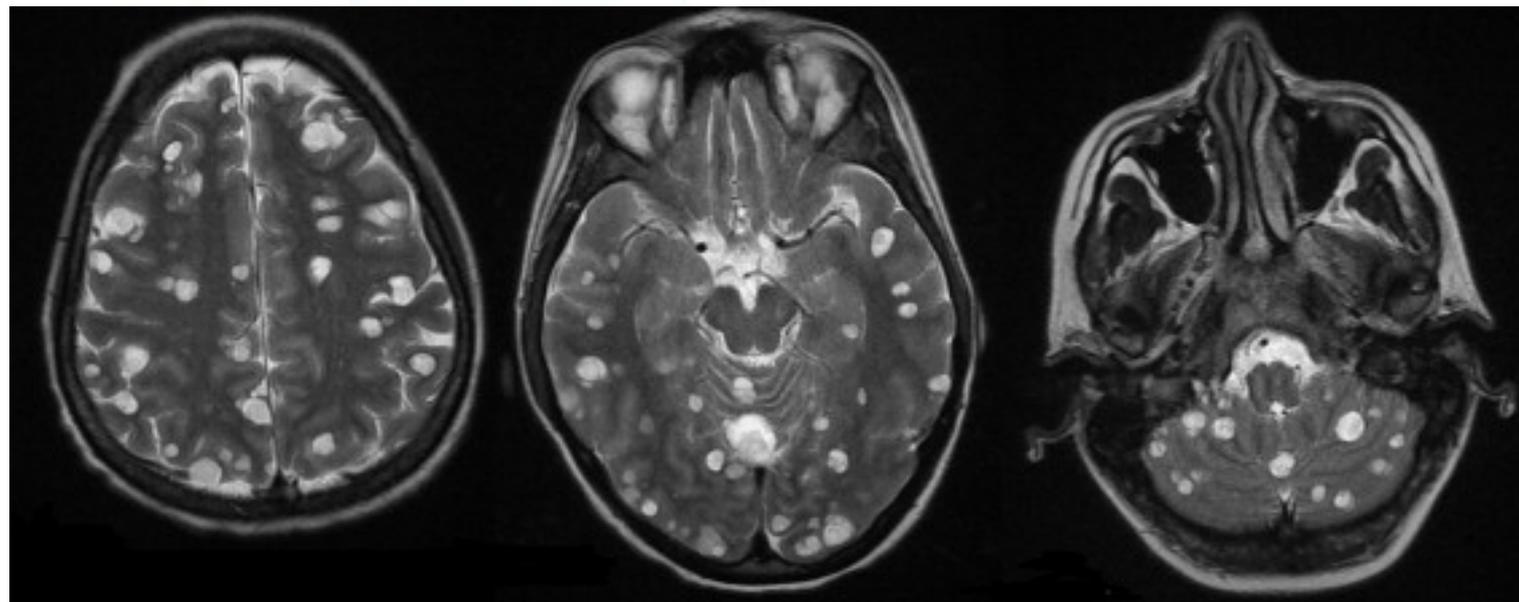
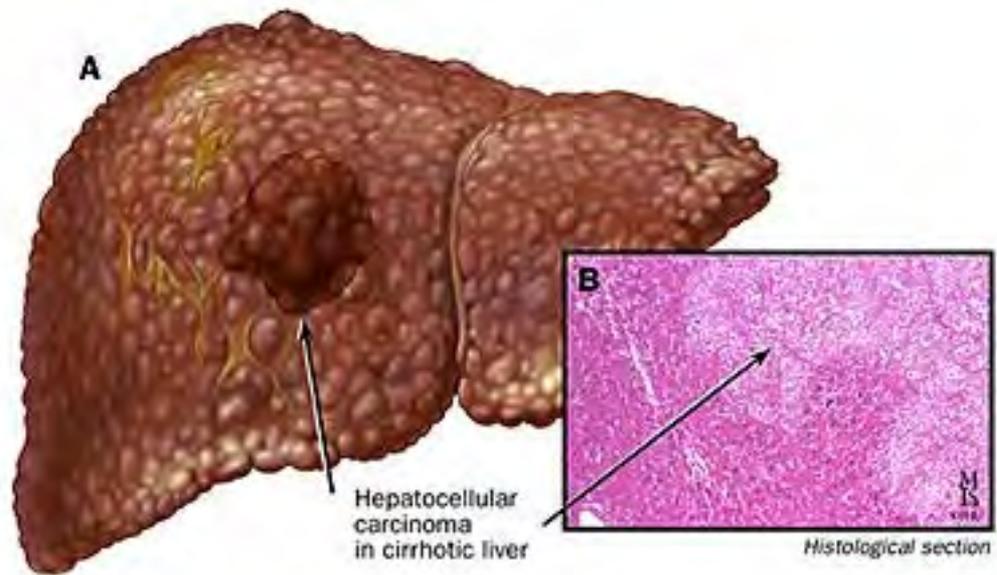
- Fadiga
- Dor
- Náuseas e vómitos
- Cicatrizes e deformidades
- Perda ponderal / caquexia
- Edema
- Ansiedade / Depressão
- Mobilidade comprometida
- .....
- **Síndromes paraneoplásicas**



CEC PÉNIS









# TRATAMENTOS



# CIRURGIA

- Alteração estrutural e anatômica
- Compromisso da integridade neurovascular das estruturas responsáveis pela resposta sexual
- Estética
- Sequelas: algicas, funcionais, .....





# CARCINOMA DO PÊNIS - SEXUALIDADE

## ➤ **Prevenção / Educação**

- Higiene, HPV, circuncisão, rastreio em áreas de elevada incidência, orientação precoce dos doentes
- Imunização??? HPV

## ➤ **Cirurgias poupadoras do órgão quando possível e seguro (Mohs micrographic surgery, LASER, RT...**

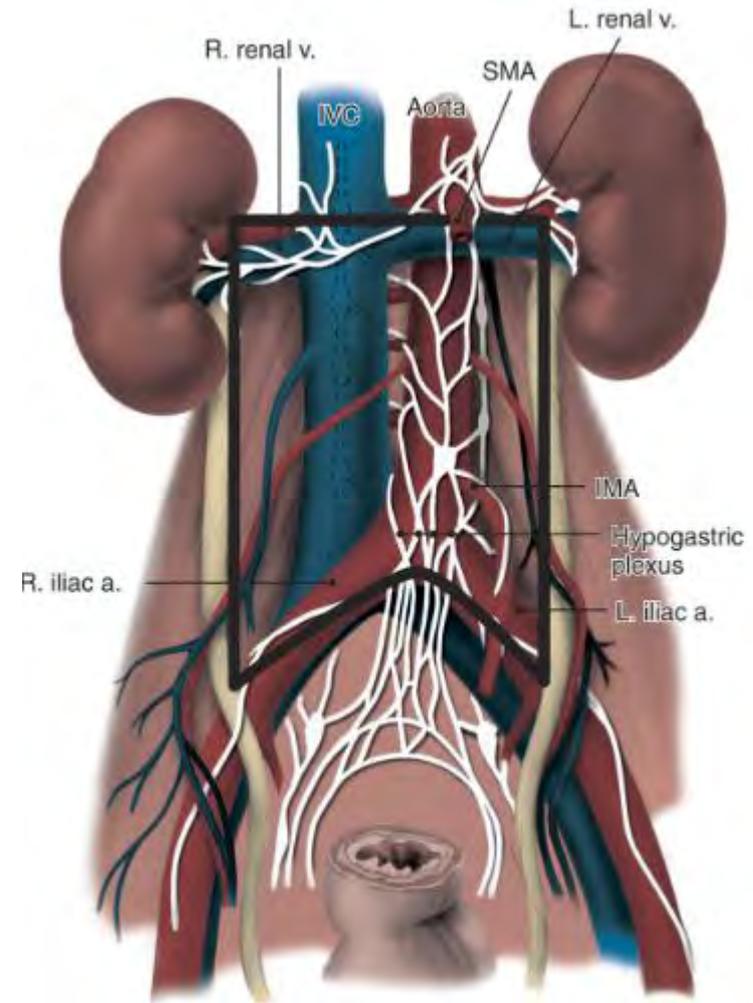
## ➤ **Reconstrução peneana muito difícil !!!**

## ➤ **Apoio psicológico**



# Tumores do Testículo - DISFUNÇÃO SEXUAL

- **Linfadenectomia Retroperitoneal**
  - Perturbação da emissão – ejaculação – anejaculação
  
- **(Orquidectomia bilateral, factores psicológicos, auto-imagem)**
  - Disfunção erétil, Líbido





## ***Sexual dysfunction: Meta-analysis of 36 studies from 1975 - 2000***

Sexual Dysfunction	<u>Retrospective Studies</u> n = 2,437	<u>Prospective Studies</u> n = 338
↓ Desire	20%	11%
Erectile dysfunction	11.5%	14%
↓ Orgasm	20%	9%
Ejaculation dysfunction	44%	51%
↓ Sexual Activity	24%	13%
↓ Sexual satisfaction	19%	18%

