

Development of

Major Concepts

in

Hemorrhoids Management



Dr P. B. Patel
Shiv Shraddha Nursing Home ,
Ahmedabad, Gujarat, India

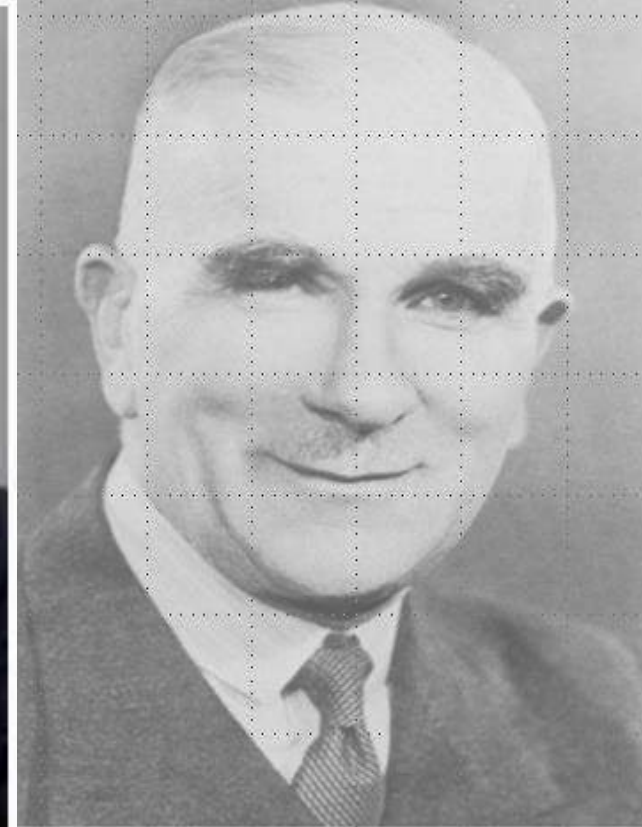
Because They Raise Us Up



Alan G. Parks
[Photograph courtesy of St. Mark's Hospital,
London, United Kingdom]



Dr. Antonio Longo

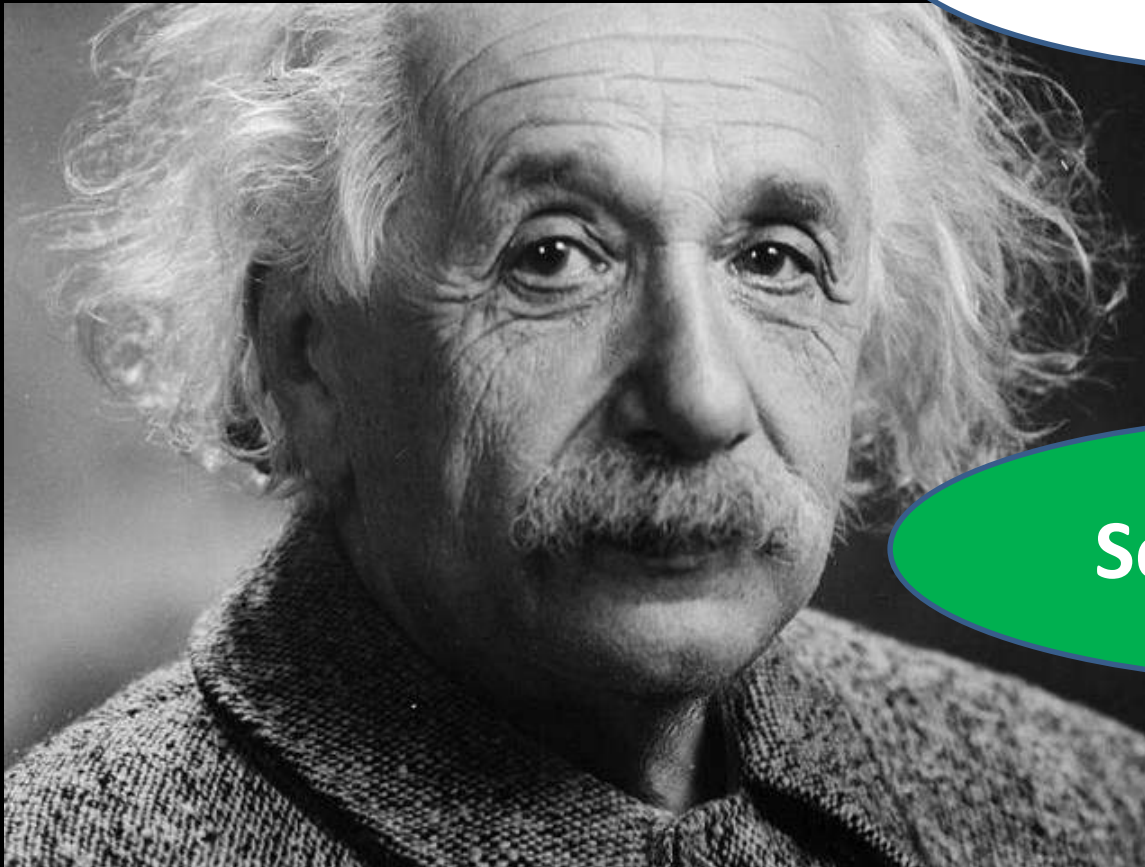


Edward Thomas Campbell Milligan
[Photograph courtesy of James P.S. Thomson, M.S., F.R.C.S.]

Their Great Stature Add To Ours

**Everything Should Be
Made as Simple as Possible,
But Not Simpler**

Understandable



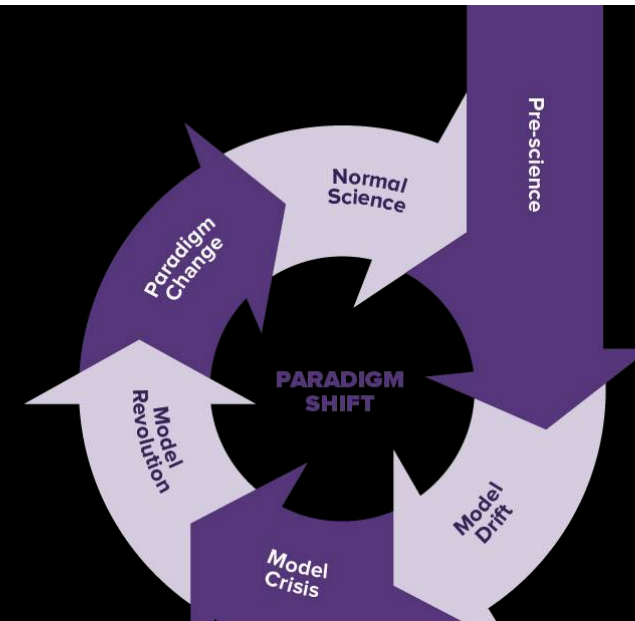
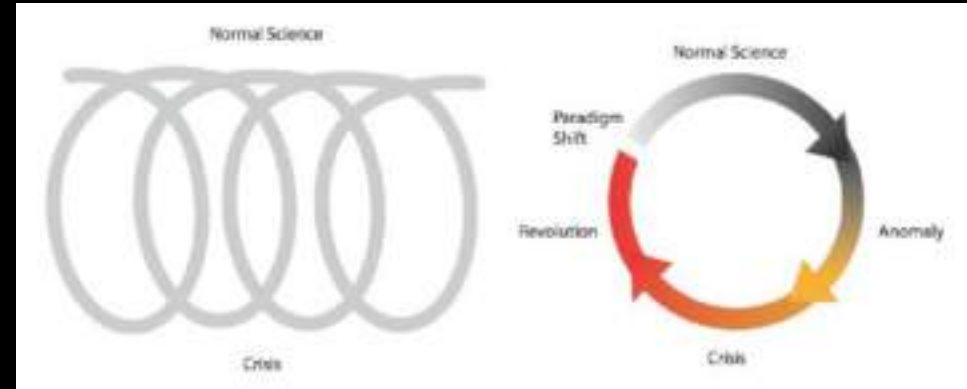
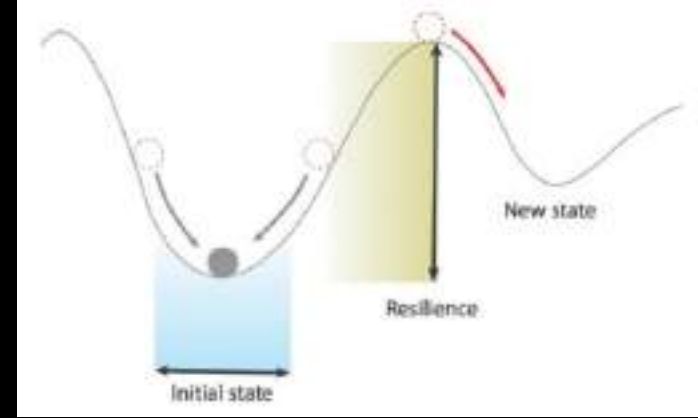
Select the BEST

