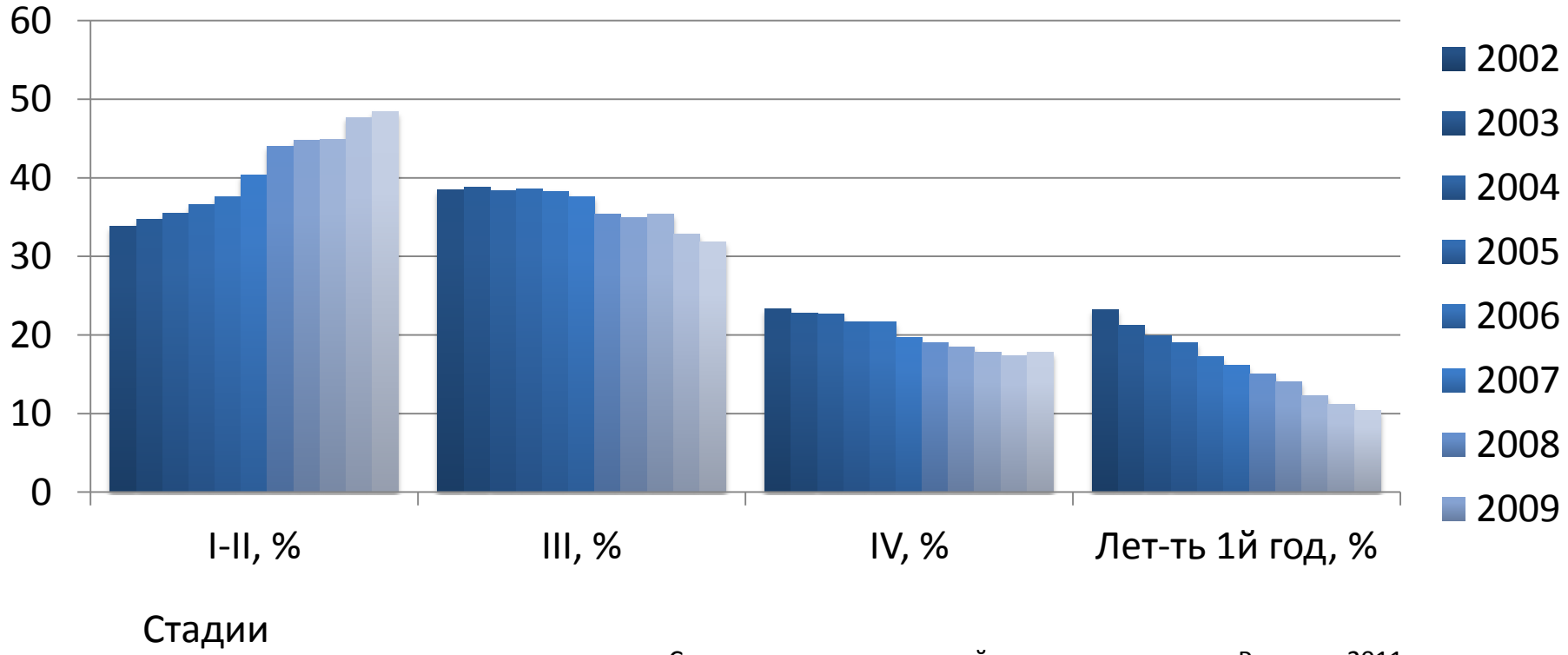
Московская урология

Рак простаты – есть успех …

Профессор Пушкарь Д.Ю.
Главный уролог Москвы и МЗ РФ
pushkardm@mail.ru

Распределение РПЖ по стадиям в РФ 2002-2012



Состояние онкологической помощи населению России в 2011 году.
Под редакцией В.И. Чиссова, В.В. Старинского, Г.В. Петровой. Москва 2012.

Скрининг РПЖ - факты

PROSTATE CANCER MORTALITY AFTER INTRODUCTION OF PROSTATE-SPECIFIC ANTIGEN MASS SCREENING IN THE FEDERAL STATE OF TYROL, AUSTRIA

GEORG BARTSCH, WOLFGANG HORNINGER, HELMUT KLOCKER, ANDREAS REISSIGL, WILHELM OBERAIGNER, DIETER SCHÖNITZER, GIANLUCA SEVERI, CHRIS ROBERTSON, AND PETER BOYLE, ON BEHALF OF THE TYROL PROSTATE CANCER SCREENING GROUP

- **Рост T1 и T2**
- **Уменьшение M+ с 1993 г., T3 с 1994 г.**
- **Снижение смертности от РПЖ с 1993 по 1999 г. выражено значительнее (p=0,006) vs Австрия**
- **Для ♂ >60 лет риск смерти от РПЖ в 2004-2008 гг. меньше на 30%, чем в 1989-1993 гг.**

The NEW ENGLAND JOURNAL of MEDICINE

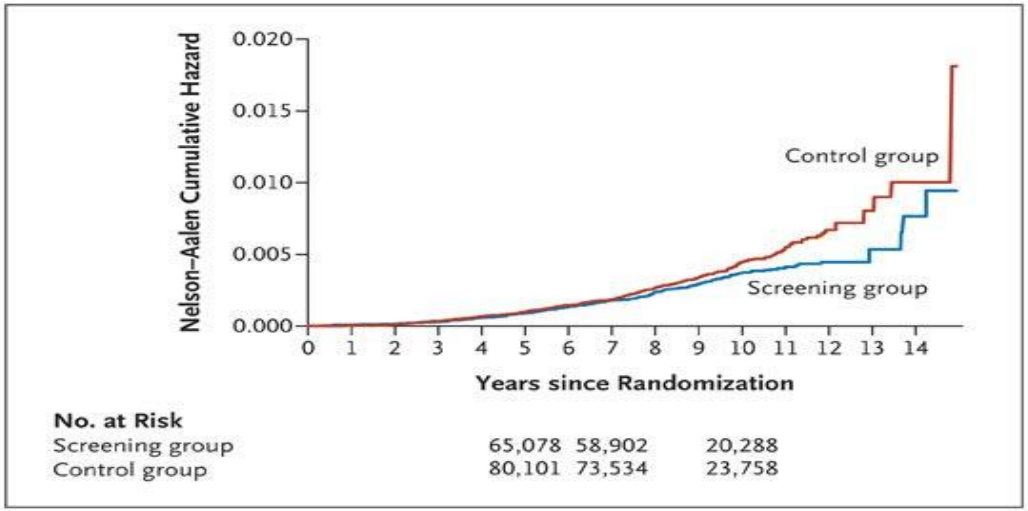
ERSPC

2009

- Рандомизированная группа 162 388 мужчин 55-69 лет:
  - скрининг - 72 891,
  - контроль - 89 352
  - медиана длительности наблюдения - 11 лет, интервал 4 г.
- Всего – 136 689 тестов на ПСА, в среднем 2.27 на участника
- 16.6% положительных тестов ПСА (ПСА > 3нг/мл)
- 85.9% мужчин с ПСА > 3нг/мл проведена 6-точечная биопсия

