

# ROBOT ASSISTED SURGERY

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DA VINCI SURGICAL ROBOT (RTM)

INTUITIVE SURGICAL

DA VINCI ROBOT (RTM)

WHY ?

# ADVANTAGES OF MIS

- LESS PAIN
- LESS BLEEDING
- FASTER RECOVERY
- PRESERVATION ACC. PUDENDAL ARTERIES
- BETTER VISION NEUROVASCULAR BUNDLES
- SHORTER CATHETER TIME
- FEWER STRICTURES



# LIMITATIONS LAPAROSCOPIC SURGERY



# LRP

## DISADVANTAGES

STEEP LEARNING CURVE

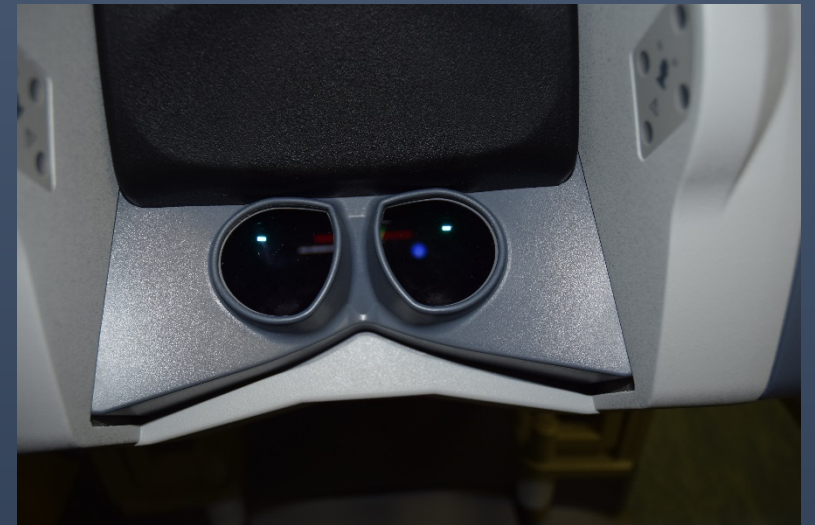
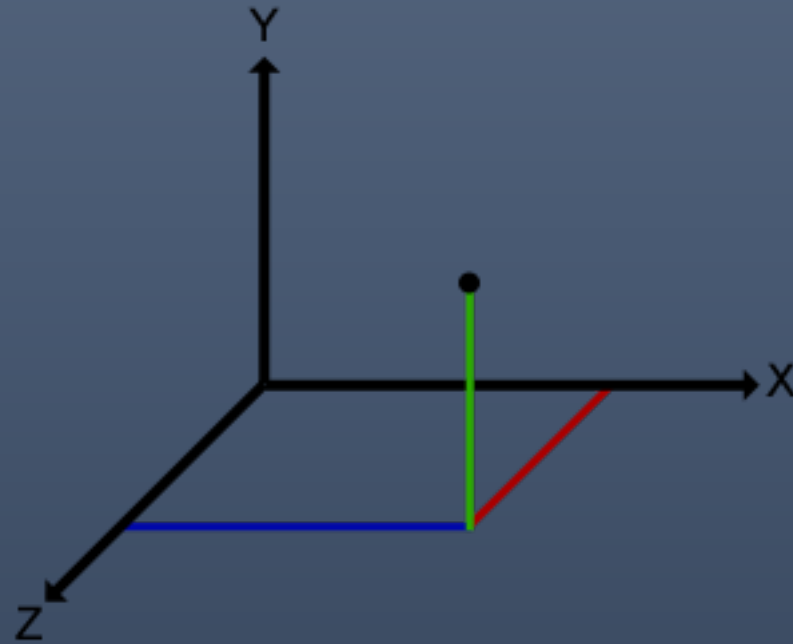
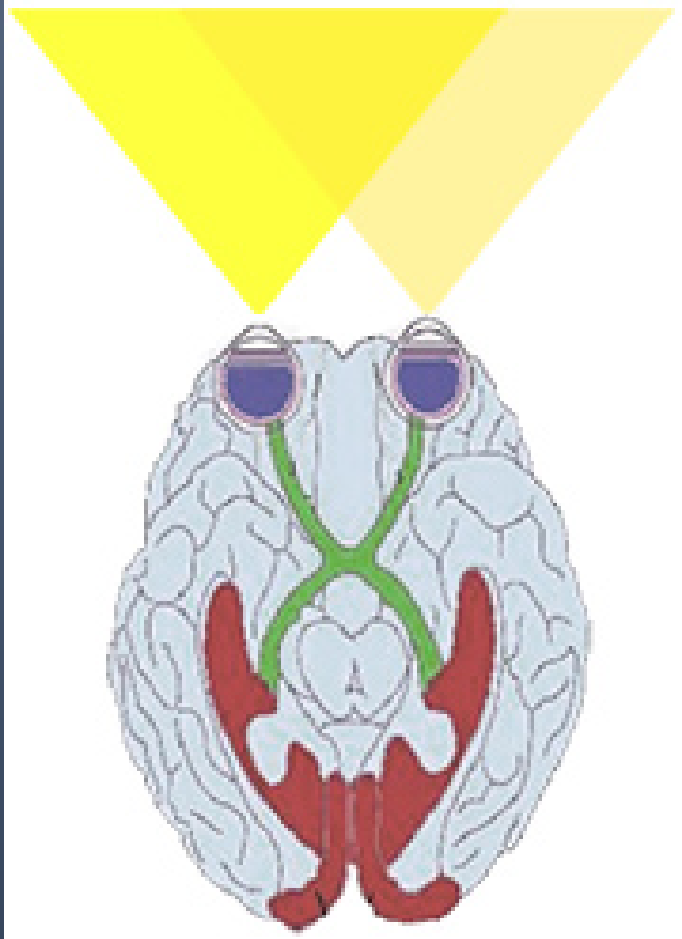
2D VISION