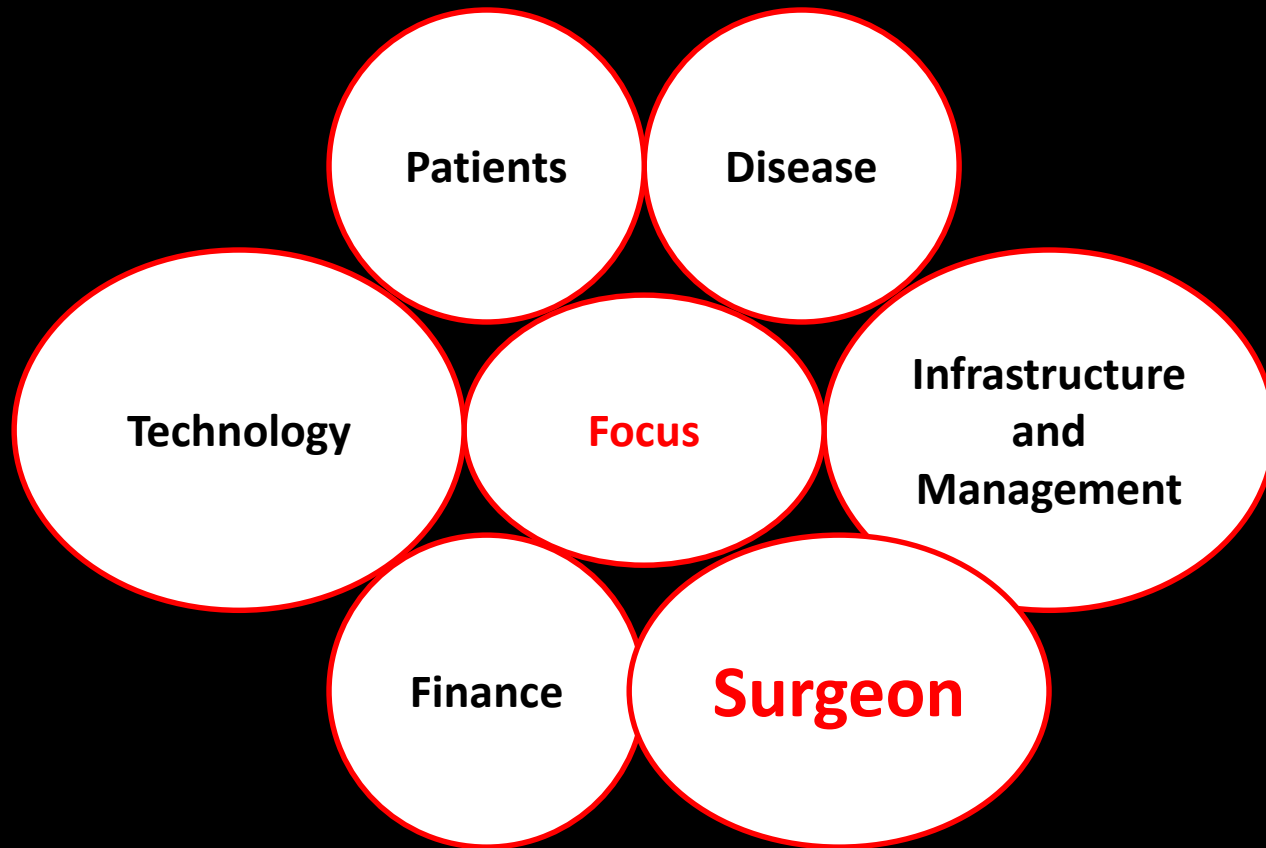
Fundamental Change

- in approach

or

- underlying assumptions

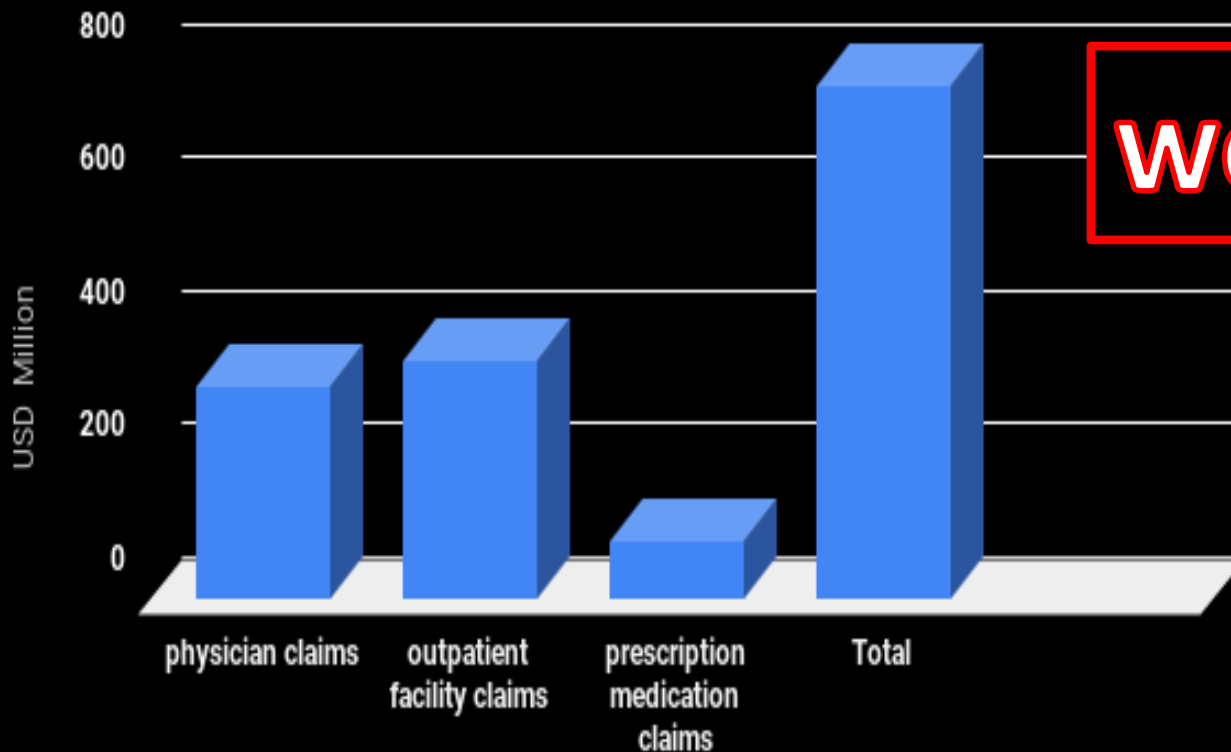




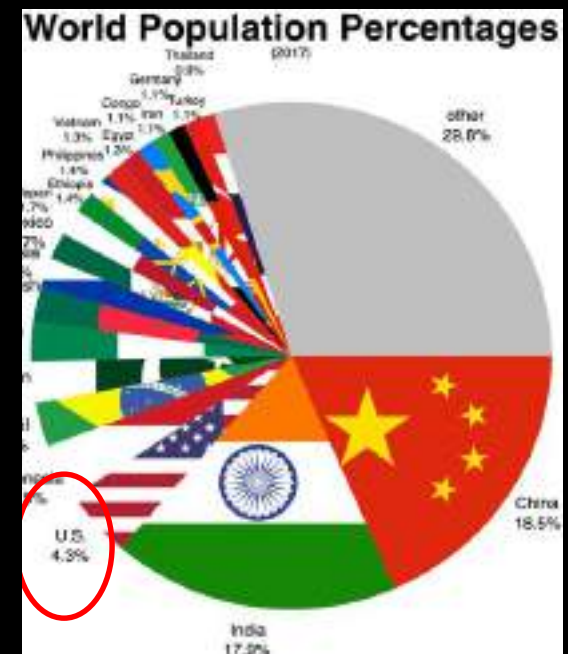
Burden and Cost

This is only 49 % of USA population That too only First Position
Diagnosis Out Patients Only

USD Million vs. First Position Diagnosis



worthwhile



Up to
65 to 95%

Constipation and Hemorrhoids

Villain in crisis

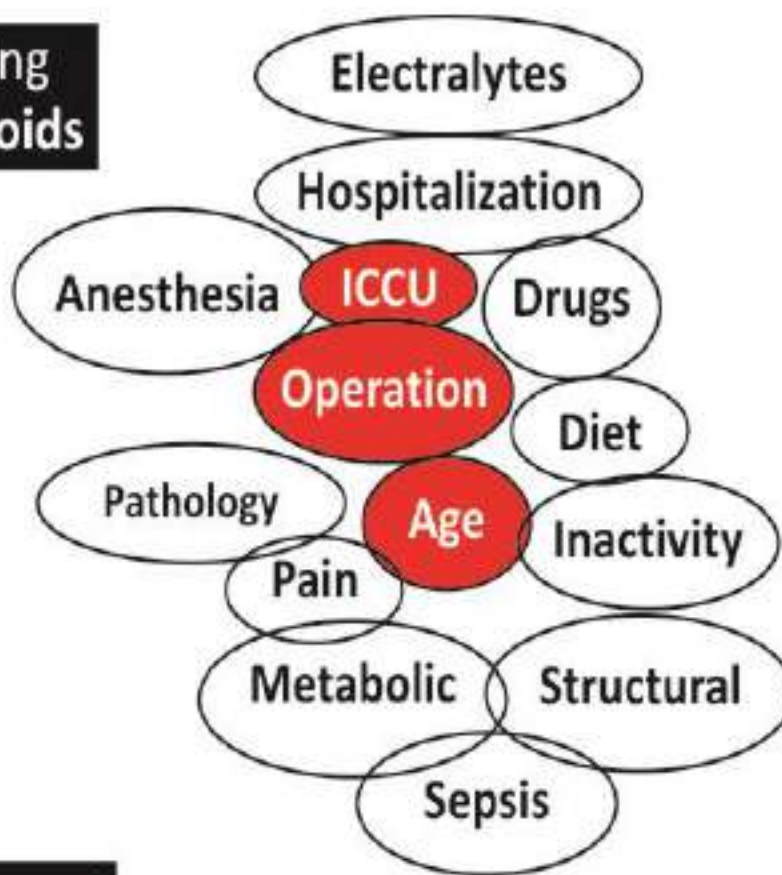
very high risk for developing
Constipation and Hemorrhoids

- suppression of defecation
- Inability to verbally express
- Privacy
- Bedpan
- Fasting
- Unconscious or sedated
- Often overlooked
- Endocrine,
- Neurogenic,
- Psychological

**Complex Anatomy, Physiology and
Function**

Significant
morbidity

© Copyright



Considerable
Underestimation

Healing
CVS, RS, GIT
Prolonged mechanical
ventilation
ICU length of stay
Higher Mortality
QOL, Nursing
Discomfort, Pain
Bloating, Nausea,
Anorexia,
Intolerance to feeding
Urinary retention,
Faecal impaction
Fecal Soiling
Intraabdominal
hypertension
Prolapse Uterus
Diverticulitis
Paralytic ileus
Readmission
Absenteeism,
Presenteeism
Pulmonary Aspiration
Emergency Visit
Bacterial overgrowth
Death
Finance

Landmarks in the History of Hemorrhoids

Charles V. Mann

Date	Comments