ERSPC

Снижение относительного риска смерти от рака простаты



- 20% для всей скрининговой группы
- 29% - для мужчин, действительно прошедших скрининг
- NNS – 1410, NNT - 48

ERSPC

BJUI SUPPLEMENTS

Landmarks in prostate cancer screening

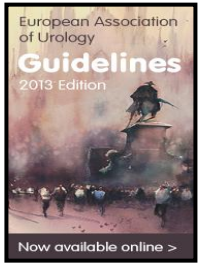
Fritz H. Schröder
Erasmus University Medical Centre, Rotterdam, The Netherlands

- **При анализе баз данных 4-х центров (Финляндия, Швеция, Швейцария, Нидерланды) при медиане наблюдения 12 лет в группе скрининга частота *метастатического РПЖ* < на 31%**

BJUI 2012; 110: 3-7

Скрининг РПЖ - рекомендации

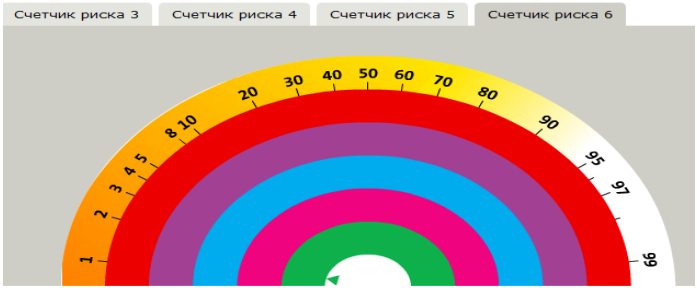
- AUA – определение «исходного» ПСА в 40 лет
- ACS – асимптоматический ♂ с ожидаемой продолжительностью жизни ≥10 лет должен принять «информированное решение» о скрининге
- NCCN – рекомендует проведение скрининга на основании алгоритма (учёт возраста, семейного анамнеза, расы и пр.)
- EAU – рекомендован не скрининг, а ранняя диагностика у «хорошо информированных» ♂ ≥50 лет



Скрининг РПЖ – информированное согласие

- Решение начать скрининг РПЖ необходимо обсудить с пациентом: преимущества и риски самого скрининга, биопсии простаты и возможного последующего лечения

- Используем комбинации ПСА с его изоформами, с другими маркерами, с номогр аммами, калькуляторами риска и пр.



Скрининг РПЖ в 2015 г

Куда идти ?

Экстенсивный (лечить больных)

- Наибольшие затраты
- Низкая эффективность

Интенсивный (создавать здоровье)

- В случае рака простаты – только ранняя диагностика

Куда идти ?

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- В случае рака простаты – только ранняя диагностика

Медицинская наука сегодня

- Опираясь на пациента
- Профилактика... – ранние стадии
- Минимизация оперативных вмешательств

- Лечение - 2015...
- Stay Young… о чем это Вы?
- Иные ожидания – иной функциональный результат !

Laparoscopy: Лапароскопия
Greek λαπάρα *(lapara)*, и *(skopeó)*
смотрим сбоку

Ralph Clayman in 1990 – первая лапароскопическая нефрэктомия

..... 20 лет !

Manon 2001 год
Роботическая простатэктомия

В головах большинства
Робот – заменяет человека
Это – заблуждение...

Health

REPORTED BY REBECCA BOYLE • BREANNA DRAXLER

THE BIONIC ARM

Even with today's most advanced prosthetic limbs, amputees still struggle to perform certain basic tasks. But the bionic arm made by Deka, the R&D firm founded by inventor Dean Kamen, is nearly as dexterous as the real thing. Nicknamed for the cybernetic hand in *Star Wars*, the Luke Arm is the first prosthesis that allows a person to make multiple movements, such as rotating the wrist and opening the hand, at once.

"Ten minutes after putting it on, people are able to pick things up," says Stewart Coulter, the Luke Arm project manager. "Our office is littered with things that people have built with it." In a clinical trial, 90 percent of the 36 participants were able to do previously impossible tasks, such as unlocking a door or using chopsticks.

Electrodes on the skin near the attachment site pick up the electrical impulses signaling muscle contractions and send them to a computer in the prosthesis. The processor translates these messages into motion of the integrated elbow, wrist, and hand. Users coordinate complex movements with a joystick-like sensor on their shoe.

"It works the way the patient thinks," says Chuck Hildreth Jr., who lost his arms in a work accident about 30 years ago and has been testing the prototypes since 2008. The Food and Drug Administration (FDA) approved the arm in May. Deka hasn't announced a date for its commercial release, or a price, but when the Luke Arm hits the market, Hildreth says he'll be first in line to buy one.

GRAND AWARD WINNER

DEKA "LUKE" ARM

DECEMBER 2014

Best of What's New

Health

The Matrix

THE BIONICS REVOLUTION HAS BEGUN

This year marked a turning point for bionic technologies. In March, a dancer who lost her leg in the Boston Marathon bombing returned to the stage on a prosthetic foot and ankle. In June, a paraplegic man made the World Cup's opening kick using a mind-controlled exoskeleton. The FDA approved the first robotic exoskeleton for home use that same month. Here, we size up standout recent advances in restoring movement to those who've lost it. BREANNA DRAXLER

Health

DECEMBER 2014

Best of What's New

Clever Medkit

First Aid Made Smarter

The cloud-connected Clever Medkit dispenses medical advice along with supplies. Got a burn? Push the button with a flame on it, and the cubbies containing burn gel, gauze, and a cold pack will light up. The kit knows each time someone removes a pill or Band-Aid and can automatically reorder supplies when stocks are low. The units are leased to companies for a monthly service fee and will be available in the U.S. early next year.