## ***Odds ratio (OR) of sexual dysfunction after testicular cancer treatment***

Sexual Dysfunction	OR
↓ Libido	1.75
ED	2.47
↓ Orgasm	4.62
EjD	28.57





# Tumores do Testículo

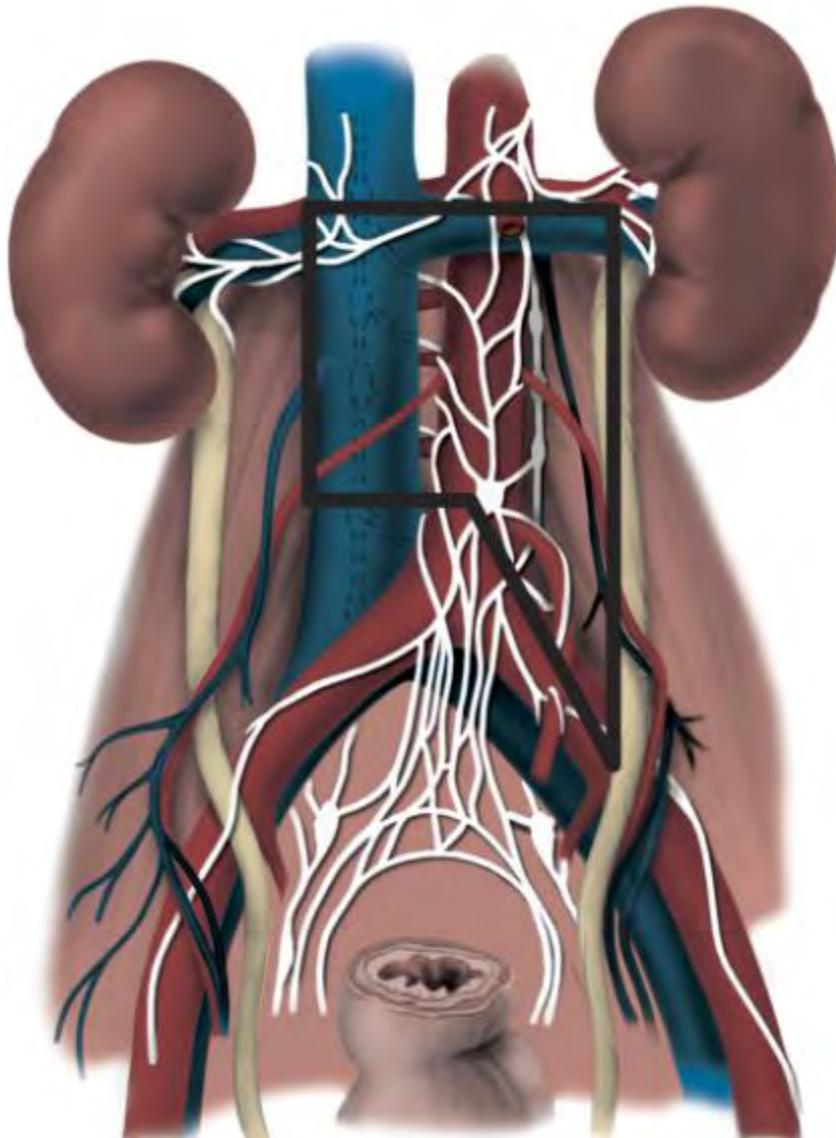
## DISFUNÇÃO SEXUAL

### ➤ **PERTURBAÇÕES EJACULATÓRIAS**

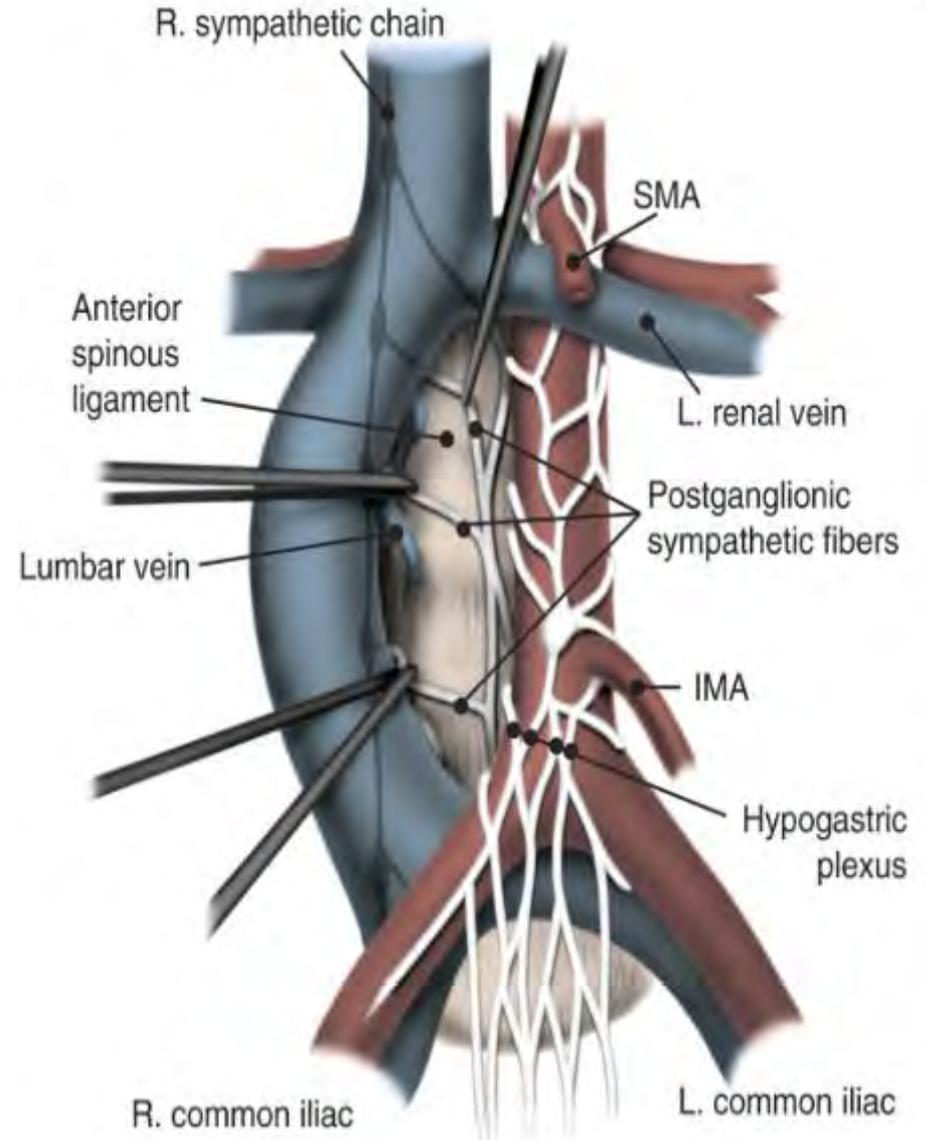
- Fármacos simpaticomiméticos
- LFD template (51-88% de recuperação)
- Nerve Sparing RPLND (95% recuperação)



# LINFADENECTOMIA RETROPERITONEAL por TT



Template para TT esquerdo



Nerve-sparing



# CIRURGIA no CANCRO DA MAMA

Partial or complete or bilateral mastectomy	Loss of sexual self image	Loss of breast & nipple sensitivity	Scientific reviews conclude reconstruction or choosing lumpectomy versus mastectomy has minimal effect on sexual function [588, 589, 595]
Scars	Cosmesis may not always be favorable		
Lymph node dissection	Appearance & possibly painful lymphedema of arm		
Possible non breast scars from reconstruction	Appearance & possibly painfu		Physical therapy may decrease lymphedema

ICUD 2010

- mastectomy was associated with greater problems in interest in sex;
- chemotherapy was associated with greater sexual dysfunction





## CIRURGIA no CANCRO DA MAMA



- ➔ women who had and had not undergone breast reconstruction did not differ with respect to coital frequency, ease of orgasm, or overall sexual satisfaction

*Schover LR. Sexuality and fertility after cancer. New York: Wiley; 1997.*





# CIRURGIA nos TUMORES GINECOLÓGICOS (vagina, vulva, colo uterino, útero, trompas, ovários)

Removal of sex organs	Sense of loss of womanhood Loss of fertility	Arousal and orgasmic disorders	
Disruption of uterosacral plexus		Loss of sexual genital congestion. dyspareunia, discomfort from direct vulval/ clitoral stimulation	Consideration for nerve sparing hysterectomy for neural preservation (LOE 4)
Lymph node dissection	Appearance & possibly painful lymphedema of leg	Positioning for intercourse is limited	Physical therapy may decrease lymphedema
Possible scars from reconstruction	Appearance & possibly painful		

Nerve-sparing during radical hysterectomy, radical trachelectomy and clitoral preservation during vulvar cancer surgery may allow neurovascular preservation which may lead to improve sexual function [541, 548, 563, 564, 566, 567] (LOE 4): Grade C.

ICUD 2010





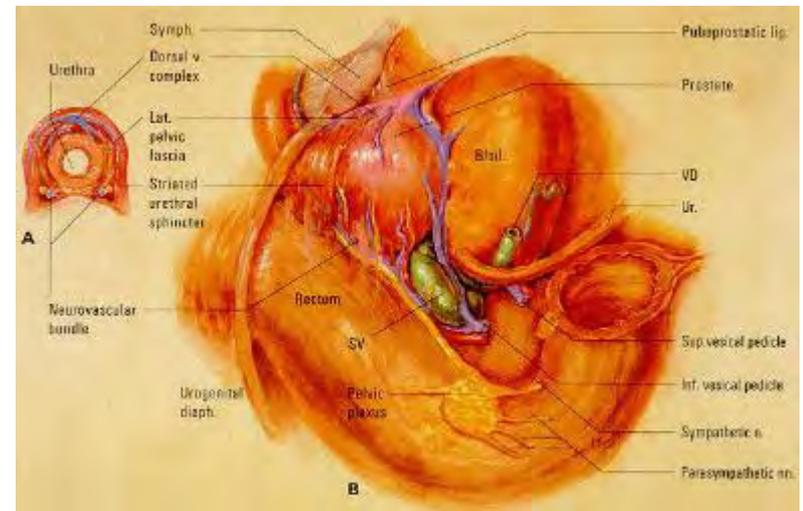
# Terapêutica do Carcinoma da Próstata localizado

## PROSTATECTOMIA RADICAL

➤ Excisão cirúrgica radical

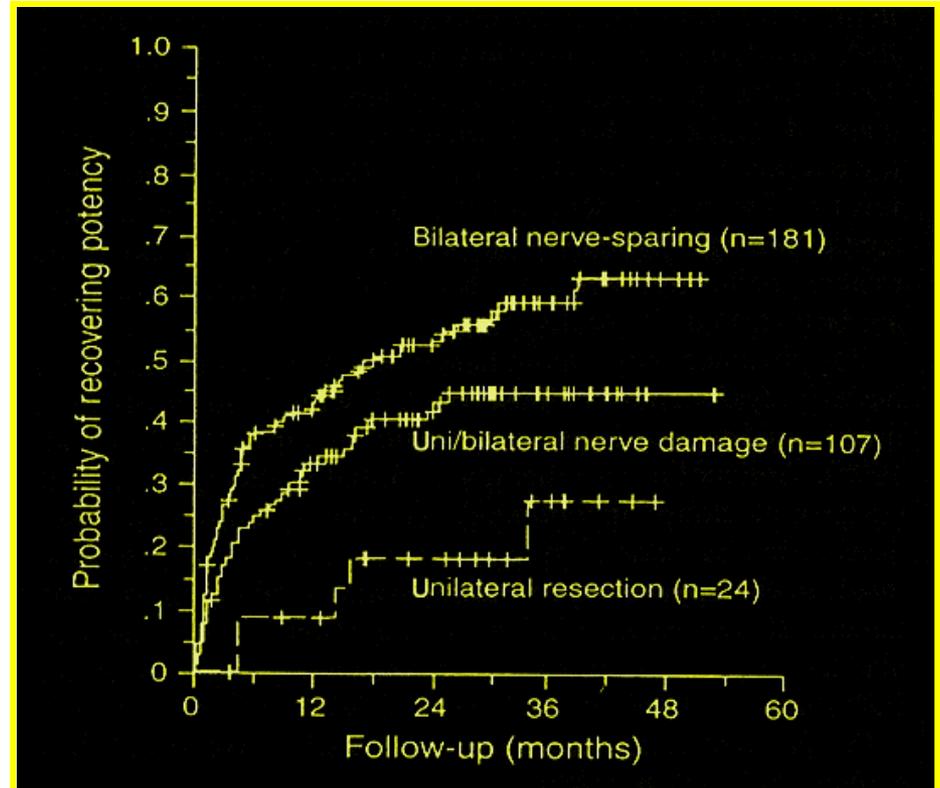
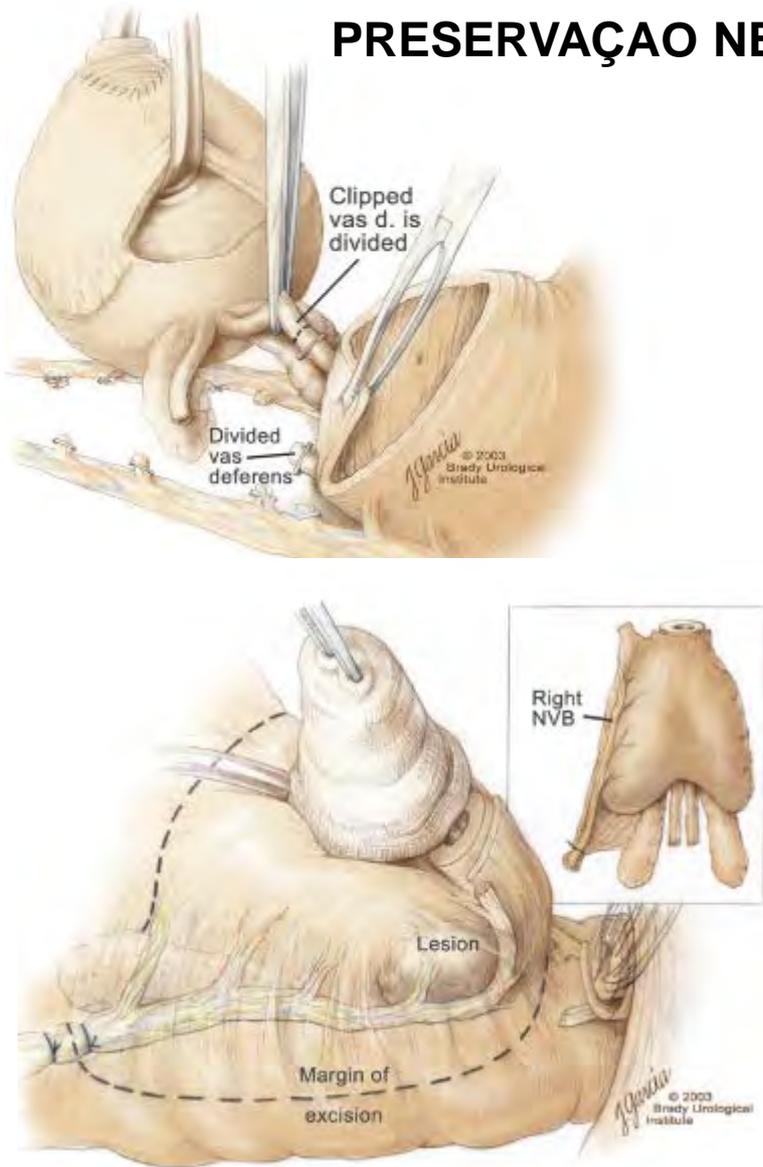
➤ OBJECTIVOS:

- Radicalidade oncológica
- Preservação da continência urinária
- Preservação da função sexual





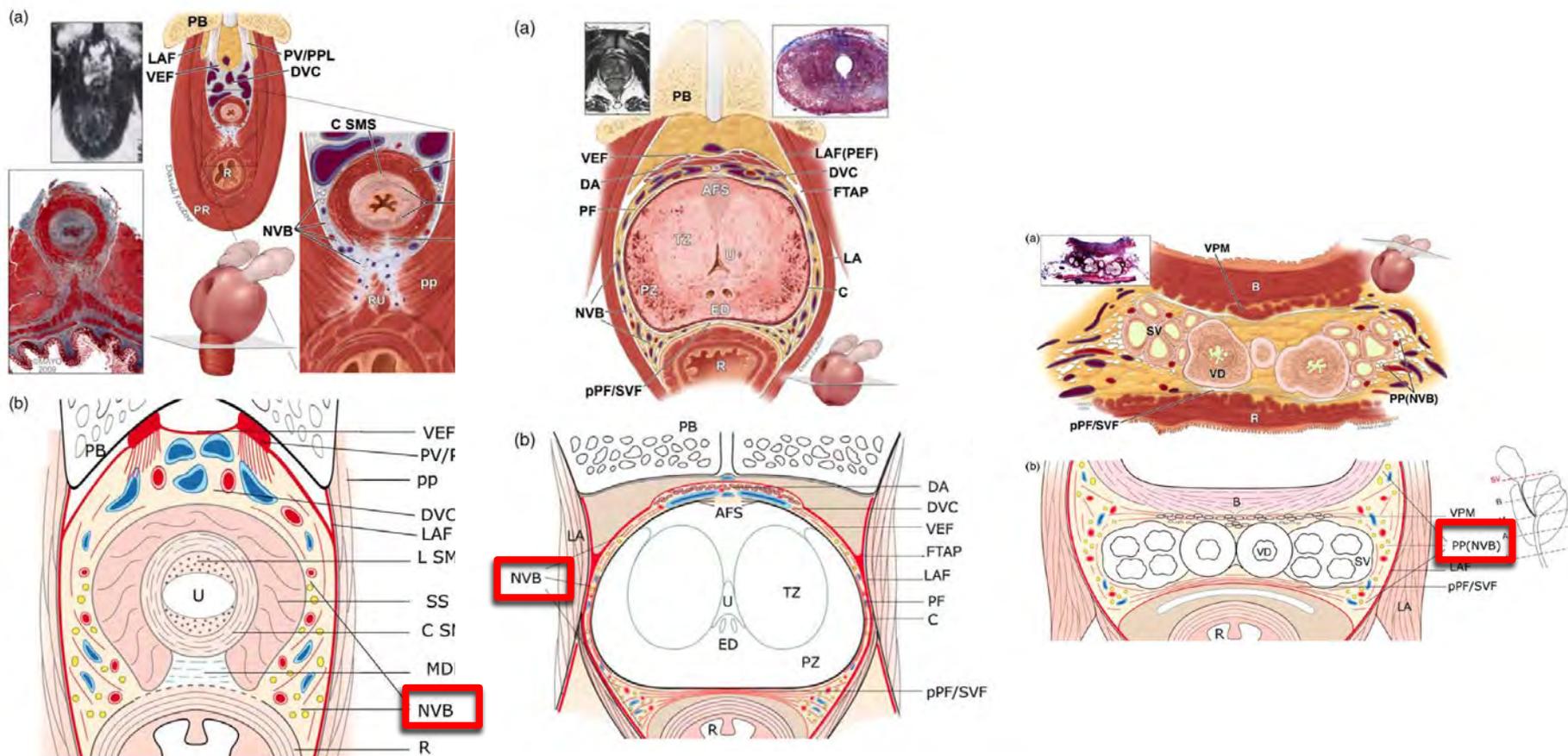
## PRESERVAÇÃO NERVOSA BILATERAL

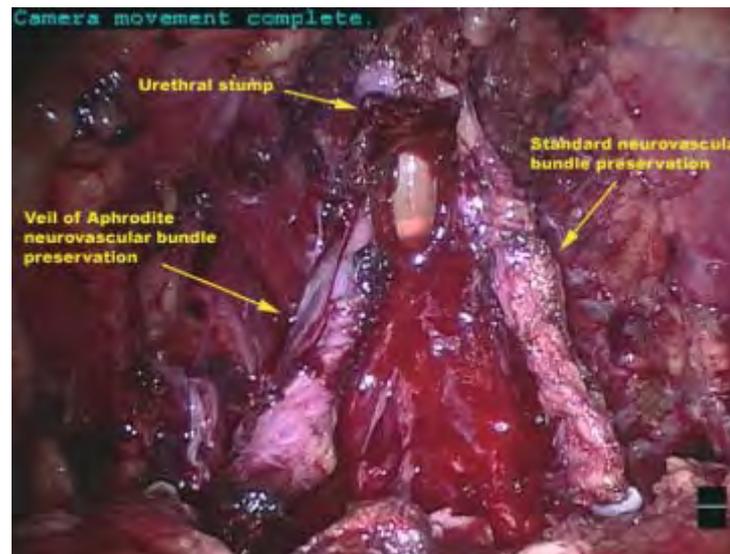
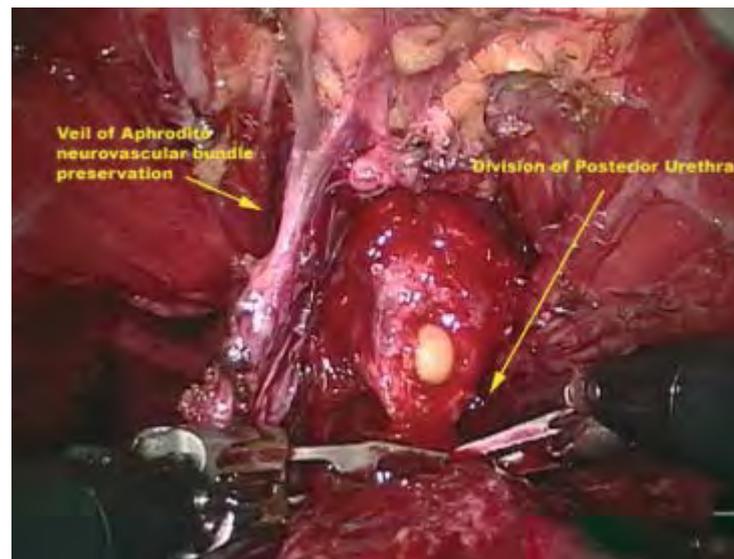
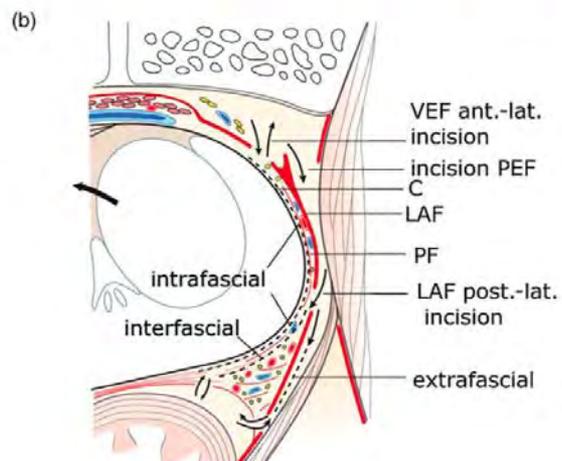
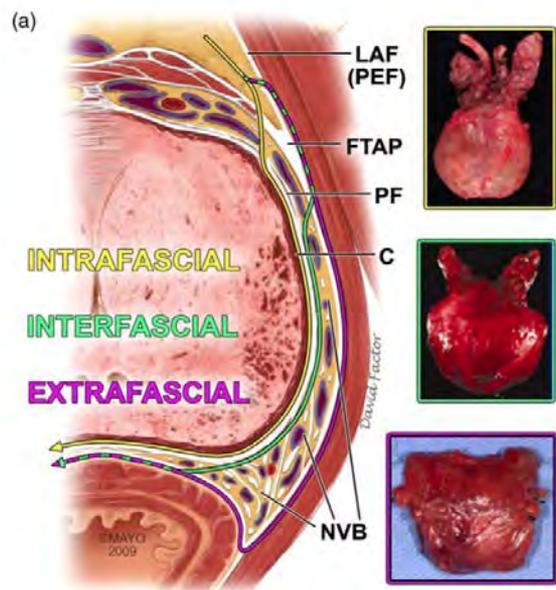


## PRESERVAÇÃO NERVOSA UNILATERAL

# A Critical Analysis of the Current Knowledge of Surgical Anatomy Related to Optimization of Cancer Control and Preservation of Continence and Erection in Candidates for Radical Prostatectomy

Jochen Walz<sup>a,\*</sup>, Arthur L. Burnett<sup>b</sup>, Anthony J. Costello<sup>c</sup>, James A. Eastham<sup>d</sup>, Markus Graefen<sup>e</sup>, Bertrand Guillonneau<sup>d</sup>, Mani Menon<sup>f</sup>, Francesco Montorsi<sup>g</sup>, Robert P. Myers<sup>h</sup>, Bernardo Rocco<sup>i</sup>, Arnaud Villers<sup>j</sup>







## Systematic Review and Meta-analysis of Studies Reporting Potency Rates After Robot-assisted Radical Prostatectomy

Vincenzo Ficarra<sup>a,b,\*</sup>, Giacomo Novara<sup>a</sup>, Thomas E. Ahlering<sup>c</sup>, Anthony Costello<sup>d</sup>, James A. Eastham<sup>e</sup>, Markus Graefen<sup>f</sup>, Giorgio Guazzoni<sup>g</sup>, Mani Menon<sup>h</sup>, Alexandre Mottrie<sup>b</sup>, Vipul R. Patel<sup>i</sup>, Henk Van der Poel<sup>j</sup>, Raymond C. Rosen<sup>k</sup>, Ashutosh K. Tewari<sup>l</sup>, Timothy G. Wilson<sup>m</sup>, Filiberto Zattoni<sup>a</sup>, Francesco Montorsi<sup>g</sup>