c. 2250 BC	Code of Hammurabi, King of Babylon. Description of anal symptoms (hemorrhoids).
1700 BC	Edwin Smith papyrus. Use of astringent lotions for anal symptoms (hemorrhoids?) described.
1552 BC	Eber papyrus. The most complete record of Egyptian medicine. Hemorrhoid remedies described.
460–375 BC	Writings of Hippocrates. Treatment of hemorrhoids by cautery and excision described.
Old Testament, Samuel 5:9	Philistines punished with “emerods.”
Old Testament Samuel 5:12	After the Ark moved to Ekron, perpetrators smitten by “emerods.”
25 BC–AD 50	Celsus describes ligature of piles with flax.
AD 130–200	Galen recommends conservative management of piles (laxatives, ointments, leeches) and regards bleeding as therapeutic. Also describes, however, use of a tight thread to induce sloughing of hemorrhoids.
Sometime between the fourth & sixth century AD	Susruta Samhita describes use of treatment by clamp and cautery method.
10th century AD	El-Zahrawy describes treatment by application of cautery irons.
10th–15th century AD	Treatment in Byzantine medical practise by twisting pile, application of ligature to its base, followed by amputation—a “modern” approach that lapses for many centuries.
1307–1370	John of Arderne publishes his treatise on the treatment of fistula and hemorrhoids, and the use of clysters (enemas).