Sproutling Baby Monitor

A Baby Monitor That Tracks Vitals

The Sproutling ankle band turns baby monitors into wearable tech, tracking heart rate, breathing, movement, and body position. An app alerts parents if something is awry. Company co-founder Mathew Sposin came up with the idea because his son liked to sleep facedown: "As soon as he flipped over, the device would've pushed right to my phone." Sproutling learns babies' behaviors, such as nap lengths, to help parents better plan. The charging station tracks light, noise, and temperature too. $249

Gilead Sciences Sovaldi

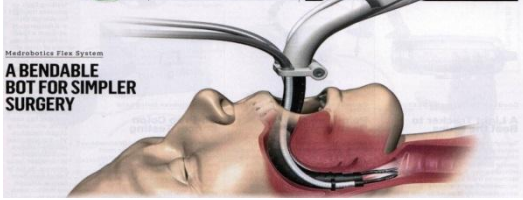
The Hepatitis C Cure

"This year will mark a paradigm shift in how we treat hepatitis C infections, for the better of all patients. Combination antiviral therapies are short in duration, highly effective, and without significant toxicity."

—ERIC LAWITZ, VICE PRESIDENT OF SCIENTIFIC AND RESEARCH DEVELOPMENT AT THE TEXAS LIVER INSTITUTE

Medrobotics Flex System

A BENDABLE BOT FOR SIMPLER SURGERY



da Vinci S
da Vinci S
②
①
③

Радикальная простатэктомия – 2015

- В 90% случаев выполняется, используя робот da Vinci (США) и в 70% в Европе
- Ожидания пациентов… *Сегодня ИНЫЕ*
- Стало возможным исключительно благодаря накопленному опыту
- Робот da Vinci - в большинстве клиник развитых стран

Оценка результата по иным критериям

Pentafecta: A New Concept for Reporting Outcomes of Robot-Assisted Laparoscopic Radical Prostatectomy

Vipul R. Patel [a,], Ananthakrishnan Sivaraman [a], Rafael F. Coelho [a,b,c], Sanket Chauhan [a], Kenneth J. Palmer [a], Marcelo A. Orvieto [a], Ignacio Camacho [a], Geoff Coughlin [a], Bernardo Rocco [a,d]*

Операционные инструменты

2

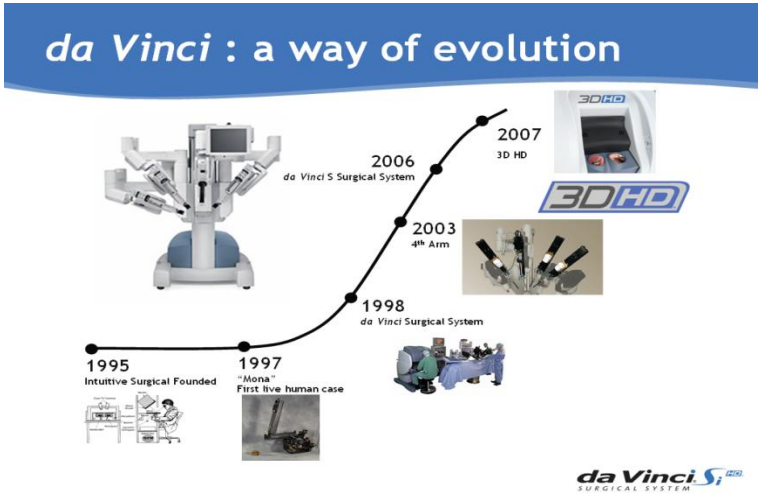
Da Vinci в России - 21 система

Московская урология

Кто Готов?

хирургия da Vinci

Урология
Гинекология
Кардиохирургия
Торакальная хирургия
Абдоминальная хирургия
Хирургия головы и шеи



LEVEL	DESCRIPTION	New in June	Total
Level 1	Randomized control trial	0	34
Level 2a	Non-randomized prospective study including a comparison cohort	11	164
Level 2b	Non-randomized retrospective study including a comparison cohort	20	739
Lower level publications:			
Level 3	Single cohort (non-comparison) studies	34	5486
Level 4	Case studies	22	
Level 5	Opinion publications	42	
TOTAL		119	6422

> 12 лет
> 6500 публикаций

http://www.intuitivesurgical.com

NCBI Resources How To

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed | robots in medicine

RSS Save search Advanced

Show additional filters

Display Settings: Summary, 20 per page, Sorted by Recently Added

Send to:

Article types
Clinical Trial
Review

Results: 1 to 20 of 307

<< First < Prev Page 1 of 16 Next > Last >>

NCBI Resources How To

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed | robotic surgery

RSS Save search Advanced

Show additional filters

Display Settings: Summary, 20 per page, Sorted by Recently Added

Article types
Clinical Trial

Results: 1 to 20 of 7337

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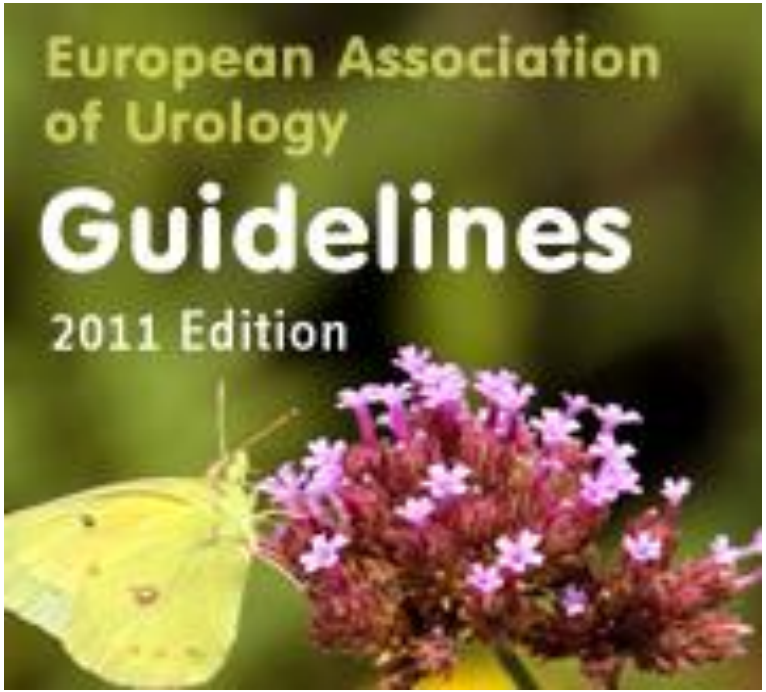
Guidelines EAU 2011