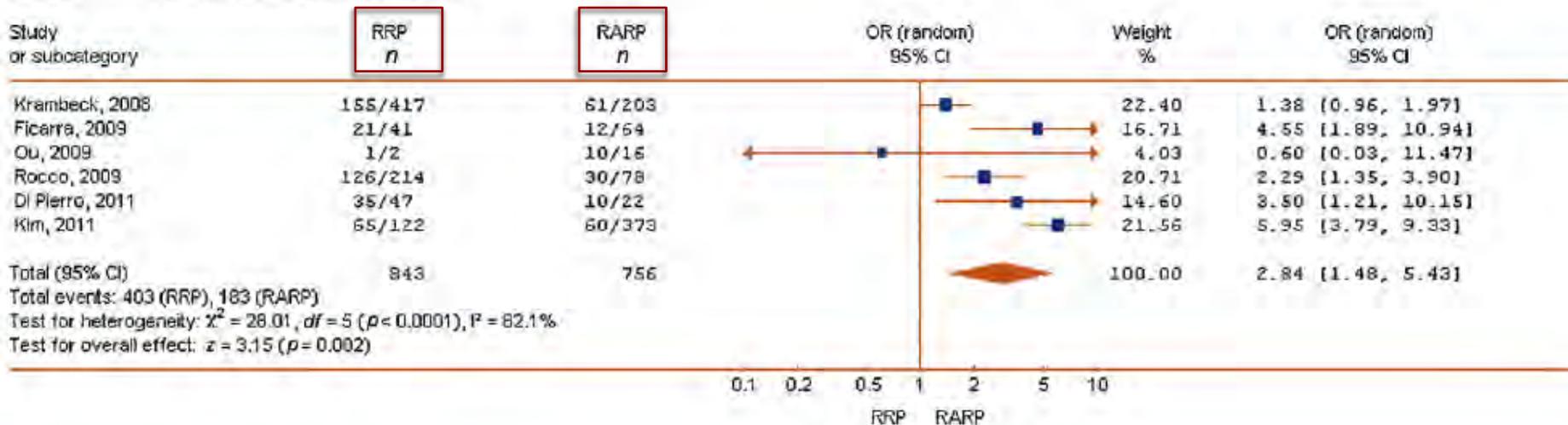
First author	Cases, n	Patients characteristics	Surgical aspects (NVB dissection)	Study design	Potency definition	Data collection	3 mo, %	6 mo, %	12 mo, %	24–36 mo, %	Mulhall criteria fulfilled
Park, 2008 [21]	58	Age: <65 yr Preoperatively potent	Unspecified NS	Retrospective analysis	ESI	Questionnaire	–	53	–	–	Unclear
Carlucci, 2009 [22]	700	Age: 40–78 yr Preoperatively potent	Interfascial bilateral NS Cautery-free/minimal use	Prospective case series	SHIM >21	Validated questionnaire	56	70	83	–	1
Murphy, 2009 [23]	232	Age: 43–75 yr Preoperatively potent	Unilateral NS (70) Bilateral NS (162) Interfascial cautery-free	Prospective case series	SHIM >21	Validated questionnaire	–	–	62	–	3
Rodriguez, 2009 [24]	58	Age: <65 yr Preoperatively potent	Monolateral (15) Bilateral (43) Interfascial/intrafascial Cautery-free NS	Prospective case series	ESI	Validated questionnaire	32	–	–	90	6
Shikanov, 2009 [25]	380	Age: 42–76 yr Preoperatively potent	Bilateral NS Interfascial Clipless (bipolar cautery)	Prospective case series	ESI	Validated questionnaire (interview)	44 (57)	50 (63)	62 (82)	69 (93)	7
Menon, 2009 [26]	85	Mean age: 55 yr (range: 42–72) Preoperatively potent	Bilateral NS Interfascial (Superveil) Clipless (monopolar cautery)	Prospective case series	ESI	–	–	–	–	94	7
Houssard, 2010 [27]	189	Mean age: 63 yr (range: 47–75) Preoperatively potent (75%)	Monol (29) Bilateral (152) Intrafascial (73%) Extraperitoneal	Prospective case series	ESI	Validated questionnaire	19	24	39	–	4
Novara, 2010 [28]	208	Mean age: 61 yr Preoperatively potent (79%)	Bilateral NS Interfascial (60) Intrafascial (148) Clipless (monopolar cautery)	Prospective case series	SHIM >18	Validated questionnaire	–	–	62 (58) (63.5)	–	7
Shikanov, 2010 [29]	816	Age: 38–85 yr Preoperatively potent	Bilateral Interfascial NS Clipless (bipolar cautery)	Prospective case series	ESI	Validated questionnaire	–	–	75	–	7
Patel, 2011 [30]	332	Mean age: 58.7 yr Preoperatively potent	Bilateral NS Intrafascial (full) Athermal	Prospective case series	ESI	Validated questionnaire	68	86	90	–	7
Xylinas, in press [31]	433	Mean age: 62 yr (range: 43–79) Preoperatively potent	Monolateral (55) Bilateral NS (378) Extraperitoneal	Prospective case series	ESI	Validated questionnaire	–	–	54	63	4

ESI = erection sufficient for intercourse; NVB = neurovascular bundle.  
All studies are level 4 evidence.  
\* Same cohort at two different follow-up durations.

Variabilidade de critérios e definições / avaliação

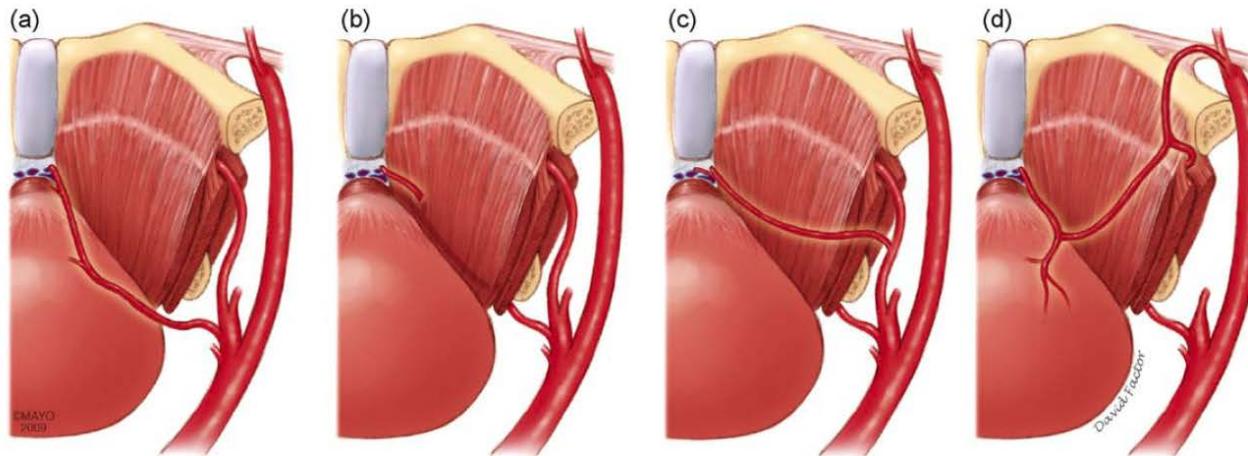


Review: Radical prostatectomy: comparisons of different approaches  
 Comparison: 11 Potency rate  
 Outcome: 01 12-mo potency rate: RRP vs RARP





## VASCULARIZAÇÃO CAVERNOSA ACESSÓRIA

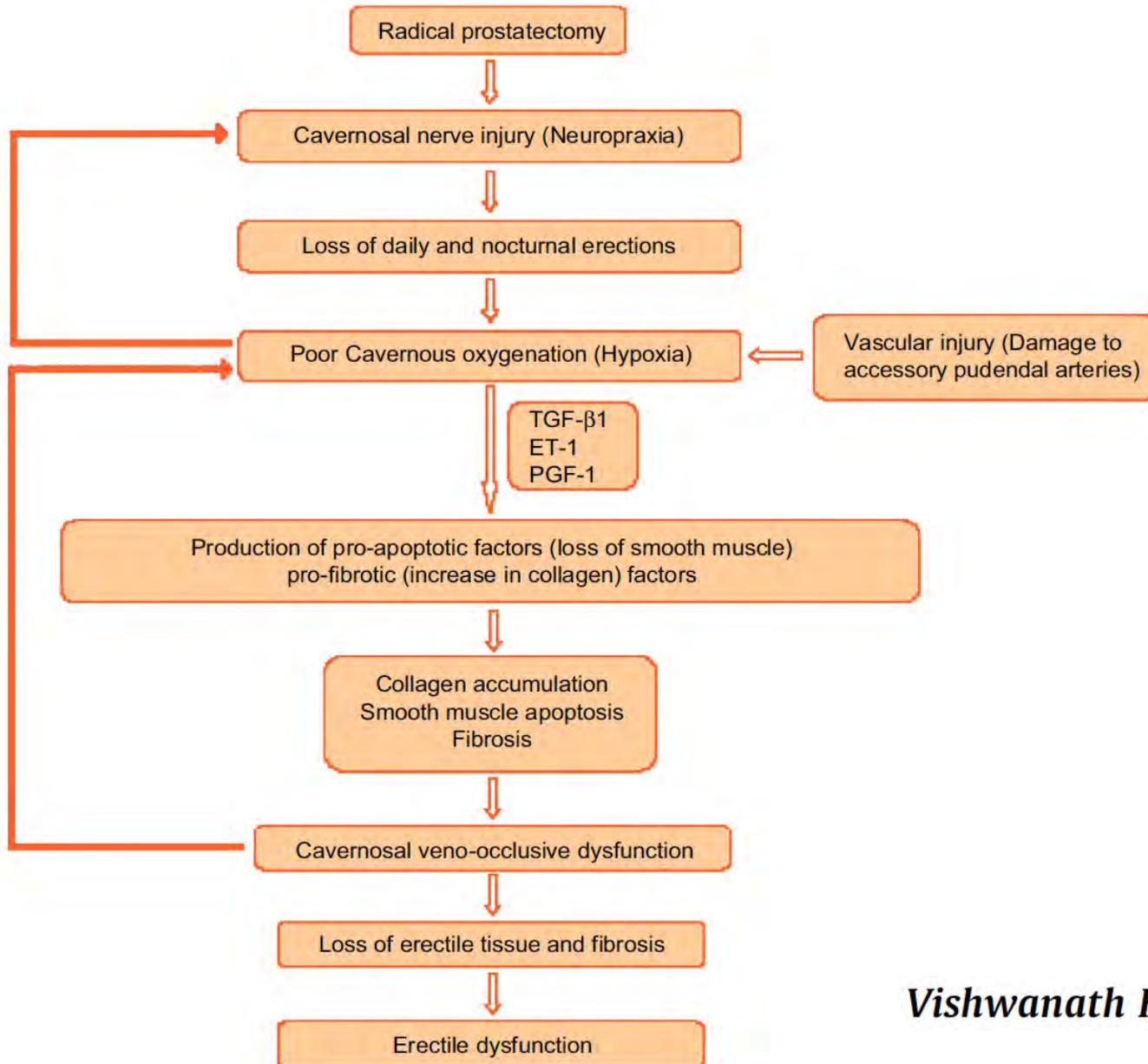


*Lateral accessory or aberrant pudendal arteries*

*Apical accessory pudendal arteries*

DVC as previously mentioned. **Accessory or aberrant pudendal arteries** are present in 4–75% of all men and provide unilaterally or bilaterally arterial blood to the corpora cavernosa [27,28]. They may be solely responsible for arterial blood supply to the corpora cavernosa; if so, preservation of these arteries during prostatectomy would be mandatory to avoid erectile dysfunction caused by penile **arterial insufficiency** [29–32]. Two different types of accessory or aberrant pudendal arteries are categorizable







# Sexual Dysfunction Following Radical Prostatectomy

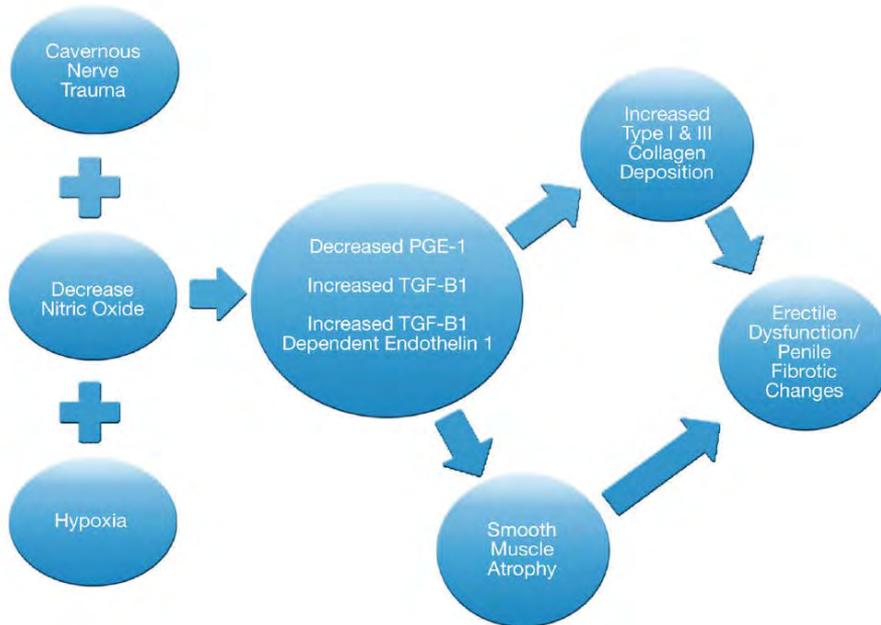
## Review

COOPER R. BENSON,\* EGE CAN SEREFOGLU,† AND WAYNE J. G. HELLSTROM†

From the \*Department of Urology, Louisiana State University, New Orleans, Louisiana; and the †Department of Urology, Tulane University Medical Center, New Orleans, Louisiana.