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Surgical Treatment of Hemorrhoids

Date	Comments
1660–1734	Georg Ernst Stahl publishes a classic work on the treatment of hemorrhoids.
1835	Foundation of St. Marks Hospital, London, by Frederick Salmon for the treatment of anal diseases, especially fistula in ano and hemorrhoids.
1849	J. G. Maisonneuve describes treatment by forceful anal dilation. Subsequently, this treatment is revived by P. H. Lord.
1935	Development of the classical method of open dissection and ligature at St. Marks Hospital by E. T. C. Milligan and C. Naughton Morgan.
1955	Development of a closed method of hemorrhoidectomy by A. G. Parks, London.
1960	The closed surgical method of treatment established by J. A. Ferguson and colleagues at Grand Rapids, Missouri.
1963	Invention of the method of rubber band ligation of hemorrhoids as an office procedure by J. Barron (USA). Method widely adopted thereafter.
1970	New methods for physical destruction of hemorrhoids developed (cryotherapy infrared thermocoagulation, diathermy, laser). Some still used.
1975	Use of anal dilatation advocated by P. H. Lord. Is not widely adopted but of historical importance. Classical studies by W. H. F. Thomson into the nature of hemorrhoids and their development from anal cushions, which are normal structures.
1990	Day-case surgery initiated in special centers.

Evolution and current status

Year	Author	Technique
1869	John Morgan	Sclerotherapy (IS) - Mitchell technique (Illinois, USA)
1882	Whitehead	Total haemorrhoidectomy- Amputative technique Supra-anodermal hemorrhoidectomy
1935	Milligan Morgan	open dissection and ligature - GOLD STANDARD
1955	A.G.Parks	Submucosal technique
1960	J.A. Ferguson, USA	closed method
1963	J. Barron	Rubber Band Ligation Most Common
1968	P.H. Lord	anal dilatation
1969	Lewis	Cryo therapy-Cryosurgery
1970		New methods for physical destruction
1970	Sokol	Semi-closed technique
1978	Faraq	Pile 'suture'
1979	Neiger	Infrared photocoagulation (IRC)
1986	Santos	Hybrid -RBL+ excision of external hemorrhoids

Evolution and current status

1987	Griffith	Bipolar diathermy BD (BICAP)
1989	Norman	Direct current electrotherapy (Ultroid)
1993	Antonio Longo	SH, PPH - Mechanical anopecty with circular clamp
1995	Morinaga , Japan	THD or DG HAL Doppler-guided hemorrhoidal artery ligation
1998	Gupta	Radiofrequency ablation (RFA)
2006	Chivate	Dr Chivatr's Technique
2006	Boccasanta	stapled transanal rectal resection (STARR)-Circumferential mucosectomy
2015	Vidal	Emborrhoid - SRAs are occluded with embolization coils
2018	P. B. Patel	4PF
	Ruiz-Moreno	Semi-closed technique
	René Obando and René Obando-Reis Neto	Semi-closed technique
		Clamp and cautery hemorrhoidectomy
		Internal Anal Sphincterotomy
	Fansler-Anderson-Arnold	circular resection: Reconstructive hemorrhoidectomy –
		Laser hemorrhoidoplasty-LHP
		Atomizing hemorrhoids Arizona, USA
		Thermofusion hemorrhoidectomy

Ideological classification

Historic

Trial and error

Pre classic

Applying logic

Classic

Effective logic


Post classic

In search of better option

New Era

Intention to cure

Historic Trial and error

A medieval manuscript illustration depicting a surgical procedure for hemorrhoids. A surgeon, wearing a red robe, is shown from the side, holding a patient's leg with his left hand and a knife in his right hand. The patient is lying on a green and red patterned surface, with their back to the viewer. The background is a blue field with white stars. Above the patient, there is a rectangular frame containing the Latin text 'da inci' and 'sicut'. The illustration is framed by a gold border.

Haemorrhoids are one of the best-described diseases in medical history.

Medieval surgery for haemorrhoids. The surgeon holds in his left hand an instrument to visualise and secure the haemorrhoids. In his right hand he holds a knife to cut them away. The picture is from c. 1200 ACE. (Image: The British Library).

Ideological classification

Historic

Trial and error

Pre classic

Applying logic

Classic

Effective logic

Post classic

In search of better option

New Era

Intention to cure

most important books ever published

**Foundations of
modern (human)
anatomy**

1543



28 years old

Example of Excellence

In *De humani corporis fabrica* Vesalius reports that he once dissected “a man who suffered from the complaint called hemorrhoids . . . ; at regu-



of blood from the anal veins, ve their menstrual flux.”⁵ The and female men tion is so lies the ob gathered throw a con- the ana- Does it

Focus on Anatomy

First Major Shift

1543

Our history

1835

St Mark's Hospital was founded in 1835 by Frederick Salmon in a spirit of protest and independence against the closed world of the medical profession at the time.

Super Specialization

Frederick Salmon – Rebel and Entrepreneur



Frederick Salmon
founder of St Mark's Hospital

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Frederick Salmon was born in Bath in 1796, the sixth child of a practising attorney. He was apprenticed at the age of 15 to a surgeon-apothecary, a combination of both surgeon and physician, and at one time during his period, he came into contact with William White, one of the earliest surgeons in Britain to write on rectal disease and whom Frederick Salmon later credited with the direction his own medical specialisation took.

THREE GREAT CONTRIBUTION

Salmon qualified for his licentiate of the Society of Apothecaries in 1817 and in October of that year entered St

Pre classic - Applying logic

Our history

St Mark's Hospital was founded in 1835 by Frederick Salmon in a spirit of protest and independence against the close world of the medical profession at the time.

1835

Super Specialize

Frederick Salmon – Rebel Entrepreneur



Frederick Salmon
© Copyright
founder of St Mark's Hospital

Change in Understanding

THREE GREAT CONTRIBUTION

Pre classic - Applying logic

Pre classic - Applying logic

1871

Sclerotherapy (IS) - Mitchell technique. First injection therapy was used by John Morgan in 1869, with iron persulfate. Mitchell in 1871 used carbolic acid for this purpose. Later, 5% solution

Promote Fibrosis

Early Internal

Simple and effective

Short term treatment

good technique

careful case selection

Pre classic - Applying logic

1971

Sclerotherapy (IS) - Mitchell. First injection therapy was used in 1869, with iron persulfate. Mitchell used carbolic acid for this indication.

Change in Understanding

Focus on Control

Early In

Sim

S

good technique
careful case selection

From Physician to Surgeon¹⁸⁸²

THE SURGICAL TREATMENT OF HÆMORRHOIDS.

By WALTER WHITEHEAD, F.R.C.S.Ed., F.R.S.Edin.,
Surgeon to the Manchester Royal Infirmary.

or of indirect and remote functional derangement. Previously to this state, the treatment of hæmorrhoids naturally remains within the domain of the physician.

‘Total haemorrhoidectomy’

Circumferential excision of the anal cushions,

Anastomosing the anoderm to the rectal mucosa

Ultra Radical

From Physician to Surgeon 1882

THE SURGICAL TREATMENT OF
BY WALTER WHITEHEAD, F.R.C.S.
Surgeon to the Manchester General Hospital.
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Change in Understanding

Focus on Cure

Circumferential incision of the anal cushions,
Stomach to the rectal mucosa

Ultra Radical

Ideological classification

Historic

Trial and error

Pre classic

Applying logic

Classic

Effective logic

Post classic

In search of better option

New Era

Intention to cure

Miles' Realization

1919

- Three primary piles
 - Right
 - two
 - Left
 - one

[Observations upon internal piles](#)

WE Miles - Surg Gynelol Obstet, 1919 -
ci.nii.ac.jp

Miles' Realization

1919

- Three primary piles

- P

one

Change in Understanding

[es upon internal piles](#)

es - Surg Gynelol Obstet, 1919 -

.ac.jp



Fig. 1 - William Ernest Miles ((1869-1947). The English surgeon who developed the abdominoperineal excision of the rectum.