Стандарты Европейской и Американской урологической ассоциации



«.... роботическая радикальная простатэктомия заменяет открытую операцию в качестве «золотого стандарта» хирургического лечения локализованного рака простата в США и странах Европы.....»

Факты…

- Роботизированная хирургия (Da Vinci)
- 3 500 роботов в США
  – 700 Европа
  – 20 РФ

NB: - 90% хир операций – роботизированные

США – 2013

DOI: 10.1111/j.1471-0528.2011.03139.x
www.bjog.org

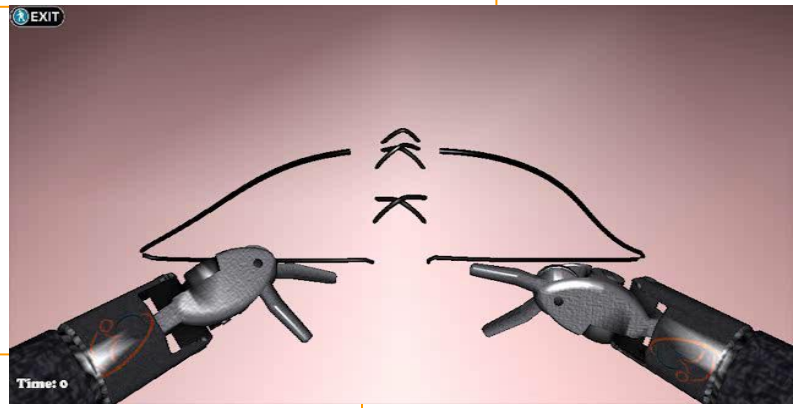
Systematic review

Training and learning robotic surgery, time for a more structured approach: a systematic review

HWR Schreuder,[a] R Wolswijk,[a] RP Zweemer,[a] MP Schijven,[b] RHM Verheijen[a]

[a] Division of Women and Baby, Department of Gynaecological Oncology, University Medical Centre Utrecht, Utrecht, The Netherlands
[b] Department of Surgery, Academic Medical Centre, Amsterdam, the Netherlands
Correspondence: HWR Schreuder, Department of Gynaecological Oncology, University Medical Centre Utrecht, PO Box 85500, room F05-126, 3508 GA, Utrecht, the Netherlands. Email: h.w.r.schreuder@umcutrecht.nl

Accepted 26 July 2011. Published Online 7 October 2011.



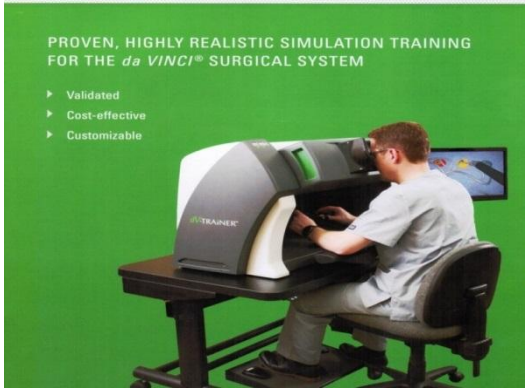
Surg Endosc (2008) 22:313–325
DOI 10.1007/s00464-007-9727-5

CONSENSUS STATEMENT

A consensus document on robotic surgery

D. M. Herron · M. Marohn · The SAGES-MIRA Robotic Surgery Consensus Group

dV-TRAINER™ by mimic



3
1
2

Тормозящие факторы !
(первостепенные вопросы)

Недоверие к методике

Боязнь всего нового

Образование (об этом еще раз на конгрессе)

Английский язык

Парадигмы:

Робот только для неосложненных больных

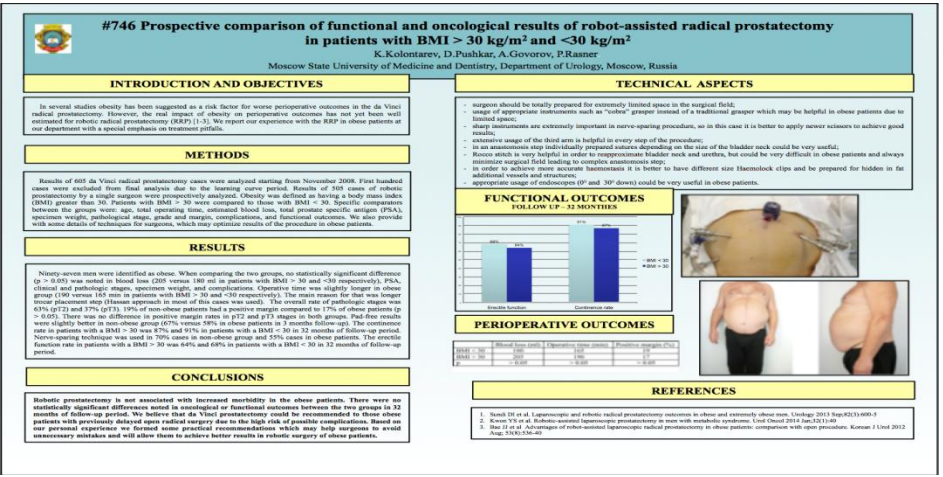
Роботическая операция не так эффективна

Роботическая операция неоправдано дорога и.т.д.

eau Stockholm 11-15 April 2014 29th Annual EAU Congress

Опыт МГМСУ

- Около 150 больных BMI+
- Операция эффективна и безопасна
- Схожие функциональные результаты



#746 Prospective comparison of functional and oncological results of robot-assisted radical prostatectomy in patients with BMI > 30 kg/m² and <30 kg/m²

K.Kolontarev, D.Pushkar, A.Govorov, P.Rasner

Moscow State University of Medicine and Dentistry, Department of Urology, Moscow, Russia

INTRODUCTION AND OBJECTIVES

In several studies obesity has been suggested as a risk factor for worse perioperative outcomes in the da Vinci radical prostatectomy. However, the real impact of obesity on perioperative outcomes has not yet been well estimated for robotic radical prostatectomy (RRP) [1-3]. We report our experience with the RRP in obese patients at our department with a special emphasis on treatment pitfalls.