LESS FREEDOM OF MOVEMENT

TWO ASSISTANTS REQUIRED

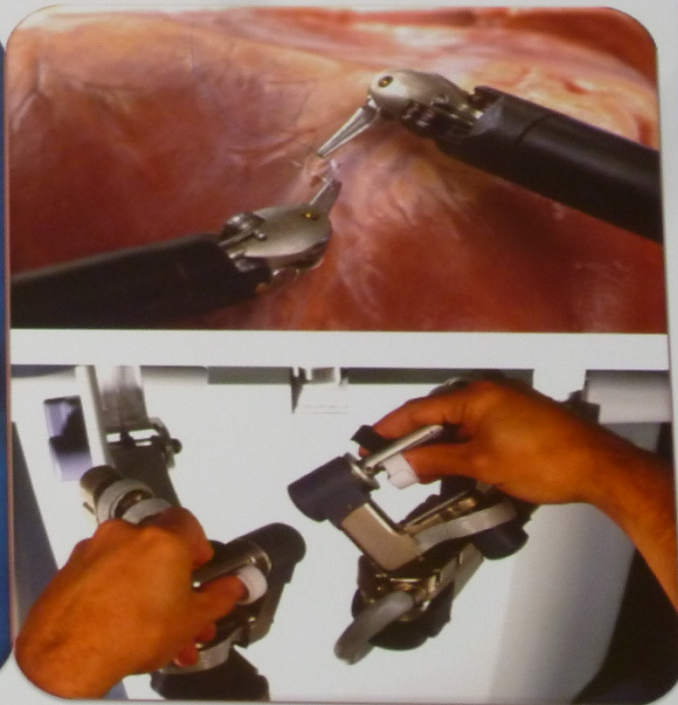


# ADVANTAGES OF ROBOT ASSISTANCE



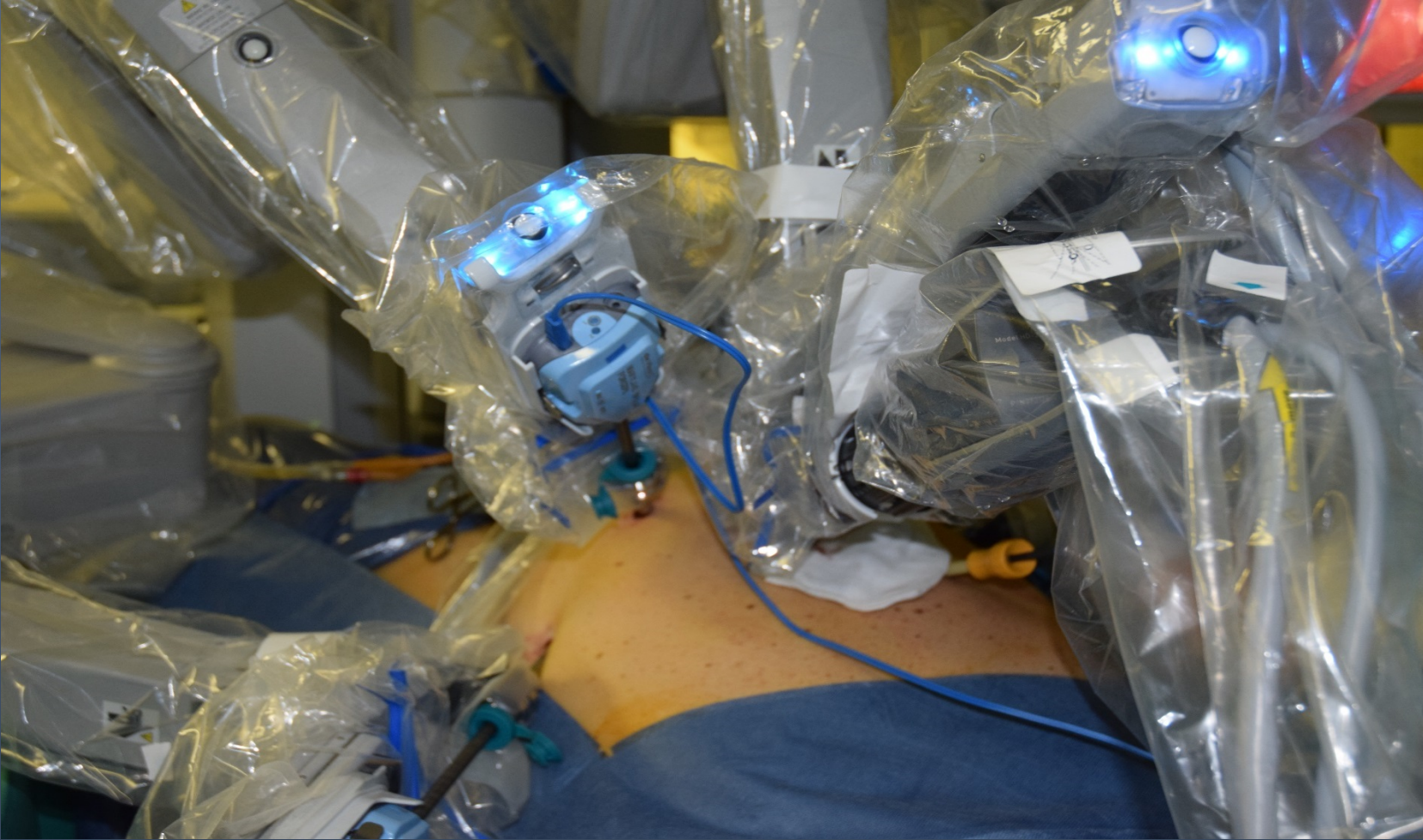
# ADVANTAGES ROBOT ASSISTANCE

## ADVANTAGES OF ROBOTIC ASSISTANCE





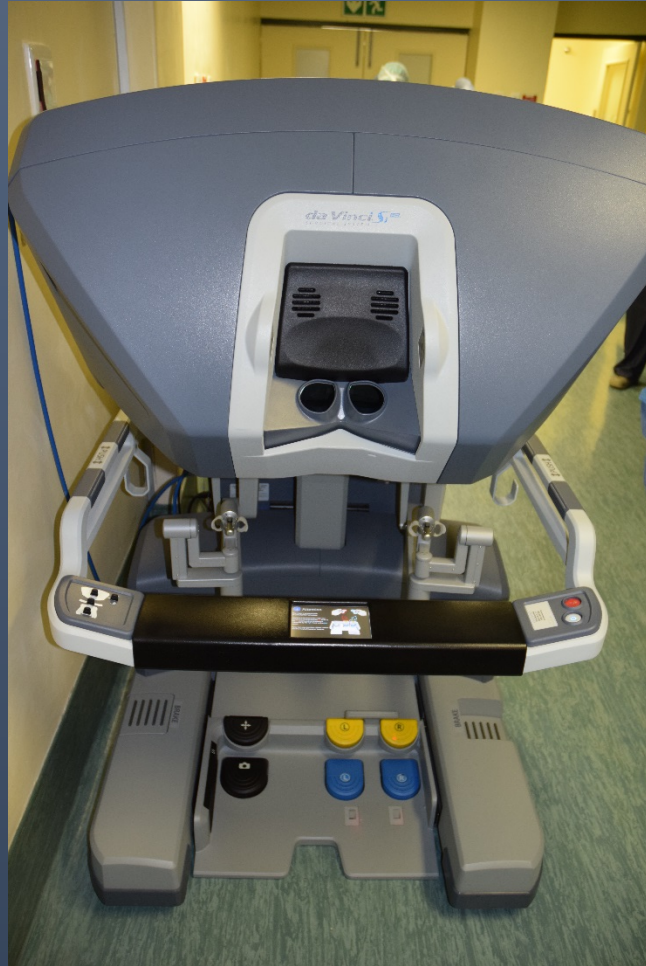
# ADVANTAGES OF ROBOT ASSISTANCE



7 DEGREES OF  
FREEDOM OF  