**Entre 4 e 6 meses pós-PR:**  
**< 9% no comprimento**  
**< 22% do volume peneano**

*Frیمان et al 2009*



➤ The most significant decrease in the length of the penis occurred at the time of catheter removal (0.67 cm flaccid and 0.84 cm stretched), which they associated with **sympathetic hyperinnervation causing a hypertonic penile state and that long-term loss in penile length was due to the fibrogenic state**

➤ *Ciancio and Kim, 2000; Gontero et al, 2007*

➤ **nerve sparing made no difference**





# Função sexual e Prostatectomia Radical

- N=110 COM DE PÓS-PR
  - **41% ALTERAÇÕES FIBRÓTICAS PENEANAS**
    - 93% CURVATURA
    - 24% BANDA CIRCULAR
    - 69% PLACAS
  - **70% DIMINUIÇÃO DO TAMANHO PÊNIS**
  - 50% ESTABILIZAÇÃO
  - 40% MELHORIA (87,5% AP VÁCUO OU IIC)
  - 10% PROGRESSÃO

CIANCIO ET AL 2000





# Função sexual e Prostatectomia Radical

## ORGASMO

- Entrevista e questionário
  - 55%: diminuição da libido e arousal (também na parceira)
  - Nenhum sentiu *no return point*
  - 70% : diminuição da sensação orgástica (ausência de ejaculação)
  - 30% : prazer N
  - 64%: perda de urina durante o orgasmo
  - 14%: dor durante o orgasmo

Koeman et al 1996

- Orgasmo sem erecção



# PR e Orgasmo

- N = 239 patients post-RP
  - **14% dysorgasmia**
    - penile pain during orgasm (72%)
    - Some reported abdominal and rectal pain
  - intense bladder neck closure during orgasm is translated into spasms of the vesico-urethral anastomosis or pelvic floor dystonia.
  - alpha-blockers helped to ameliorate pain in 77% of 98 patients complaining of dysorgasmia



# Climatúria

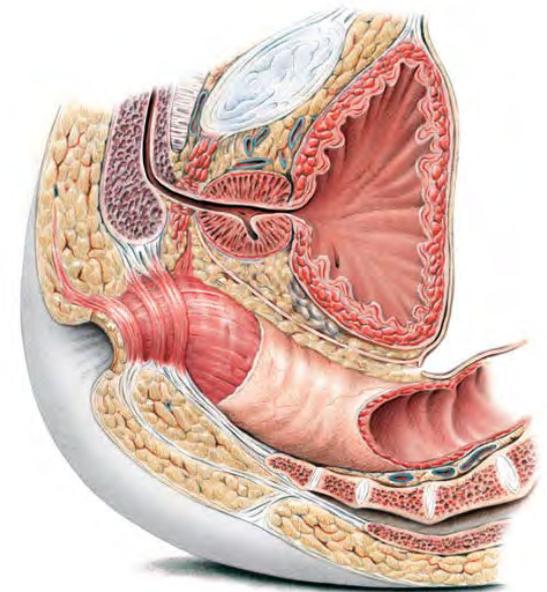
- Até 45% após PR
- N = 1288
  - 20% climatúria (destes 86% estavam continentes)
- In patients with climacturia, there was a higher prevalence of avoidance of sexual activity for fear of failing, not satisfying their partner, and low orgasmic satisfaction, indicating a negative effect on QoL
- climacturia was more common in patients experiencing dysorgasmia and/or penile shortening



# CIRURGIA nos TUMORES DA BEXIGA

## CISTOPROSTATECTOMIA com preservação nervosa - resultados

Reference	N	Procedures	Erectile Function	Other Outcomes	LOE
Walsh & Mostwin, 1984[438]	11	Radical cystectomy sparing nerve bundles	67% "able to have intercourse"	--	4
Zippe et al., 2004a[445]	16 NS 33 NNS	Radical cystectomy sparing nerve bundles	91% had ED at mean 48-mo. FU	Only 9% could use PDE5-inhibitors successfully	4
Hekal et al., 2008[446]	21 NS 24 NNS	Radical cystectomy sparing nerve bundles	0% ED 42% ED	Sildenafil worked in 21% with NS but none with NNS	4
Puppo et al., 2008[440]	37	Intrafascial prostatectomy, sparing SV, VD, nerve bundles	Only 14% had moderate/severe ED	No loss of urinary continence	4
Nieuwenhuijzen et al., 2005[441]	40	Spared prostate, SV, VD, and nerve bundles	Only 23% had ED	Was 42 mo. FU, but subjective criteria used	4
Davila et al., 2007[447]	15 6	Spared apex of prostate Spared whole prostate	IIEF EF score 20 IIEF EF score 30	At 30 months, excess local recurrence rates	4





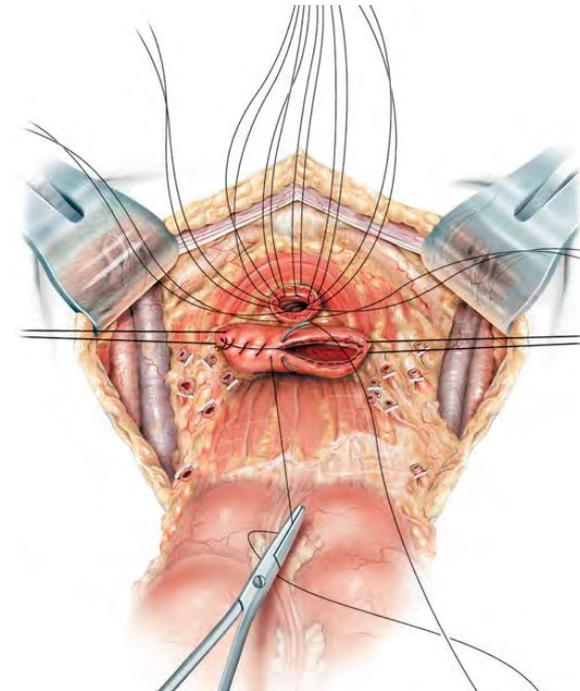
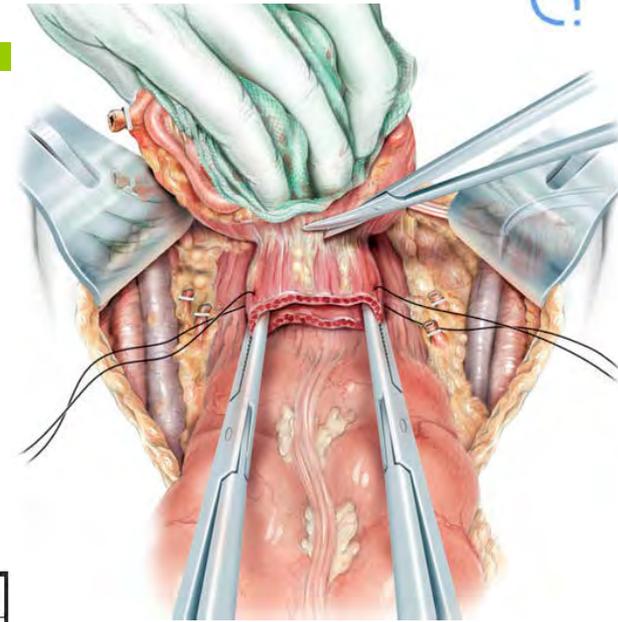
# CIRURGIA nos TUMORES DA BEXIGA

## CISTECTOMIA RADICAL & disfunção sexual feminina

Reference	N	Procedures	Sexual Function	Other Outcomes	LOE
Zippe et al., 2004[457]	10 7 10	Ileal conduit Cutaneous diversion Neobladder	At 2-year FU no difference by group, 48% inactive, 37% low desire, 22% dyspareunia, 45% inorgasmic	Classic operative technique, no NS	4
Volkmer et al., 2004[[461]	44	Neobladder, NNS	39% stayed sexually active and 65% of this group said better sex than before cystectomy	Classic operative technique, no NS; if > age 60 at time of surgery, had benign disease, and a sexual partner, better sexual functioning	4
Bhatt et al., 2006[459]	6 7	NS NNS	Preserved FSFI score Big drop in FSFI score	Anterior vaginal wall and neurovascular bundle spared	4

Abbreviations: NS: nerve-sparing; NNS: non nerve-sparing; FU: follow-up; FSFI: Female Sexual Function Index

ICUD 2010

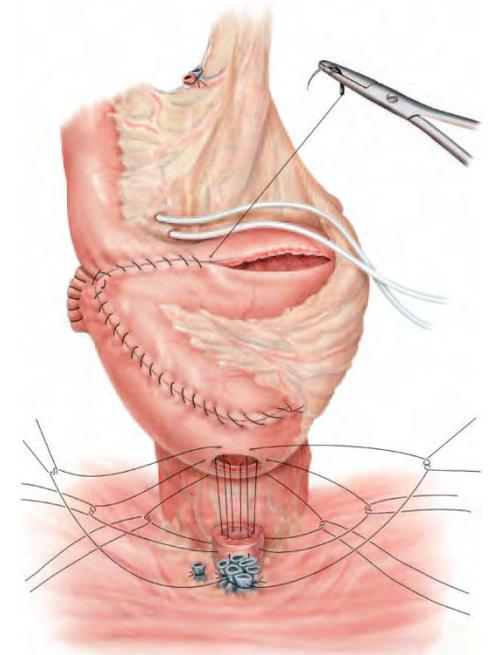




# CIRURGIA nos TUMORES DA BEXIGA

## TIPO DE DERIVAÇÃO URINÁRIA E SEXUALIDADE MASCULINA

Reference	N	Procedures	Erectile Function	Other Outcomes	LOE
Bjerre et al., 1998[451]	27 49	Ileal conduit Cutaneous diversion	81% of men had ED, no difference by group	26% sexually active at FU, less likely if .68 years	4
Henningsohn et al., 2002a[452]	95 112	Cutaneous diversion Healthy controls	94% ED at 1-year FU 48% ED	No difference from controls in QOL	4
Zippe et al., 2004[445]	8 3 38	Ileal conduit Cutaneous diversion Neobladder	86% at 4-year FU, no difference by group	Only 52% of men with ED sought help	4
Kikuchi et al., 2006[453]	13 11 15	Ileal conduit Cutaneous diversion Neobladder	100% had ED, no difference by group	Desire for sex also low	4
Studer et al., 2006[454]	442	Neobladder	78% ED	15% successful use of medical therapy for ED	4
Gilbert et al., 2007[432]	60 93	Ileal conduit Neobladder	Both groups had poor sexual function	Continence worse if neobladder	3
Frich et al., 2008[455]	37 16 19	Ileal conduit Cutaneous diversion Neobladder	81% had ED at 2- to 5-year FU, no difference by group	Continence worse if neobladder	3