METHODS

Results of 605 da Vinci radical prostatectomy cases were analyzed starting from November 2008. First hundred cases were excluded from final analysis due to the learning curve period. Results of 505 cases of robotic prostatectomy by a single surgeon were prospectively analyzed. Obesity was defined as having a body mass index (BMI) greater than 30. Patients with BMI > 30 were compared to those with BMI < 30. Specific comparators between the groups were: age, total operating time, estimated blood loss, total prostate specific antigen (PSA), specimen weight, pathological stage, grade and margin, complications, and functional outcomes. We also provide with some details of techniques for surgeons, which may optimize results of the procedure in obese patients.

RESULTS

Ninety-seven men were identified as obese. When comparing the two groups, no statistically significant difference ($p > 0.05$) was noted in blood loss (205 versus 180 ml in patients with BMI > 30 and <30 respectively), PSA, clinical and pathologic stages, specimen weight, and complications. Operative time was slightly longer in obese group (190 versus 165 min in patients with BMI > 30 and <30 respectively). The main reason for that was longer trocar placement step (Hassan approach in most of this cases was used). The overall rate of pathologic stages was 63% (pT2) and 37% (pT3). 19% of non-obese patients had a positive margin compared to 17% of obese patients ($p > 0.05$). There was no difference in positive margin rates in pT2 and pT3 stages in both groups. Pad-free results were slightly better in non-obese group (67% versus 58% in obese patients in 3 months follow-up). The continence rate in patients with a BMI < 30 was 87% and 91% in patients with a BMI < 30 in 32 months of follow-up period. Nerve-sparing technique was used in 70% cases in non-obese group and 55% cases in obese patients. The erectile function rate in patients with a BMI > 30 was 64% and 68% in patients with a BMI < 30 in 32 months of follow-up period.

CONCLUSIONS

Robotic prostatectomy is not associated with increased morbidity in the obese patients. There were no statistically significant differences noted in oncological or functional outcomes between the two groups in 32 months of follow-up period. We believe that da Vinci prostatectomy could be recommended to those obese patients with previously delayed open radical surgery due to the high risk of possible complications. Based on our personal experience we formed some practical recommendations which may help surgeons to avoid unnecessary mistakes and will allow them to achieve better results in robotic surgery of obese patients.

TECHNICAL ASPECTS

- surgeon should be totally prepared for extremely limited space in the surgical field;
- usage of appropriate instruments such as "cobra" grasper instead of a traditional grasper which may be helpful in obese patients due to limited space;
- sharp instruments are extremely important in nerve-sparing procedure, so in this case it is better to apply newer scissors to achieve good results;
- extensive usage of the third arm is helpful in every step of the procedure;
- in an anastomosis step individually prepared sutures depending on the size of the bladder neck could be very useful;
- Rocco stitch is very helpful in order to reapproximate bladder neck and urethra, but could be very difficult in obese patients and always minimize surgical field leading to complex anastomosis step;
- in order to achieve more accurate haemostasis it is better to have different size Haemolock clips and be prepared for hidden in fat additional vessels and structures;
- appropriate usage of endoscopes (0° and 30° down) could be very useful in obese patients.

FUNCTIONAL OUTCOMES

FOLLOW UP – 32 MONTHES

PERIOPERATIVE OUTCOMES

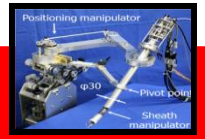
	Blood loss (ml)	Operative time (min)	Positive margin (%)
BMI < 30	180	165	19
BMI > 30	205	190	17
p	> 0.05	> 0.05	> 0.05

REFERENCES

1. Scotti DJ et al. Laparoscopic and robotic radical prostatectomy outcomes in obese and extremely obese men. Urology 2013 Sep;82(3):600-5
2. Kwon YS et al. Robotic-assisted laparoscopic prostatectomy in men with metabolic syndrome. Urol Oncol 2014 Jan;32(1):49
3. Baz JJ et al. Advantages of robot-assisted laparoscopic radical prostatectomy in obese patients: comparison with open procedure. Korean J Urol 2012 Aug; 53(8):536-40

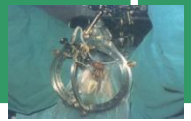
Роботические технологии в урологии 1996 - 2013

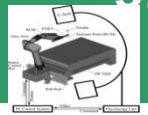
Console-based devices for Laparoscopy



Bedside devices for Laparoscopy

Manipulators for Endourology





EUROPEAN UROLOGY 61 (2012) 571–576

available at www.sciencedirect.com
journal homepage: www.europeanurology.com
http://www.sciencedirect.com