MOVEMENT



# ADVANTAGES OF ROBOT ASSISTANCE



# RALRP

3D vision

THIRD ARM

7 DEGREES OF FREEDOM OF MOVEMENT

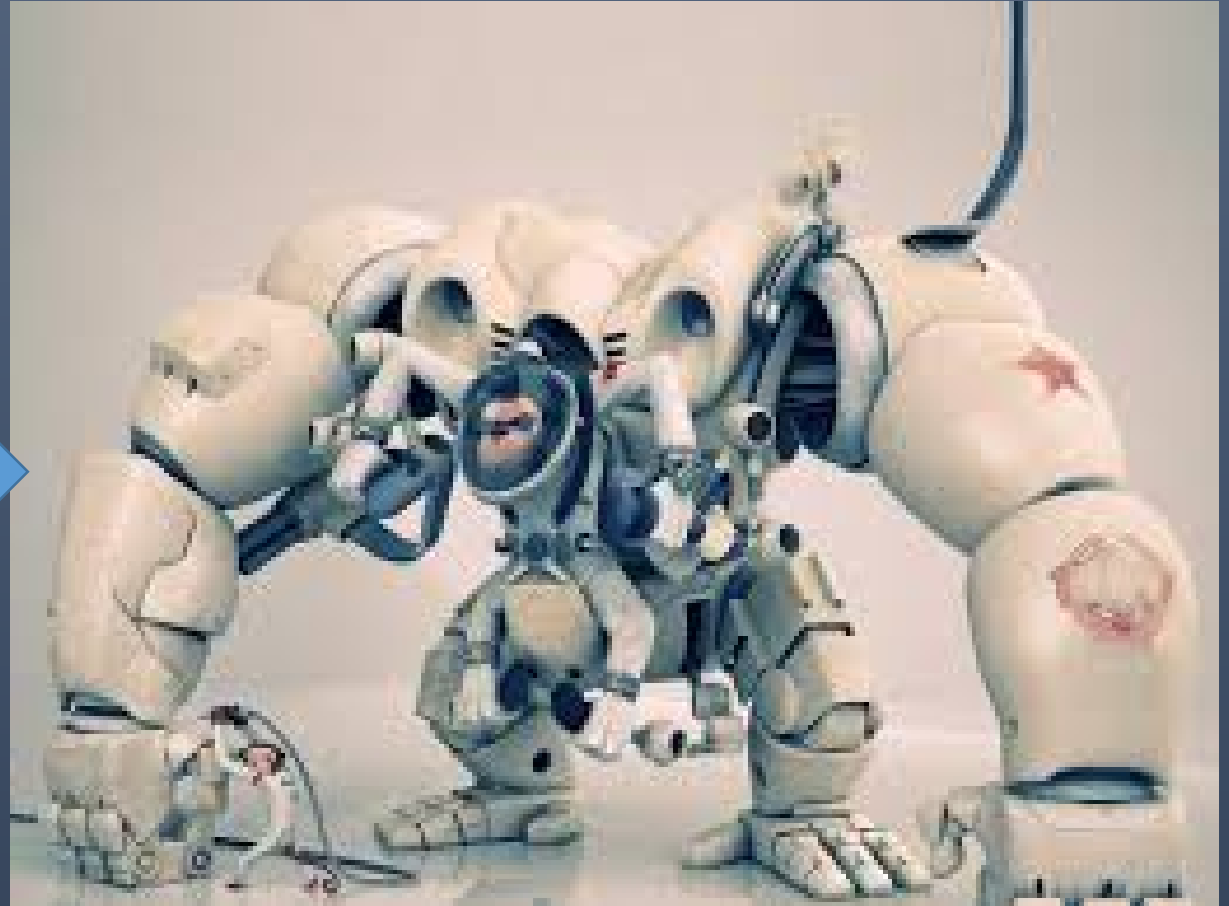
ONE ASSISTANT

# ADVANTAGES OF ROBOT ASSISTANCE



**Monkey see, monkey do—But so do we all. It's called cognitive modeling.**

**SHORT LEARNING CURVE**





# PATIENT VIEW RALRP

INTERNET AND SOCIAL MEDIA