Fig. 3 - Picture of the Gordon Hospital for Rectal Diseases, where Miles did most of his professional work.

Who Develop APR

TREATMENT OF HAEMORRHOIDS*

BY

W. B. GABRIEL, M.S., F.R.C.S.

Surgeon, Royal Northern and St. Mark's Hospitals

(WITH SPECIAL PLATE)

The choice of treatment of haemorrhoids depends so much on examination and an accurate estimation of the

Primary, being the earliest stage, in which bleeding takes place at defaecation: the pile may just become grasped by the anal sphincters during the act of defaecation, but no prolapse outside the anal margin occurs.

Intermediate, when the pile protrudes through the anal orifice at defaecation and then becomes reduced spontaneously when the expulsive effort has ceased. Some bleeding still occurs, but may be less than before owing to some fibrosis taking place in the substance of the pile, together with some thickening of the mucous membrane.

Degree of Internal Haemorrhoids

The treatment of internal haemorrhoids is intimately linked up with a correct assessment of the degree of prolapse. Ernest Miles (1919) divided piles into three stages.

Goligher Classification

Grade I	Bleed without prolapse	
Grade II	Prolapse outside anal canal	Reduce spontaneously
Grade III		Requires manual reduction
Grade IV		Irreducible

Goligher Classification

Grade I	Blind without n
Grade II	Reduce spontaneously
Grade III	Requires manual reduction
Grade IV	Irreducible

Modification of Miles Classification

Change in Understanding

Classic Articles in Colonic and Rectal Surgery

MARVIN L. CORMAN, M.D., *Editor*

Edward Thomas Campbell Milligan
1886–1972

1937

Campbell Milligan was born June 23, 1886, at Waterloo, near Ballarat, Victoria, Australia, the son of a gold miner. After the gold vein ran out, his family moved near Melbourne where he was raised with the devout Methodist philosophy.

Milligan attended Ballarat College and received his medical training at Melbourne University, graduating with honors in 1910. He received his M.D. in 1912 and was awarded a gold medal. He went to France with the Australian Expeditionary Force in 1914 and distinguished himself by the application of radical exploration and debridement of wounds. For this he was relieved of operating by the consultant surgeon until his visionary approach became generally accepted. At the conclusion of the war, he received the O.B.E.

He then settled in London and became consultant to a number of hospitals, including St. Marks. He developed a particular interest in anal diseases and became extremely adept in performing a combined abdominoperineal resection. It is said that he was "master of surgical planes and deft atraumatic dissection, and even after the most major procedures, his patients look undisturbed." One of Campbell Milligan's truly outstanding achievements was the work that he and his junior colleagues prepared on the detailed anatomy of the pelvis and sphincter mechanism—the subject of this *Classic* presentation.

Among his many other interests and talents was his athletic prowess. He was a gold medalist at skiing (slalom) and played tennis up to "Wimbledon standards." He and his wife became associated with an organization called, "Moral Rearmament"; their home, in fact, became known as the Church on Harley Street.

He died, January 4, 1972, at the age of 85.

Milligan ETC. Surgical anatomy of the anal canal, and the operative treatment of haemorrhoids. *Dis Colon Rectum* 1985;28:620–628.

SURGICAL ANATOMY OF THE ANAL CANAL, AND THE OPERATIVE TREATMENT OF HAEMORRHOIDS

BY

E.T.C. MILLIGAN, O.B.E., M.D. Melb.,
F.R.C.S. Eng., F.R.A.C.S.

HON. SURGEON TO ST. MARK'S HOSPITAL FOR DISEASES
OF THE RECTUM, LONDON



Edward Thomas Campbell Milligan

[Photograph courtesy of James P.S. Thomson, M.S., F.R.C.S.]

1937

THE LANCET]

[NOV. 13, 1937

ADDRESSES AND ORIGINAL ARTICLES

SURGICAL ANATOMY OF THE ANAL CANAL, AND THE OPERATIVE TREATMENT OF HÆMORRHOIDS

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HON. SURGEON TO ST. MARK'S HOSPITAL FOR DISEASES
OF THE RECTUM, LONDON

C. NAUNTON MORGAN, F.R.C.S. Eng.

SENIOR ASSISTANT SURGEON TO THE HOSPITAL

LIONEL E. JONES, M.B. Lond., F.R.C.S. Eng.

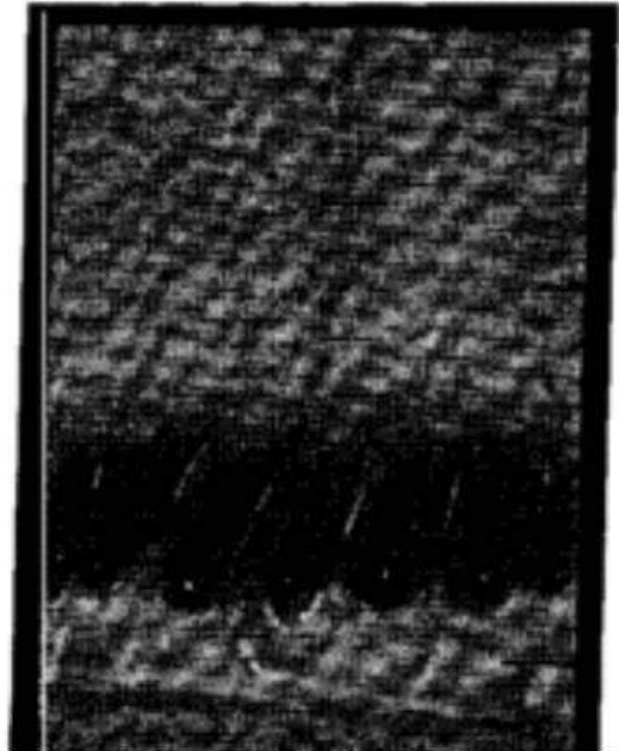
LATE RESIDENT SURGICAL OFFICER AT THE HOSPITAL

AND

R. OFFICER, M.B., B.S. Melb.

RESIDENT SURGICAL OFFICER AT THE HOSPITAL

Since the composite portions of a hæmorrhoid liesubjacent to the rectal mucosa and to the various linings of the anal canal, a description of these coverings is necessary for the identification of the underlying component parts of the