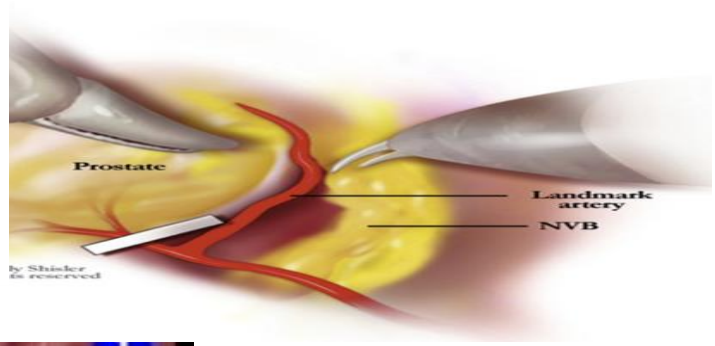
European Association of Urology

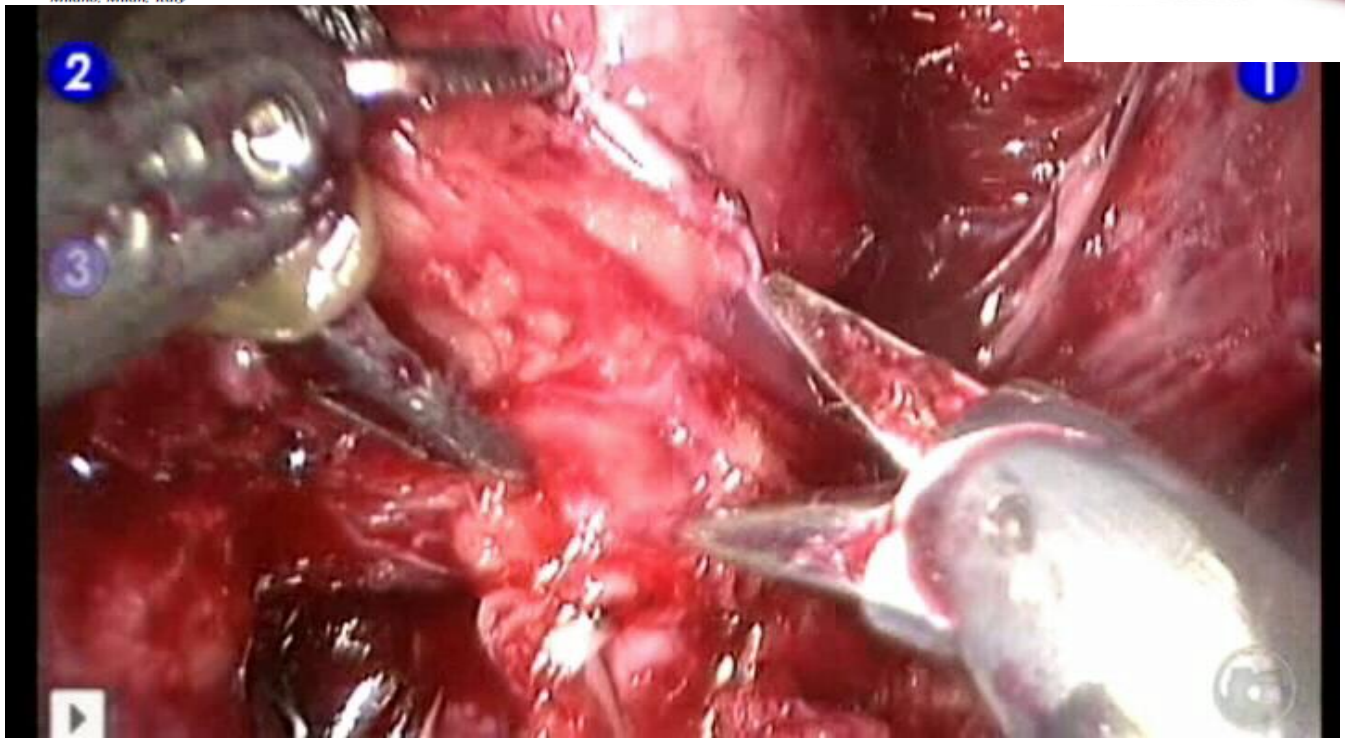
Surgery in Motion

The Role of the Prostatic Vasculature as a Landmark for Nerve Sparing During Robot-Assisted Radical Prostatectomy

Vipul R. Patel[a,b,], Oscar Schatloff[a], Sanket Chauhan[a,b], Ananthakrishnan Sivaraman[a], Rair Valero[c], Rafael F. Coelho[d], Bernardo Rocco[e,1], Kenneth J. Palmer[a,b], Darian Kameh[a]*

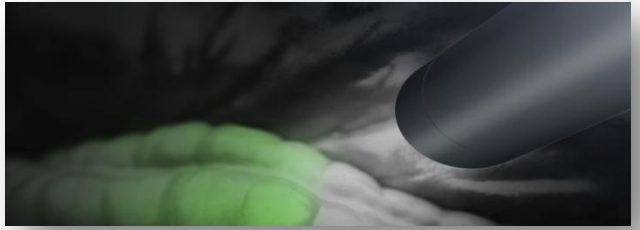
[a] Global Robotics Institute, Florida Hospital Celebration Health, Celebration, FL, USA; [b] University of Central Florida School of Medicine, Orlando, FL, USA; [c] Hospital Universitario de Caracas, Caracas, Venezuela; [d] Hospital Israelita Albert Einstein, São Paulo, Brazil; [e] Sezione di Urologia, Università degli Studi di Milano, Milan, Italy





Brand new da Vinci Xi

- FDA Approved 2014
- Не сертифицирован в Европе
- «Интуитивный» интерфейс -установки портов
- 270^0 свободы платформы рук
- Новая оптическая система (3D HD)
- Нет руки камеры



www.intuitivesurgical.com

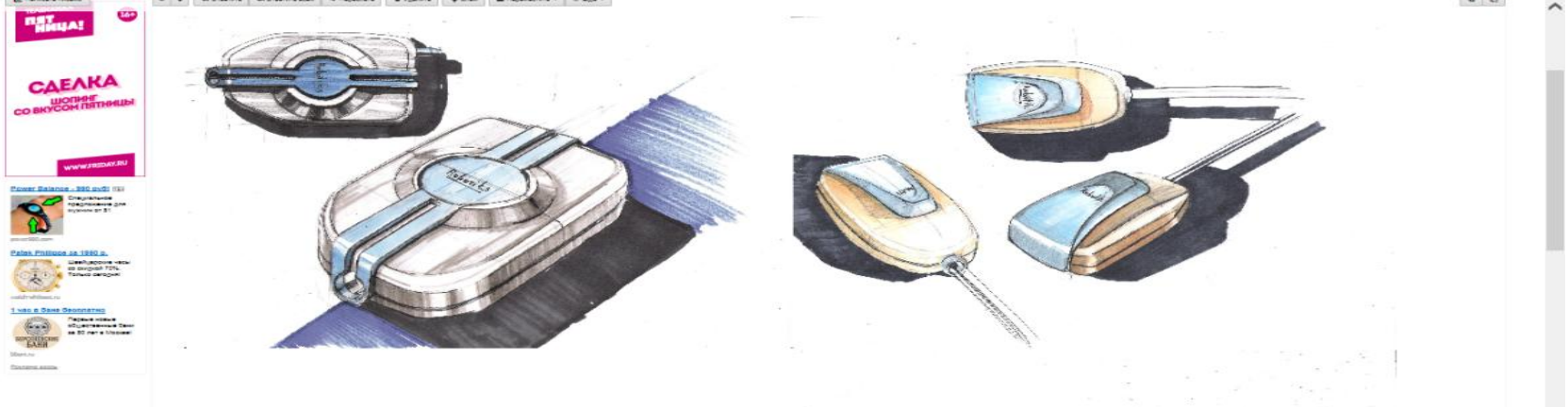
Роботическая хирургия
Стоимость ...