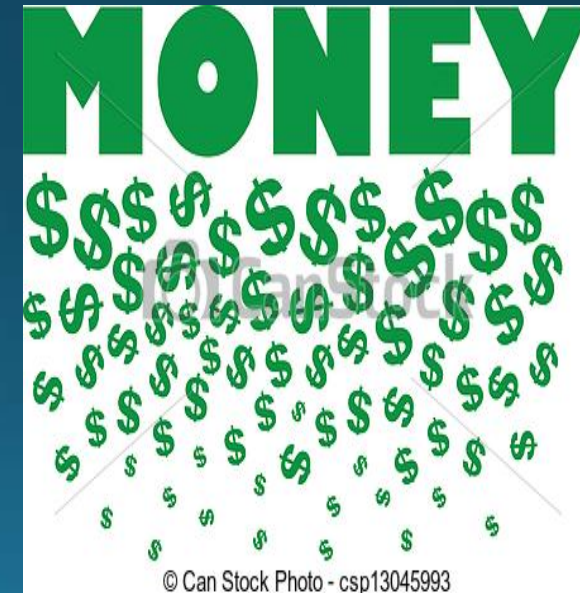
# RALRP



# ETHICAL VIEW RALRP

- \* AUTONOMY: RECOGNISES THE INDIVIDUALS RIGHTS TO SELF DETERMINATION
- \* BENEFICENCE: REFERS TO ACTIONS THAT PROMOTE THE WELLBEING OF OTHERS
- \* NON-MALEFICENCE: EMBODIED BY THE PHRASE "FIRST DO NO HARM"
- \* DOUBLE EFFECT: BENEFICENCE COMBINED WITH NON-MALFICENCE