A

B

C

Healing by second intention

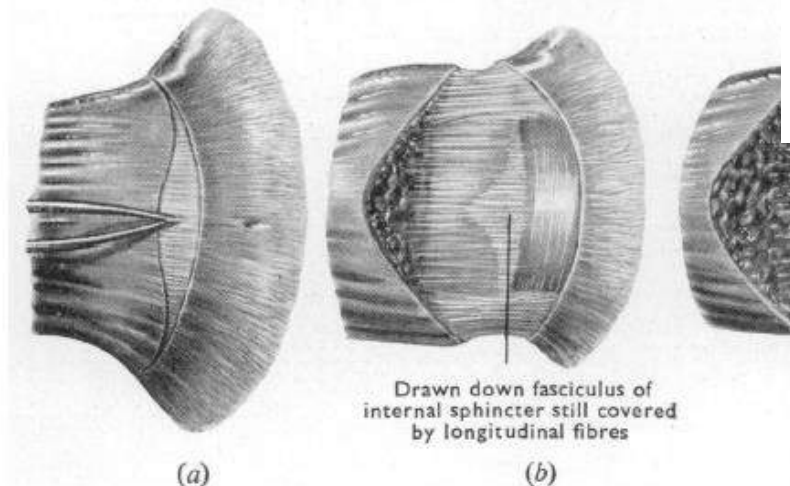
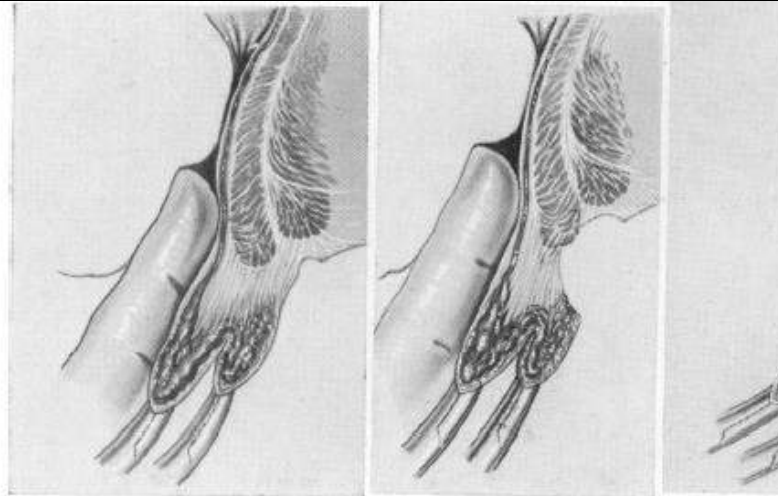


Fig. 11. Dissection of the left lateral haemorrhoid at h

- (a) Skin divided, exposing corrugator cutisani muscle.
 - (b) Incision deepened, exposing lower border of intern
 - (c) With wider skin cut, both internal and externa
- (See Figs. 12 and 13.)

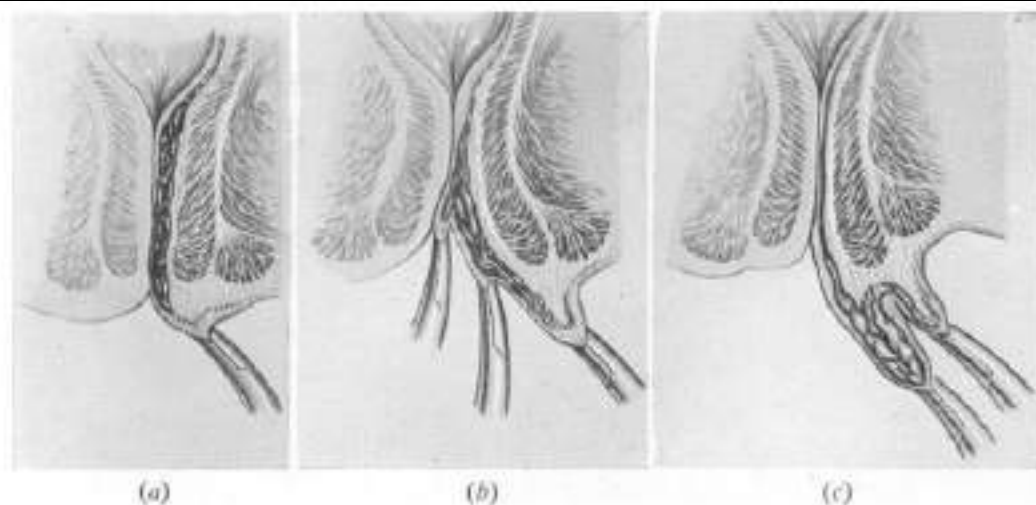


Fig. 10. Showing effect of traction on the relationship of the subcutaneous external and internal sphincter muscles.

- (a) Anus relaxed under anaesthesia with skin forceps applied.
- (b) Forceps applied to secure haemorrhoidal pedicle.
- (c) Traction on haemorrhoidal pedicle everting the anus and pulling the internal

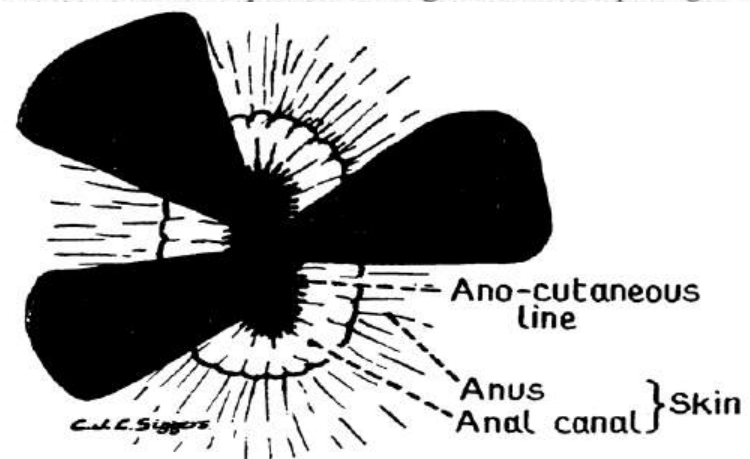


Fig. 6.—Black areas represent the trimmed skin cuts after removal of the three primary haemorrhoids. Light areas—the intact skin bridges.

Section of Proctology

President—E. T. C. MILLIGAN, O.B.E., M.D., F.R.C.S., F.R.A.C.S.

[December 9, 1942]

atomy and Disorders of the Perianal Space

PRESIDENT'S ADDRESS

By E. T. C. MILLIGAN

Remove Three
Hemorrhoids

Three Parts
each

1 Pedicel

2 Internal

3 External

Still Gold Standard

Modification of the
Salmon's techniques.