# RADIOTERAPIA



# RADIOBIOLOGIA

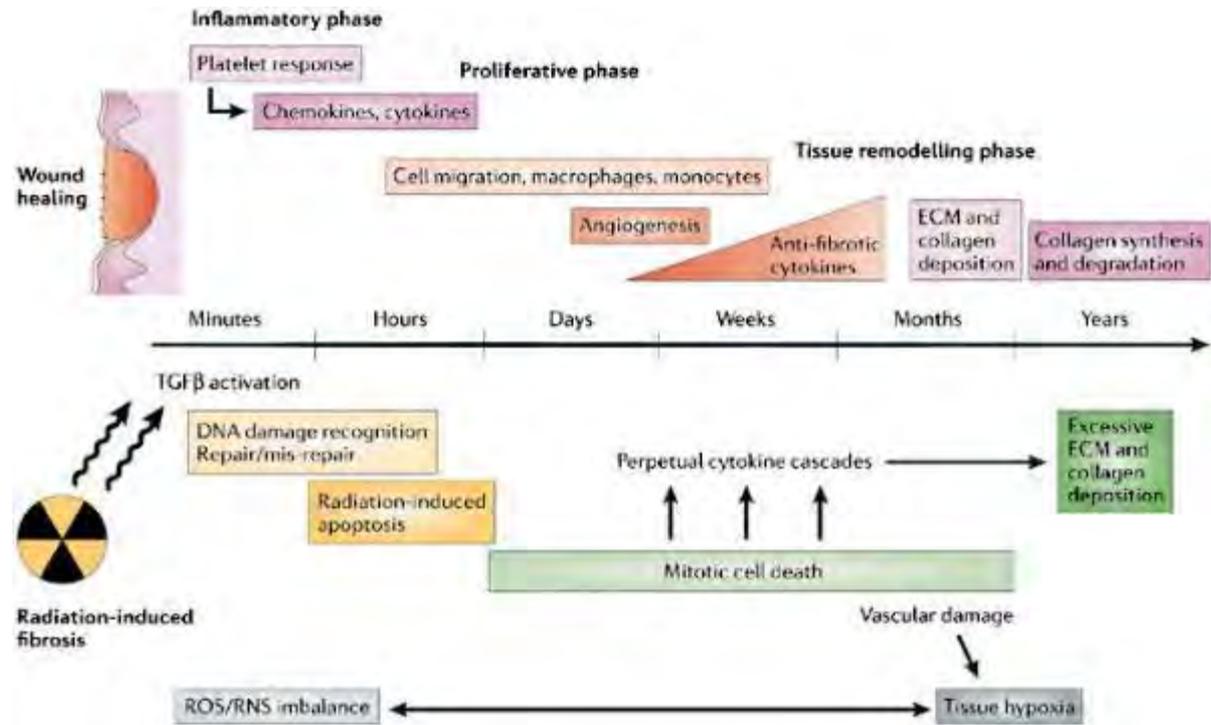
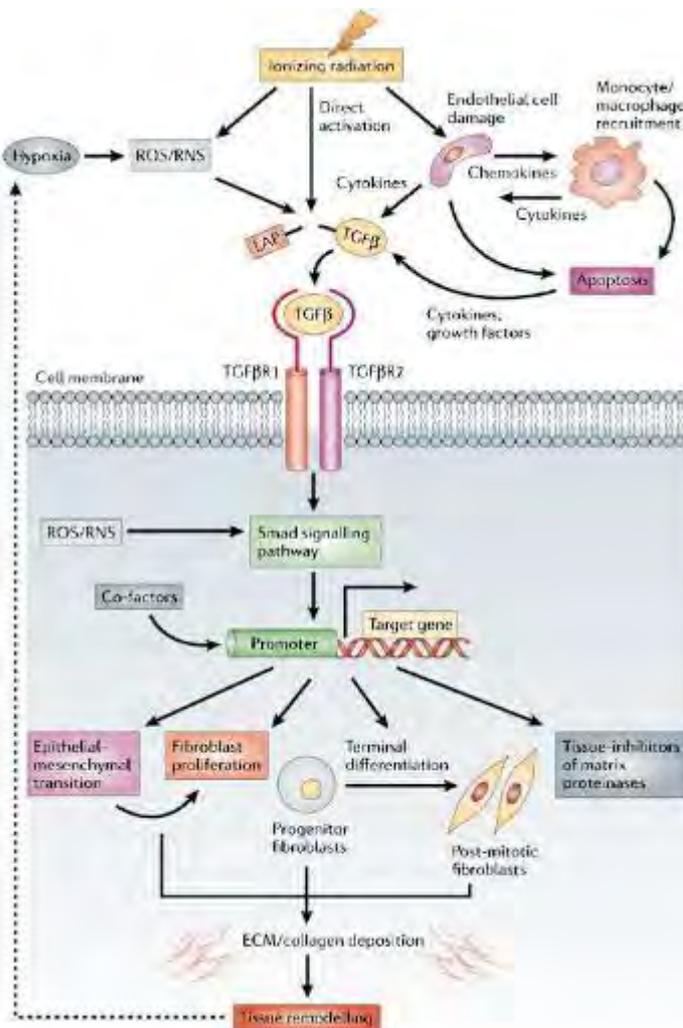




TABLE 15.1. Different types of cells and their radiosensitivity.

Types of cells*		Radiosensitivity
VIM	Mature lymphocytes Erythroblasts Spermatogonia	Highly sensitive
DIM	Myelocytes Intestinal crypt cells Basal cells of epidermis	Relatively sensitive
MCT	Osteoblasts Spermatocytes Chondroblasts Endothelial cells	Intermediate sensitivity
RPM	Spermatozoa Granulocytes Erythrocytes Osteocytes	Relatively resistant
FPM	Nerve cells Muscle cells Fibrocytes	Highly resistant

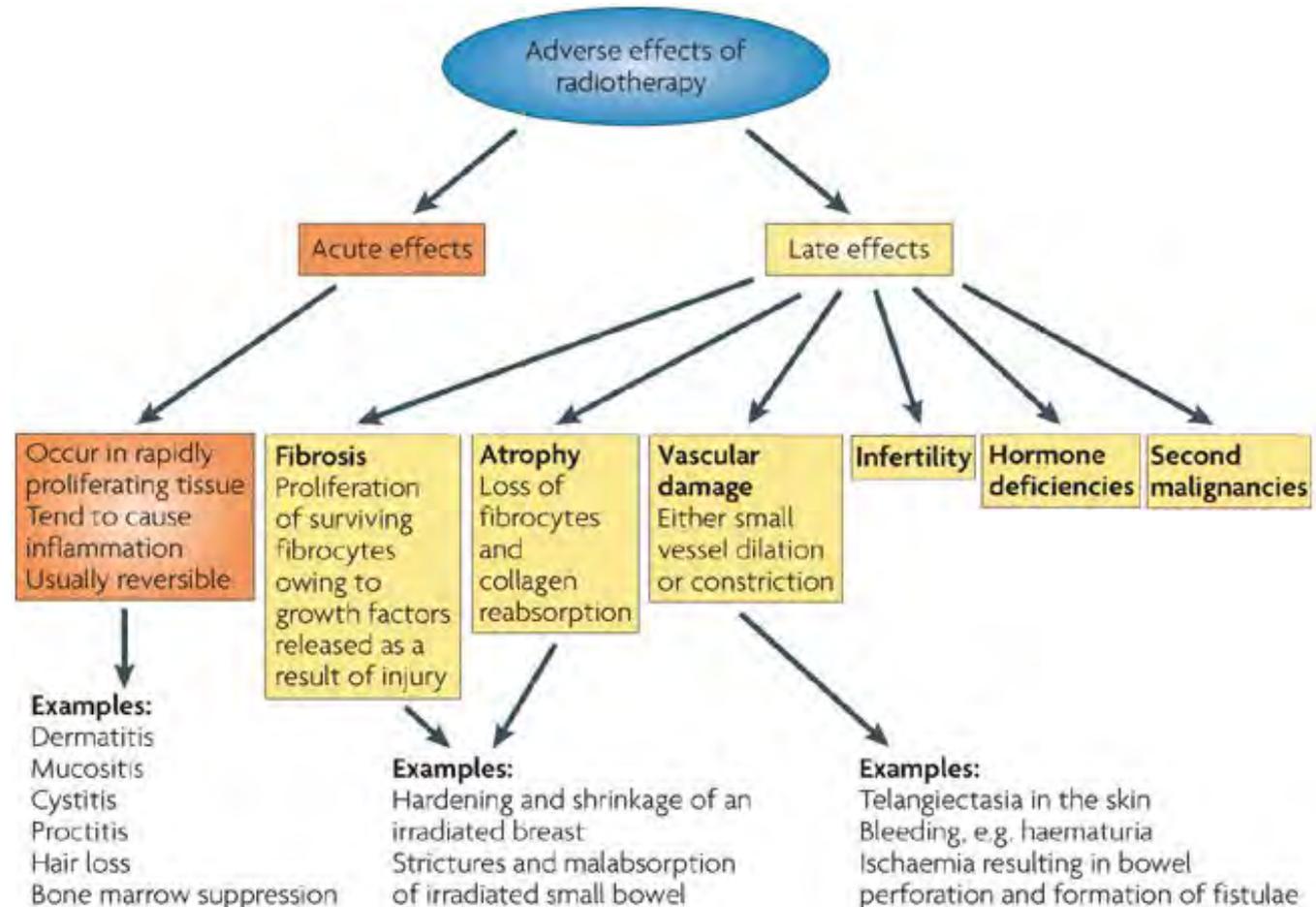
Adapted from Casarett AP. *Radiation Biology*. Englewood Cliffs, NJ: Prentice-Hall; 1968:168–169.

\* VIM—vegetative intermitotic; DIM—Differentiating intermitotic; MCT—multipotential connective tissue; RPM—reverting postmitotic; FPM—fixed postmitotic.



# RADIOTERAPIA

- Lesões cutâneas
- Fadiga
- Alopecia
- Diarreia
- Náuseas e vômitos
- Fraqueza geral
- Líbido
- Estigma de ser irradiado





## RADIOTERAPIA nos TUMORES DA MAMA e GINECOLÓGICOS (vagina, vulva, colo uterino, útero, trompas, ovários)

Skin fibrosis	Altered appearance & sensitivity of skin	Loss of sexual sensitivity of genital skin	
Cardiac or respiratory damage		Fatigue, cardiac or respiratory compromise limit sexual activities	Sex therapy to adapt to limited cardio/respiratory reserve
Vaginal narrowing & foreshortening	Loss of sexual confidence	Decreased lubrication dyspareunia	Dilators, lubricants, topical E

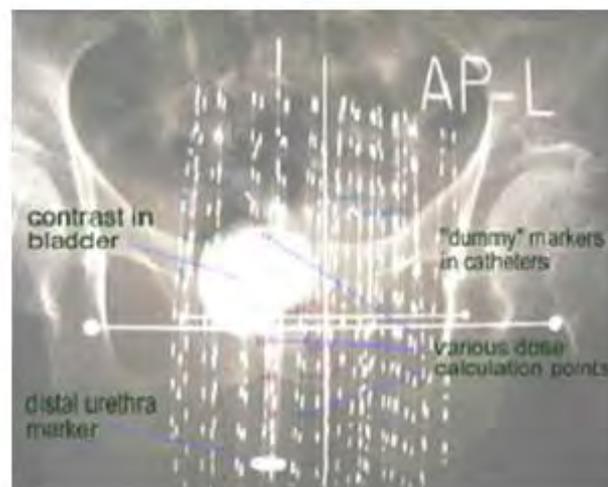
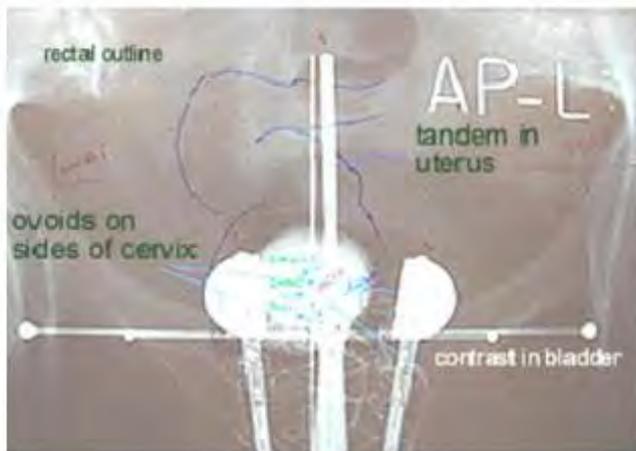
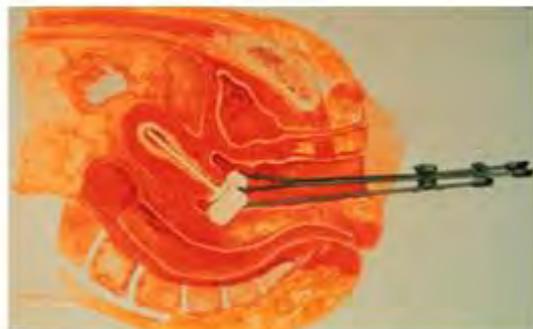