# DIFFICULTIES FACED IN STARTING A ROBOTIC PROGRAM IN SOUTH AFRICA

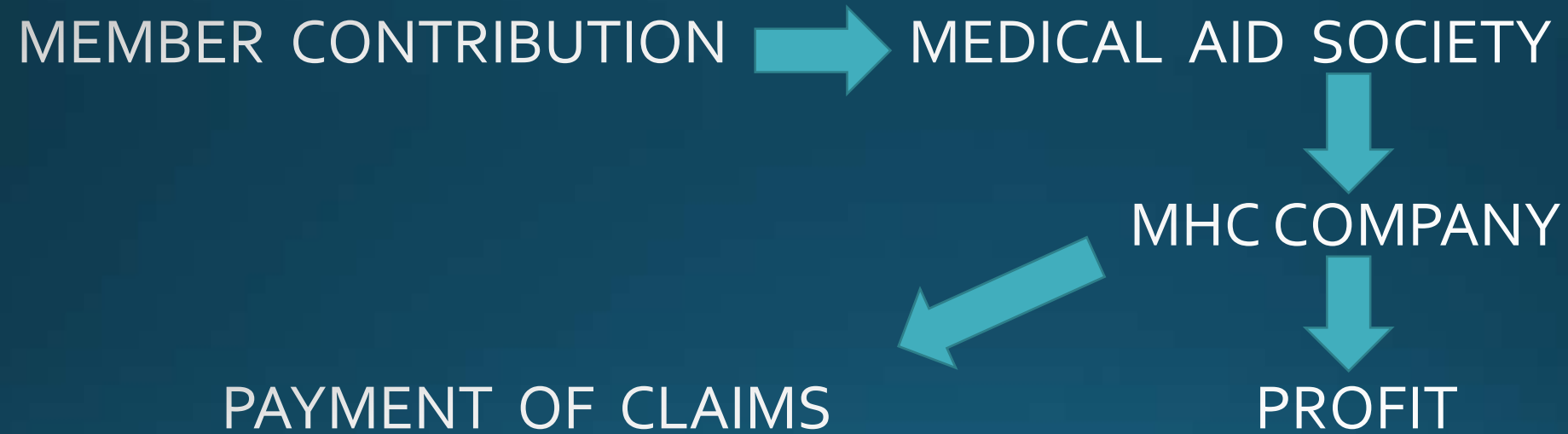




# MANAGED HEALTH CARE



# MHC



# FUNDERS AND NEW TECHNOLOGY

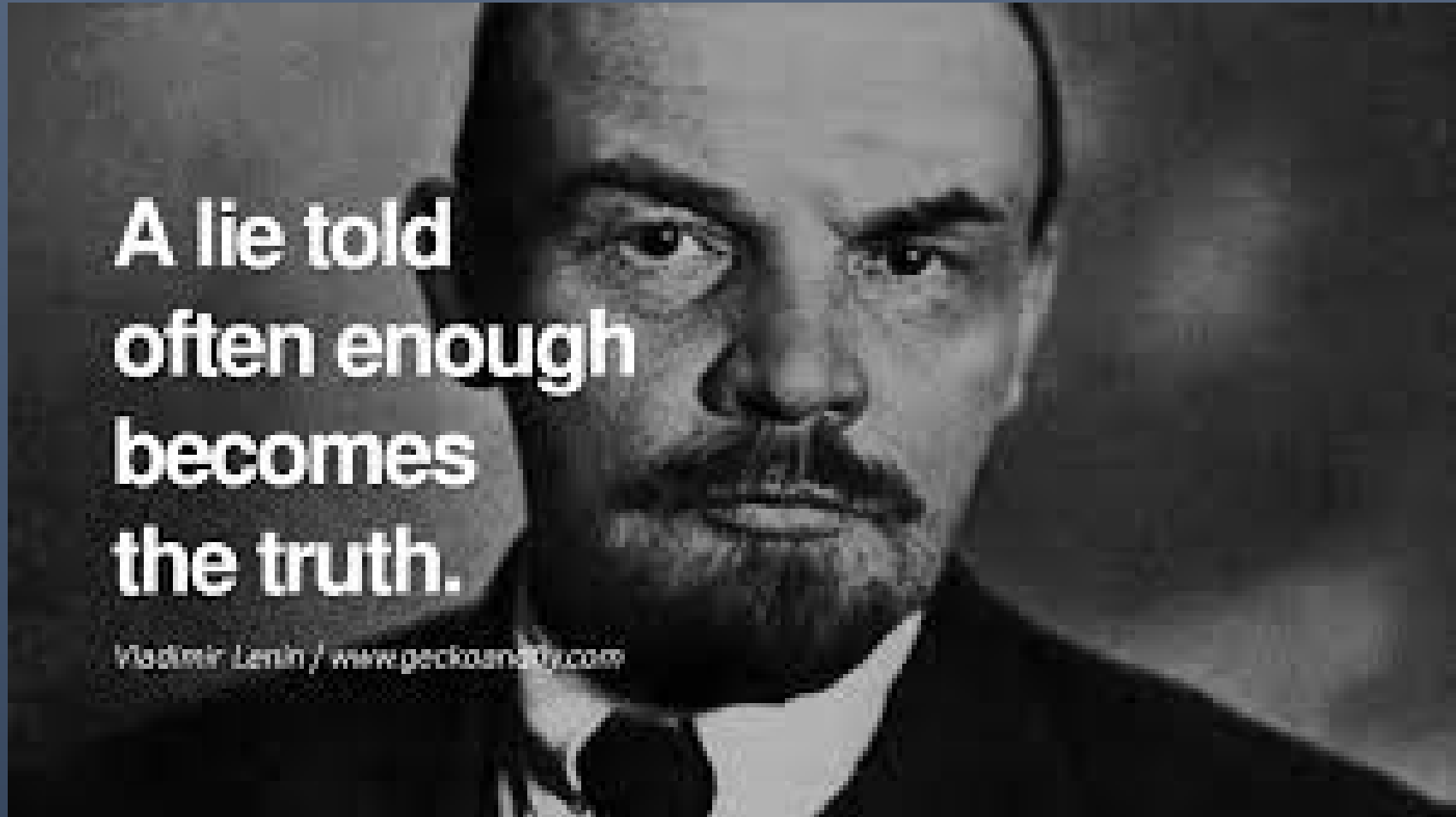


# FUNDERS AND NEW TECHNOLOGY





# FUNDERS AND NEW TECHNOLOGY



# MHC PROFIT

DISCOVERY HEALTH : TWO BILLION RAND

DISCOVERY BANK

GENESIS MEDICAL SCHEME:

RESERVES IN EXCESS OF 500% OF  
STATUTORY REQUIREMENTS

# FUNDERS AND NEW TECHNOLOGY



# OPEN RETROPUBIC RP

IS OPEN SURGERY DEAD ?

REGISTRAR TRAINING IS IN MIS

ADVANTAGES OF MIS CANNOT BE IGNORED



# DA VINCI ROBOT UTILISATION

USA : 85 %

EUROPE : 50% RALRP  
30% LRP  
20% OPEN SURGERY

# PROSTATE CANCER GUIDELINES

OPEN RETROPUBIC RP GOLD STANDARD

LOCAL GUIDELINES SUPPORTS ALL PROCEDURES

SURGEON TRAINING AND EXPERIENCE

FACILITY AND AVAILABILITY





# GUIDELINES RENAL CELL CANCER

## NEPHRON SPARING SURGERY (PARTIAL NEPHRECTOMY)

RAPN      GOLD STANDARD

LRN      GOLD STANDARD

# RADICAL PROSTATECTOMY

	OCT 2012-JUNE 2013	OCT 2013-JUNE 2014	
PERINEAL RP	118	57	
RETROPUBIC RP	177	187	
LRP	72	66	
RALRP	0	126	



JAN 2014\_\_\_\_\_SEPT 2016

LRP/RALRP