Radical

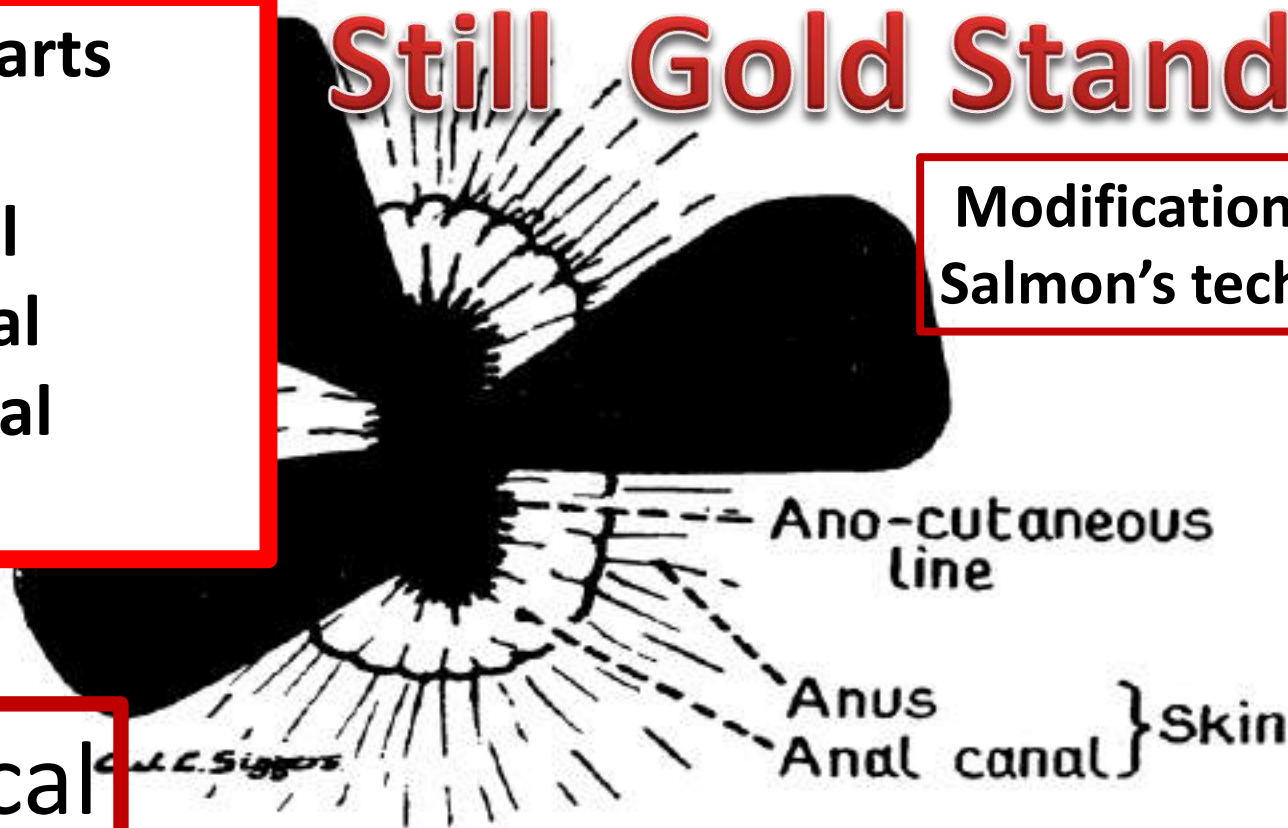


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[December 9, 1942]

Anatomy and Disorders of the Anal Space

PRESIDENT'S ADDRESS

By E. T. C. MILLIGAN

Remove Three
Hemorrhoids

Three Parts
each

1 Pedicel

2 Internal

3 External

Radical

Focus on Anatomy
Focus on Cure

...ation of the
...on's techniques.

Still

ard

Ano-cutaneous
line

Anus
Anal canal } Skin

Fig. 6.—Black areas represent the trimmed skin cuts after removal of the three primary hæmorrhoids. Light areas—the intact skin bridges.

Major Paradigm Shifts	
Historic	Trial and error
Pre classic	Applying logic
Classic	Effective logic - MMH
Post classic	In search of better option
New Era	Intention to cure

Post classic
Improving
Searching new options
Technology
Mixed or hybrid

Improving
Parks
Ferguson
Sokol

Classic- In search of better option

- Improving
- Searching new options
- Technology
- Mixed or hybrid
- Mucosal reconstructive - hemorrhoidectomy -Parks'
-
- Closed haemorrhoidectomy
Ferguson
- Semi-closed techniques- Sokol

Classic Articles in Colonic and Rectal Surgery



Alan G. Parks
(Photograph courtesy of St. Mark's Hospital,
London, United Kingdom)

MARVIN L. CORMAN, M.D., *Editor*

Alan Guyatt Parks

1920-1982

1956

THE BRITISH JOURNAL OF SURGERY

VOL. XLIII

JANUARY, 1956

No. 180

THE SURGICAL TREATMENT OF HÆMORRHOIDS ★

BY A. G. PARKS

GUY'S HOSPITAL, LONDON

IT may be thought presumptuous to write about an affliction which has beset man since the dawn of history and which to-day is of such universal distribution that all who practise surgery must surely be well acquainted with its problems. The writer must

pile covered by sensitive anal epithelium could be severed from its bed leaving a pedicle of superior hæmorrhoidal vessels and rectal mucosa only. Dissecting above the tissues innervated by somatic nerves he was able to ligate the superior hæmor-

Closed Hemorrhoidectomy

JAMES A. FERGUSON, M.D., J. RICHARD HEATON, M.D.

From the Ferguson-Droste-Ferguson Clinic, Grand Rapids, Michigan

© the American Proctologic Society 1959

HEMORRHOIDECTOMY PROBABLY can be considered a standard surgical procedure. Despite the fact that few surgeons employ identical technics, it is quite unlikely that any feature utilized by a surgeon can be considered new. The procedure herein described is not identical to usual operations for hemorrhoids and possesses some advantages which justify this presentation.

There are certain criteria upon which

the problem, hemorrhoidectomy should be recommended. A complete investigation which is the best insurance against error, should include a complete physical examination, thorough roentgenologic examination of the colon and appropriate laboratory tests.

Preparation for Operation

A liquid diet is provided during the 24-

1959

Ferguson, J.A. & Heaton, J.R. Dis Colon Rectum (1959) 2: 176.

<https://doi.org/10.1007/BF02616713>

Closed Hemorrhoidectomy

JAMES A. FERGUSON, M.D., J. RICHARD HEATON

From the Ferguson-Droste-Ferguson Clinic, Grand Rapids, Michigan

Change in Assumption

Focus on Cure

HEMORRHOIDECTOMY PROBABLY can be considered a standard surgical procedure. Despite the fact that few surgeons use identical technics, it is a complete investigation insurance against error, a complete physical examination, a thorough roentgenologic examination of the colon and appropriate laboratory tests.

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Preparation for Operation

A liquid diet is provided during the 24-

Major Paradigm Shifts

Historic	Trial and error
Pre classic	Applying logic
Classic	Effective logic - MMH
Post classic	In search of better option
New Era	Intention to cure



Post classic

Improving

Searching new options

Technology

Mixed or hybrid



Improving

Parks

Ferguson

Sokol

Radical

No or minimal Difference

Major Paradigm Shifts

Historic	Trial and error
Pre classic	Applying logic
Classic	Effective logic - MMH
Post classic	In search of better option
New Era	Intention to cure



Post classic

Improving

Searching new options

Technology

Mixed or hybrid



Improving

Parks

Ferguson

Sokol

Searching new options

RBL

Sclerotherapy (?)

Cryosurgery

Lord's

HAL (?)