ICUD 2010





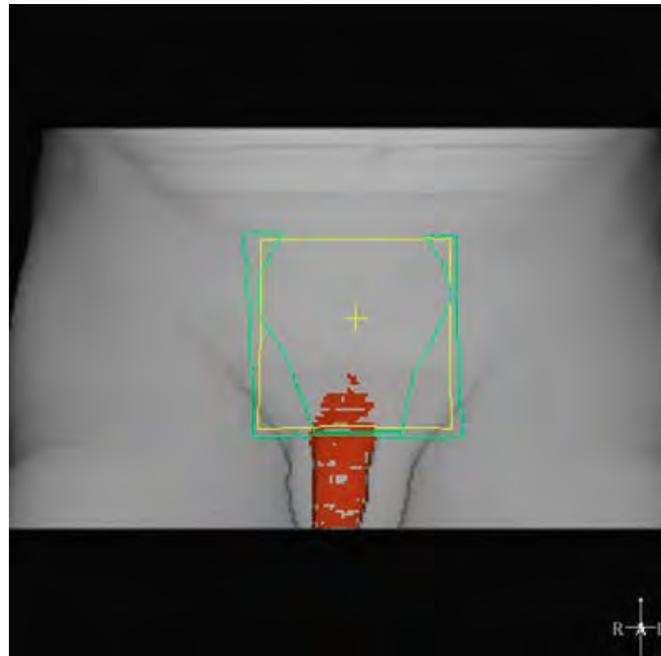
# Brachytherapy for Gynecologic Cancers





# RADIOTERAPIA NO CARCINOMA DA PRÓSTATA

- DE pós-RT – essencialmente arteriogénica  
*Zelefsky & Eid 1998*
- Multifactorial (NVB / PÉNIS)

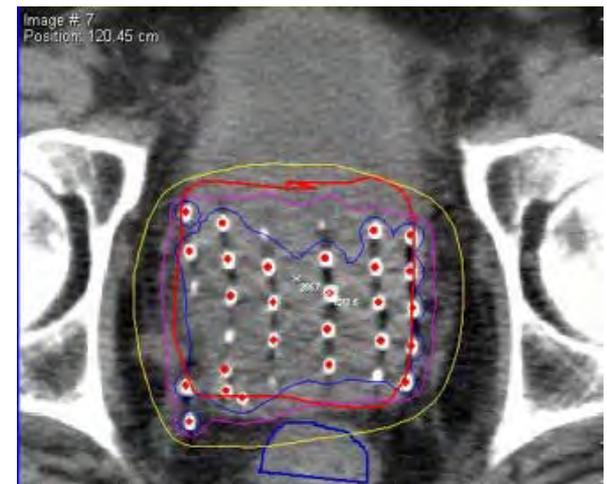




# Terapêutica do Carcinoma da Próstata LOCALIZADO e função eréctil

- Valor preditivo de manutenção da potência:
- Braquiterapia 0.76
- RT ext + Braquiterapia 0.6
- RT ext 0,55 - 0.69
- Nerve Sparing PR 0.34 - 0.42
- Não Nerve Sparing PR 0.25
- Crioterapia 0.13

Robinson, J.W., S. Moritz, and T. Fung,  
***Meta-analysis of rates of erectile function  
after treatment of localized prostate carcinoma.***  
Int J Radiat Oncol Biol Phys, 2002. **54**(4): p. 1063-8.



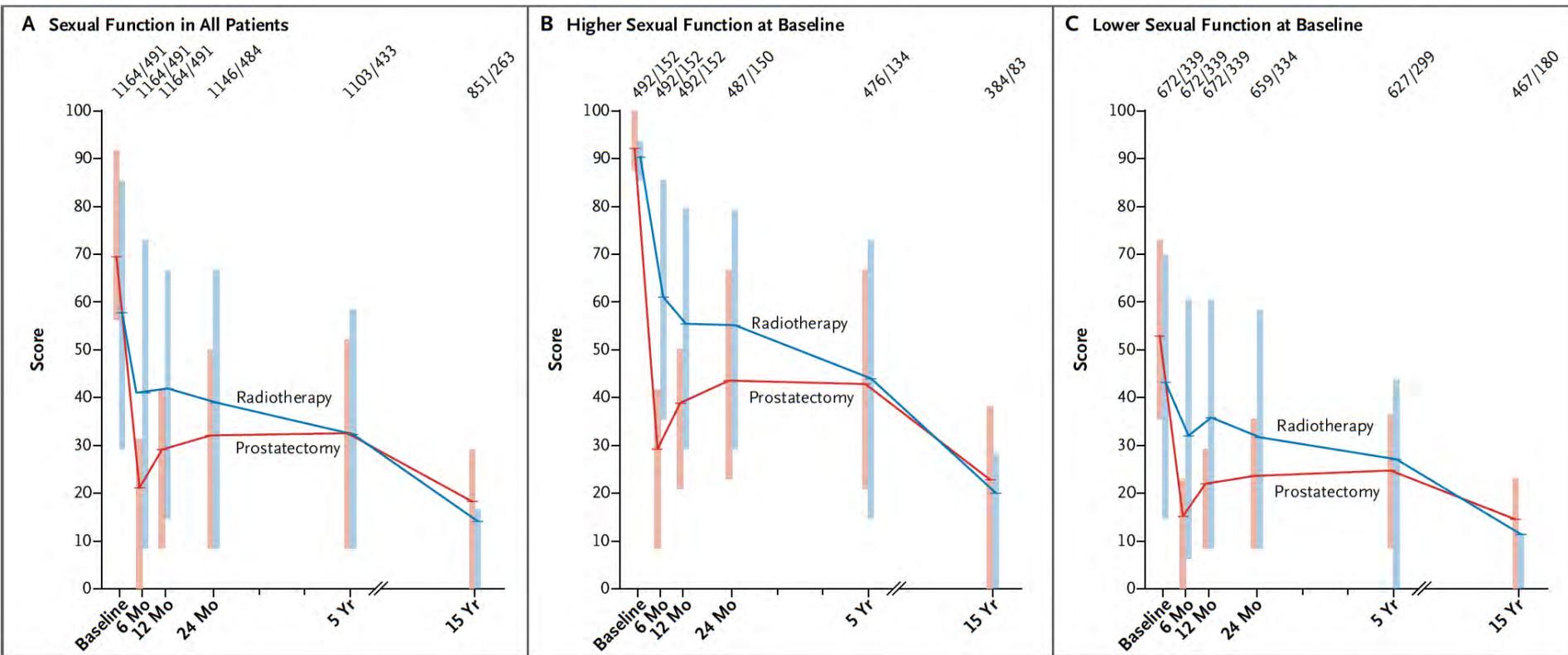
RADIOPROTECÇÃO



# Long-Term Functional Outcomes after Treatment for Localized Prostate Cancer



Matthew J. Resnick, M.D., Tatsuki Koyama, Ph.D., Kang-Hsien Fan, M.S.,  
 Peter C. Albertsen, M.D., Michael Goodman, M.D., M.P.H.,  
 Ann S. Hamilton, Ph.D., Richard M. Hoffman, M.D., M.P.H.,  
 Arnold L. Potosky, Ph.D., Janet L. Stanford, Ph.D.,  
 Antoinette M. Stroup, Ph.D., R. Lawrence Van Horn, Ph.D.,  
 and David F. Penson, M.D., M.P.H.





# Pilot Study on Quality of Life and Sexual Function in Men-Who-Have-Sex-with-Men Treated for Prostate Cancer

Tsz Kin Lee, MD,\* Rodney Henry Breau, MD,<sup>†</sup> and Libni Eapen, MD<sup>‡</sup>

\*Radiation Oncology, Fraser Valley Cancer Centre, British Columbia Cancer Agency, Surrey, BC, Canada; <sup>†</sup>Urology, The Ottawa Hospital, Ottawa, ON, Canada; <sup>‡</sup>Radiation Oncology, The Ottawa Hospital Cancer Centre, Ottawa, ON, Canada

**Introduction.** There is limited data on post-treatment quality of life (QoL) for men-who-have-sex-with-men (MSM) with prostate cancer (PCa). QoL in MSM may not be reflected by assessment tools designed for the heterosexual population.

**Aims.** Our goals were to evaluate post-treatment QoL in PCa patients who are MSM, and to investigate the utility of current QoL assessment tool.

**Methods.** PCa patients treated with surgery and/or radiation were recruited from the local MSM community. Each participant completed the Expanded Prostate Cancer Index Composite (EPIC) questionnaire, Male Sexual Health Questionnaire (MSHQ), and a questionnaire focused on insertive and receptive roles of anal intercourse.

**Main Outcome Measures.** Response scores were calculated based on questionnaire design and compared by treatment modality.

**Results.** Seven participants treated with surgery (mean age 58) and eight participants treated with radiation (mean age 67) were recruited. No participant in the surgical group received androgen deprivation therapy (ADT) while two in radiation group were treated with ADT.

The sample size of this study did not permit formal statistical analysis, although potential differences in Urinary and Bowel Domains from EPIC and Ejaculation Scale from MSHQ were observed. More participants from the radiation group seemed to be able to maintain both insertive and receptive anal intercourse roles after treatment compared to participants who received surgery.

**Conclusions.** While the two validated assessment tools suggested similar QoL scores including sexual function for both surgical and radiation groups, post-treatment sexual function related to anal intercourse may be better in the radiation group, as compared to the surgical group. Larger studies in PCa patients from MSM community are warranted to verify these data. Lee TK, Breau RH, and Eapen L. Pilot study on quality of life and sexual function in men-who-have-sex-with-men treated for prostate cancer. *J Sex Med* 2013;10:2094–2100.