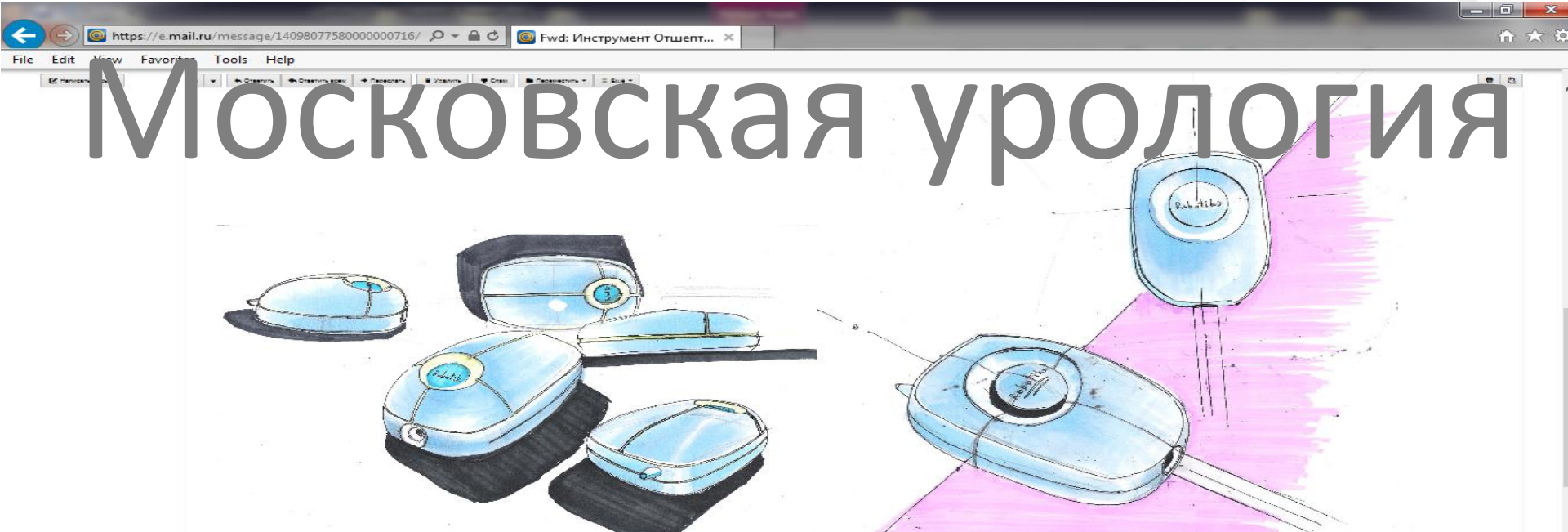
- Робот itself - 2 млн УЕ
- Обучение - 20.000 УЕ
- Обслуживание - 150.000 УЕ в год
- Инструменты - от 2000 УЕ на операцию
- Период обучения – 1 год
- Функциональные результаты – 1 год

New Robotics

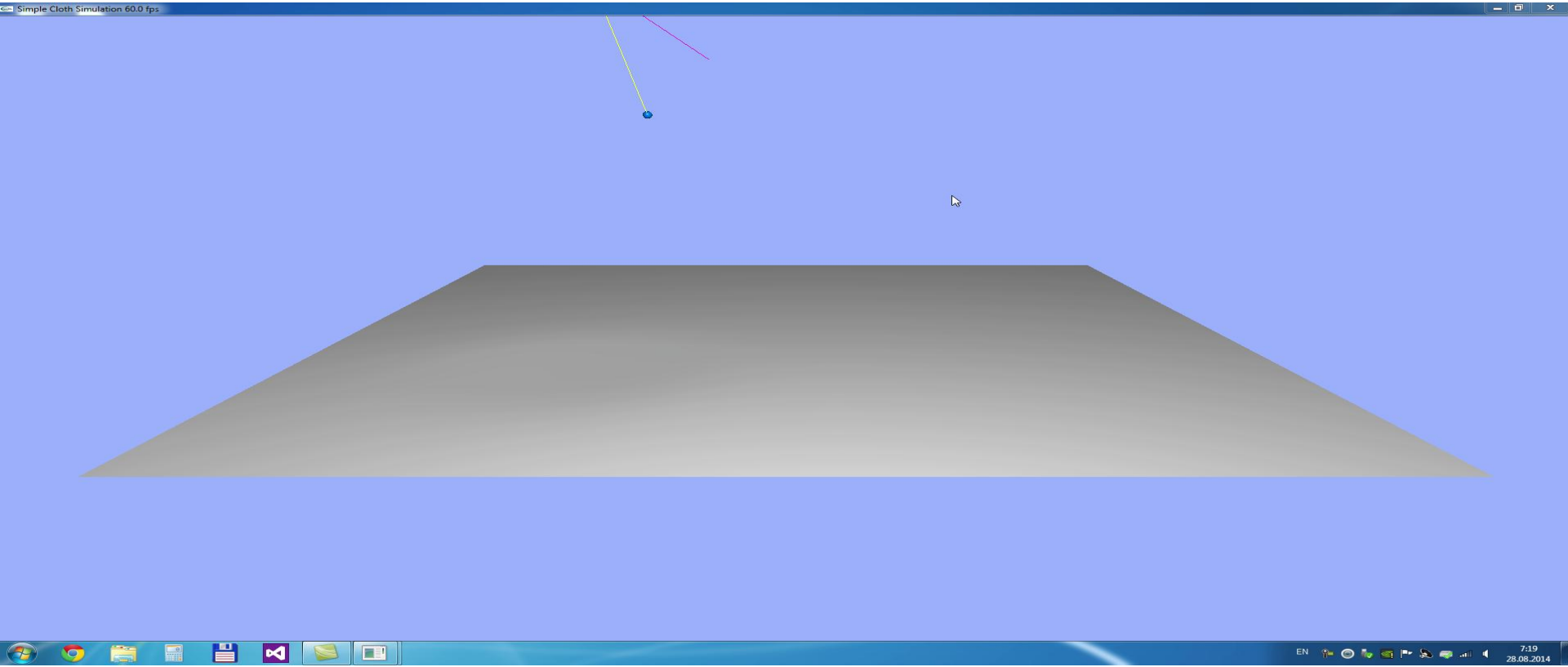
- ✓ MiroSurge robotic system (Germany)
- ✓ Raven Surgical System (NASA, США)
- ✓ Amadeus System (Titan Medical, США)