OPEN

882

734

# RADICAL PROSTATECTOMY

MIS (LRP+RALRP) : 192

OPEN RP : 187

PERINEAL RP : 57

LRP/RALRP TRIFECTA

CANCER CONTROL

CONTINENCE

ERECTILE FUNCTION

# PRE-OP STAGE

T1a	10%
T1c	54%
T2a	33%
>T2a	03%



# PRE-OP GLEASON SCORE

<6	14%
6	70%
7	09%
>7	07%

POST-OP GLEASON UPGRADE 16%

# POST-OPERATIVE PSA

pT<sub>3</sub>c/pT<sub>4</sub>a (9%) : 40% PSA <0.03 ng/ml

pT<sub>3</sub>c/pT<sub>4</sub>a : 60% detectable PSA

pT<sub>2</sub>a/pT<sub>2</sub>b/pT<sub>2</sub>c/pT<sub>3</sub>a/pT<sub>3</sub>b : PSA<0.03ng/ml

# POST-OP URINARY CONTINENCE

6-12 WEEKS	90%
12-24 WEEKS	9%
>12 MONTHS	1%

# POST-OPERATIVE ED

PRE-OP AVERAGE AGE : 60.5 YEARS (37-72 YEARS)

PRE-OP ED : 45%

POST-OP ED : 30% (1-3 YEARS)

ERECTIONS : 70% SPONTANEOUS : 34%

PDE<sub>5</sub> : 46%

CAVERJECT : 20%



# COMPLICATIONS

(MIS)

RECTAL INJURY	< 1%
URINARY FISTULA	< 1%
TRANSFUSION	1%
VASCULAR INJURY	0%
LYMPHOCELE	< 1%
HERNIA(ING)	3%
DVT	3%
STRICTURE	3%

# COMPARISON

	OPEN	MIS
DVT	3%	3%
STRICTURE	15%	3%
HERNIA(ING)	8%	3%

OCT 2013\_\_\_\_\_SEPT 2016

DA VINCI SYSTEMS	5
QUALIFIED	20
TRAINEES	12
PROCEDURES	1576
PRETORIA UROLOGY	785

# MIS



QOL ↑