# QUIMIOTERAPIA



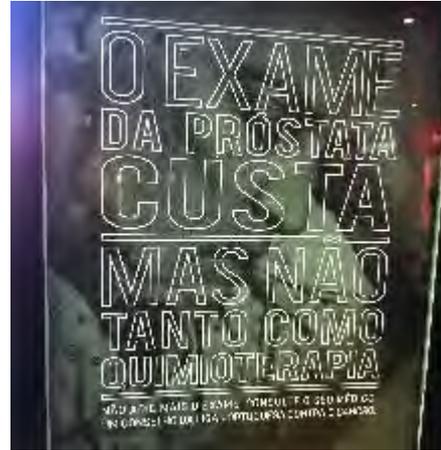
## QUIMIOTERAPIA nos TUMORES DA MAMA e GINECOLÓGICOS (vagina, vulva, colo uterino, útero, trompas, ovários)

<p>Premature ovarian failure (estrogen and testosterone) Loss of ovarian androgen and precursor sex hormones (DHEA, A4) from post menopausal ovaries</p>	<p>Loss of fertility Prematurely 'old' Alopecia Loss of pubic hair Loss of eyelashes</p>	<p>Estrogen deficiency related dyspareunia Deficient lubrication Reduced sexual genital sensitivity Reduced desire Reduced subjective arousal</p>	<p>Local estrogen via silastic ring (LOE 1) [560] Via vaginal pill estradiol 25µg (LOE 1)[560] (12.5 µg in future) Via CEE cream 0.5g 2x / week (LOE 1) – [560]  Systemic E if recommended for non sexual reasons (LOE 1)[561]  Vibrator or Eros device (LOE 4) [562]</p>
<p><b>40%</b></p>			<p>Delayed or absent orgasm</p>





# QUIMIOTERAPIA



- QT raramente é causa directa de DE
- Alguns agentes podem causar neuropatia – DE reversível
- Alguns fármacos podem causar hipogonadismo
- Neuropatia: lesão autonómica – alterações ejaculatórias e do orgasmo



# Non-hematological Toxicity (%) **Docetaxel 3 wkly**

	<b>All grades</b>	<b>3/4</b>		<b>All</b>	<b>3/4</b>
Alopecia	65	NA	Stomatitis	20	0.9
Fatigue	53	4.5	Peripheral edema	19	0.6
Nausea	41	2.7	Vomiting	17	1.5
Diarrhea	32	2.1	Anorexia	17	1.2
Neuro-Sensory	30	1.8	Dyspnea	15	2.7
Nail change	30	NA	Tearing	10	0.6
Constipation	25	2.1	Epistaxis	6	0.3



# Grade 3-4 Hematologic Toxicity (%)

Docetaxel  
3 wkly

Anemia	5
Neutropenia	<u>32.0</u>
Neutropenic infection %	3.0
Febrile neutropenia %	2.7

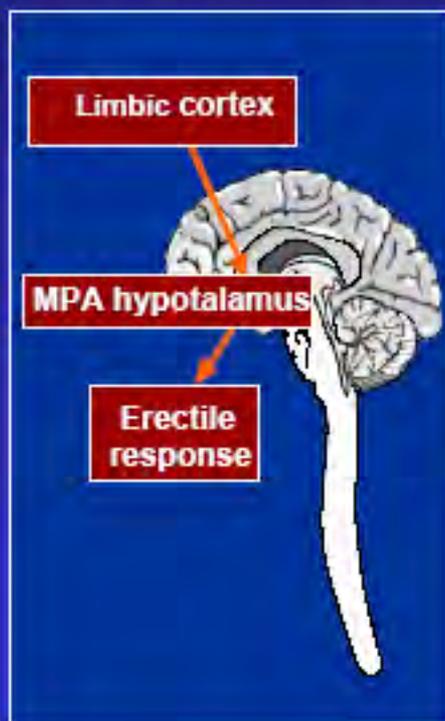


# HORMONOTERAPIA

# TESTOSTERONA

REGULADOR ENDÓCRINO MAJOR DOS MECANISMOS ERÉCTEIS

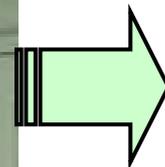
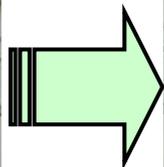
central conditioner



↓ Libido

- ↓ SMCs/connective tissue
- ↓ n Nos
- ↓ vascular influx/veno-occlusion
- ↑  $\alpha$ -adrenergic sensibility
- ↑ Apoptosis
- Post guanylate-cyclase
- ↓ phosphodiesterase type 5

# BLOQUEIO ANDROGÉNICO



DISFUNÇÃO COGNITIVA

AFRONTAMENTOS

PERDA DE LÍBIDO

ANEMIA

EFEITOS CV

DIABETES

DIM. EJACULADO

SARCOPENIA

DISFUNÇÃO ERÉCTIL

OSTEOPOROSE



# HORMONOTERAPIA no CANCRO DA MAMA

Estrogen deprivation	Severe menopausal symptoms often at young age	Dyspareunia Loss of genital and non genital sexual sensitivity Possible vaginal bleeding from tamoxifen may impact sexual responsiveness	Local estrogen as above [560] (LEVEL 4)
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**Tamoxifeno**  
**Inibidores da Aromatase**

Patient	50-year-old woman w/ loss of labial architecture	45-year-old woman with vulvar atrophy
		
Duration of AI Therapy	5 years Letrozole	2 years Anastrozole
Main Treatment*	5 year Tamoxifen Doxorubicin, Cyclophosphamide and Paclitaxel	Doxorubicin, Cyclophosphamide and Paclitaxel Trastuzumab
Sexual Side Effects	Vaginal dryness Dyspareunia	Severe Vaginal Dryness Dyspareunia

*Photos courtesy of the Program in Integrative Sexual Medicine for Women and Girls with Cancer. The University of Chicago, Chicago, Illinois. ©2010  
\*This is an abbreviated list of medications, focusing on breast cancer therapies.*



# ATROFIA VULVO-VAGINAL

- Menopausa (iatrogénica)
- Tamoxifeno
- Inibidores da aromatase
- Anti-histamínicos
  
- Estrogénios sistémicos –  
poderiam melhorar  
(cuidado)
- Estrogénios tópicos
- Hidratantes vaginais





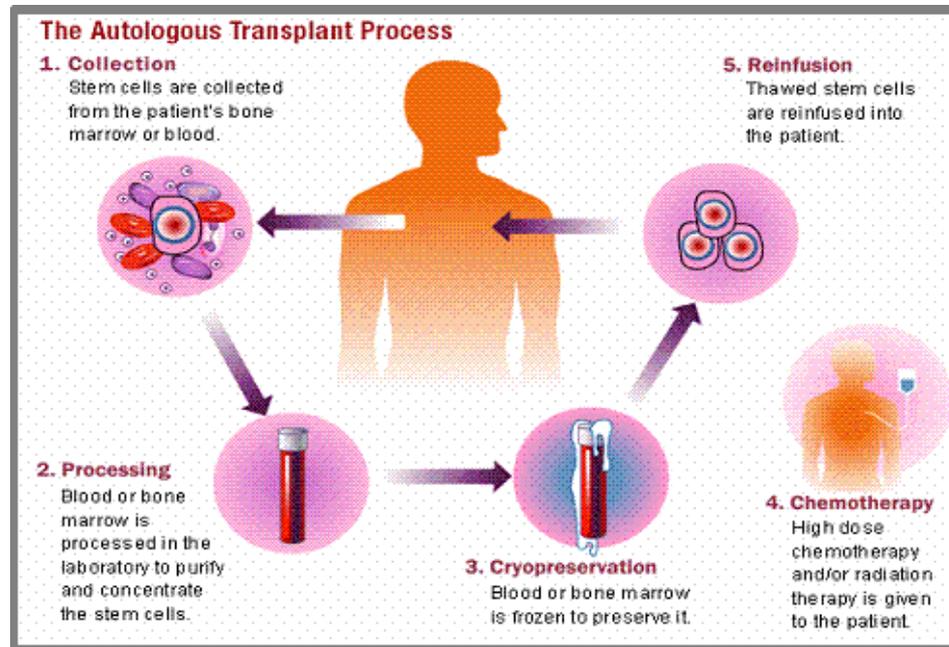
# Estenose vaginal

- RT (Carc Colorectal / ginecológicos)
- Tamoxifeno / Inibidores da aromatase
  
- Perda de colagénio, glicogénio e outras proteínas no epitélio urogenital hipoestrogenizado
- “... sinto-me uma virgem novamente...”
- Perda das rugas transforma a vagina num tubo inextensível e sem elasticidade
  
- Vaginismo
- Factores psicológicos / dor
- Penetração impossível - “Bater contra um muro”





# TRANSPLANTE DE CÉLULAS HEMATOPOIÉTICAS



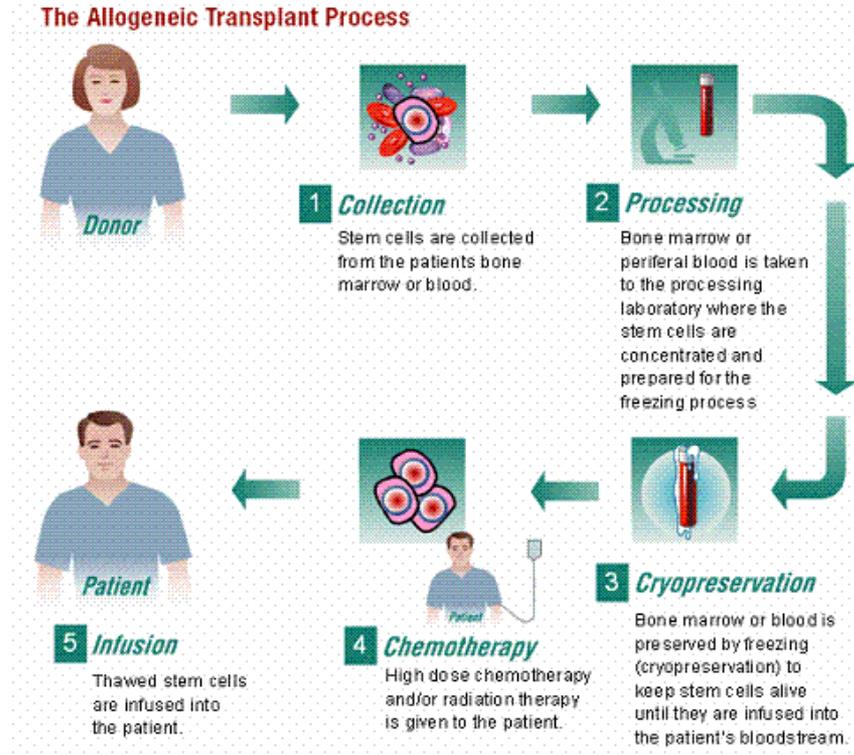


# TRANSPLANTE DE CÉLULAS HEMATOPOIÉTICAS

- **Hipogonadismo primário (homem)** – QT alta dose (alquilantes) / RT corpo inteiro
- **Falência ovárica primária** - QT alta dose (alquilantes) / RT corpo inteiro
- **Falência pubertária** – RT testículos
- **Neuropatia autonómica**
- **Lesão vascular pélvica** – RT corpo inteiro



# TRANSPLANTE DE CÉLULAS HEMATOPOIÉTICAS



**DOENÇA ENXERTO vs HOSPEDEIRO**



**Doença enxerto vs hospedeiro (homem):**

Curvaturas peneanas, Fimose,  
Aderências balano-prepuciais, Dor  
erecção



**(mulher):**

Vestibulodinia /Inflamação e fibrose /  
obliteração vaginal  
(corticóides / estrgénios)





# **DOENÇA AVANÇADA TERAPÊUTICA DE SUPORTE**



# ***Cancro avançado***

Mesmos problemas agravados por:

- Progressão da doença
- Idade
- Iatrogenia
- Perda de funções
- Maior receio de intromissão e desconforto dos profissionais de saúde
- Internamentos e falta de privacidade

**A sexualidade continua a ser importante no fim da vida embora os afectos sejam mais importantes que a expressão física.**

*Redelman MJ (2008) Is there a place for sexuality in the holistic care of patients in the palliative care phase of life? Am J Hosp Palliat Med 23: 366-371*



## ➤ **Opióides**

- Diminuição da libido
  - Diminuição da testosterona
  - Amenorreia
- 
- Inibem a produção de GnRH, LH e testosterona
  - Hiperprolactinémia
  - Efeitos reversíveis





# Antidepressivos tricíclicos / SSRIs / iMAO / Lítio /

...

## ➤ SSRIs

➤ Diminuição da libido sintoma de depressão

## ➤ Disfunção sexual:

➤ Sertraline (16%).

➤ Fluoxetine (20%).

➤ Paroxetine (22%).

➤ Venlafaxine (38%).



## ➤ **Sunitinib:**

- Usar preservativo / evitar contacto com fluídos

## ➤ **Abiraterona / Enzalutamida:**

- Usar preservativo se RS com mulher grávida
- Evitar gravidez





## DECLARAÇÃO DOS DIREITOS SEXUAIS

1. Acesso a serviços de saúde sexual e reprodutiva
2. Procurar, receber e partilhar informação relacionada com sexualidade
3. Educação sexual
4. Respeito pela integridade corporal
5. Escolher os seus parceiros
6. Decidir ser sexualmente activo ou não
7. Manter relações sexuais consensuais
8. Casamento consensual
9. Decidir se quer ou não e quando ter filhos
10. Alcançar uma vida sexual caracterizada pela satisfação, segurança e prazer

***O.M.S. 2002***



**“Life is a sexually transmitted disease ...  
and the mortality rate is one hundred percent.”**

*R.D. Laing*