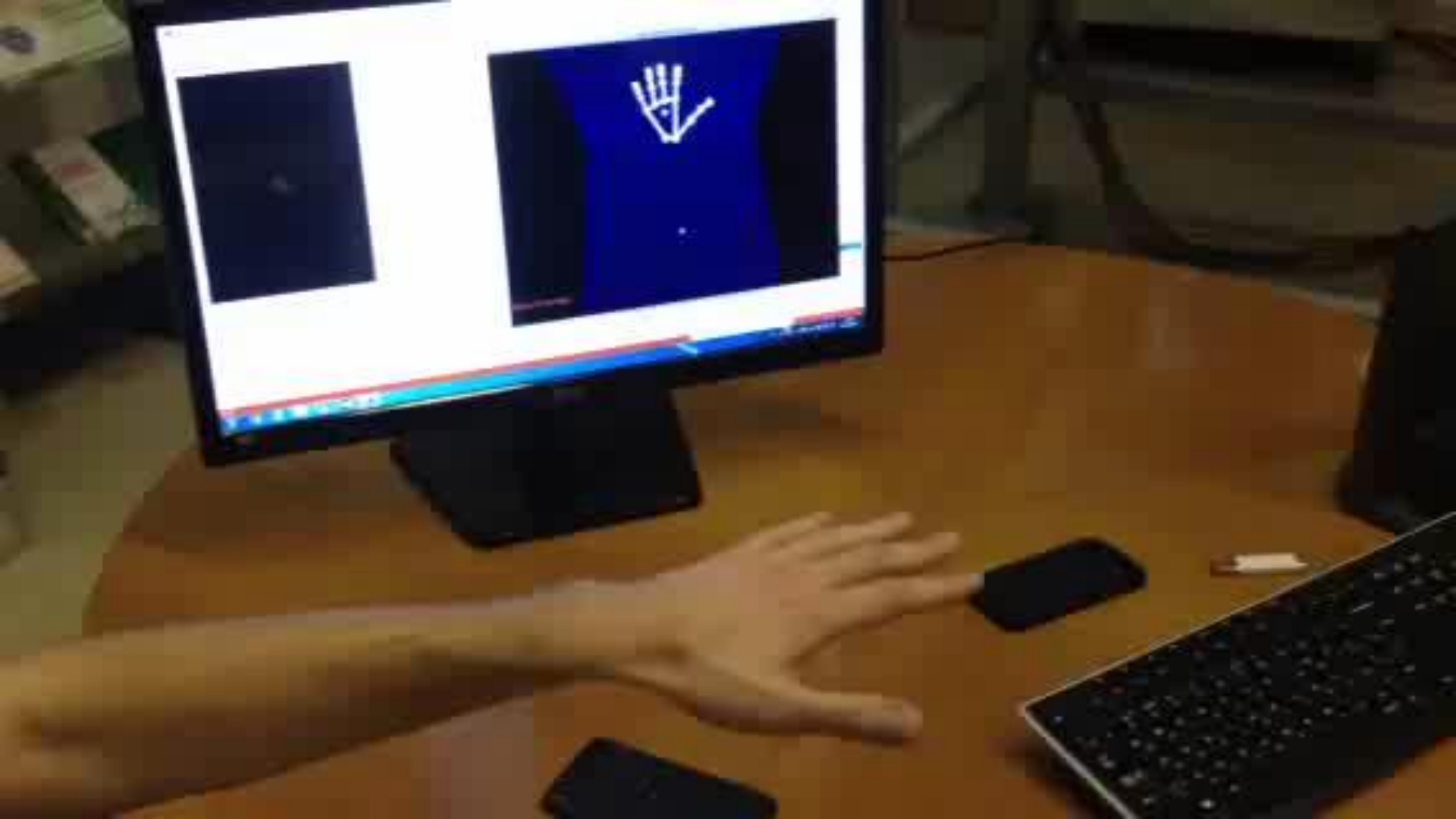
Mediland





Московская урология


Simple Cloth Simulation 60.0 fps
EN
7:19
28.08.2014



Это первая книга-монография на русском языке, посвященная робот-ассистированной хирургии.

Являясь пионерами в создании роботической программы в России, авторский коллектив представляет читателю возможность ознакомиться со всеми основными аспектами робот-ассистированной хирургии. Детально и пошагово представлена наиболее часто выполняемая робот-ассистированная операция в урологии — роботическая радикальная простатэктомия. Отдельная часть книги посвящена принципам ведения пациентов с раком простаты до и после выполнения оперативного вмешательства, включая аспекты послеоперационного наблюдения и функциональной реабилитации. Впервые представлен взгляд морфолога на проблему рака простаты в аспекте робот-ассистированной хирургии.

Данная монография предназначена для широкого круга специалистов, включая урологов, хирургов, гинекологов и онкологов.

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