Office Ligation of Internal Hemorrhoids

Blaisdell 1958

JAMES BARRON, M.D., *Detroit, Michigan*

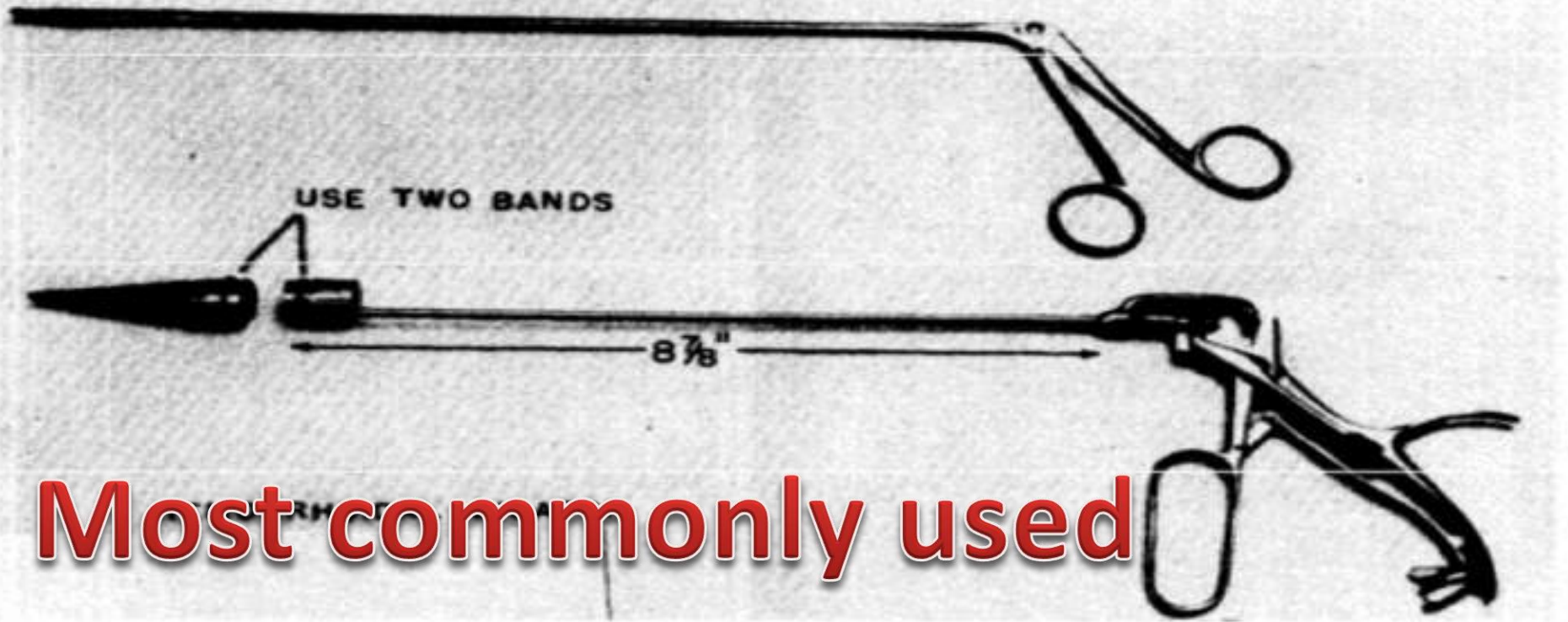
Modified by Barron 1963

From the Division of General Surgery, Henry Ford Hospital, Detroit, Michigan.

large series of adults examined proctoscopically at the Mayo Clinic [1].

SINCE the dawn of history, man has been

The basic principles of hemorrhoid treat-



Most commonly used

FIG. 1. Modified ligator.* The ligating drums have been adopted from the Blaisdell instrument. The loading principle of the Gravlee Umbilical Cord Ligator has been utilized. The handles are interchangeable and different length shafts may be used. The grasping forceps above are used to pull the internal hemorrhoid through the drums.

* Distributed by Randolph Surgical Supply Co., Detroit, Michigan.

Office Ligation of Internal Hemorrhoids

Blaisdell 1958

JAMES BARRON, M.D., Detroit

1963

Modified

Change in Assumption

Focus on Control

Commonly used

From the Division of General Surgery, Henry Ford Hospital, Detroit, Michigan.

SINCE the dawn of history, man has

examined proctoscopically

hemorrhoid treat-

US

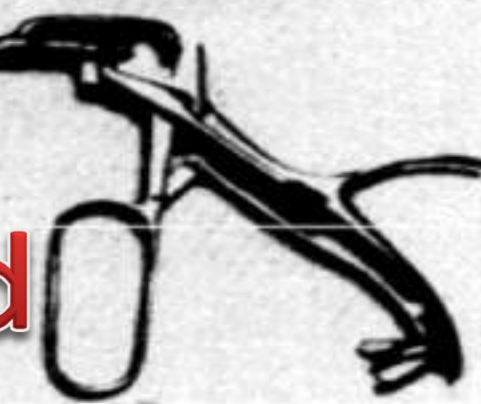


FIG. 1. The ligating drums have been adopted from the Blaisdell instrument. The loading principle of the Ford Ligator has been utilized. The handles are interchangeable and different length shafts may be used. The holding forceps above are used to pull the internal hemorrhoid through the drums.

• Dist. Randolph Surgical Supply Co., Detroit, Michigan.

Major Paradigm Shifts

Historic	Trial and error
Pre classic	Applying logic
Classic	Effective logic - MMH
Post classic	In search of better option
New Era	Intention to cure

Post classic

Improving
Searching new options
Technology
Mixed or hybrid

Technology

New Methods
Energy Devices

New Methods

SH/ PPH
THD /DG HAL
Emborrhoids

Improving

Parks
Ferguson
Sokol

Searching new options

RBL
Sclerotherapy (?)
Cryosurgery
Lord's
HAL (?)



Dr. Antonio Longo

1993

In 1993, Dr. Antonio Longo revolutionized the concepts and therapy of hemorrhoids by affirming the principle that haemorrhoidal disease is

always secondary to prolapse
the prolapse originates from the rectal mucosa , and all the symptoms of hemorrhoidal disease are caused by prolapse

<https://drantonionlongo.it/dr-antonio-longo/>

History of PPH



- 250,000 procedures have been carried out to date.
- Over 13,000 procedures have been performed in the U.S. since September 2001.
- 80% of hemorrhoid procedures in Italy are performed using PPH.

Gastroenterology 2019

<http://www.drleith.co.za/haemorrhoids.php>



Dr. Antonio Longo

1993

In 1993, Dr. Antonio Longo revolutionized the concepts and therapies for hemorrhoids

by affirming the new concept that hemorrhoids are always internal

the only origin of hemorrhoids is the internal

hemorrhoid caused by

Change in Assumption

Focus on Control

<http://www.drlongo.it/dr-antonio->

His

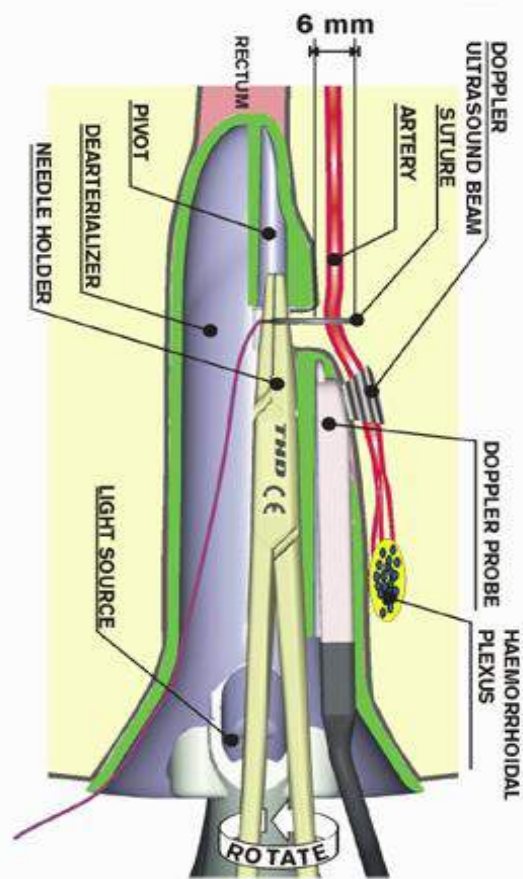


- 250,000 procedures have been carried out to date.
- Over 100,000 procedures have been performed in the U.S. since September 2001.
- 80% of the procedures are performed using PPH.

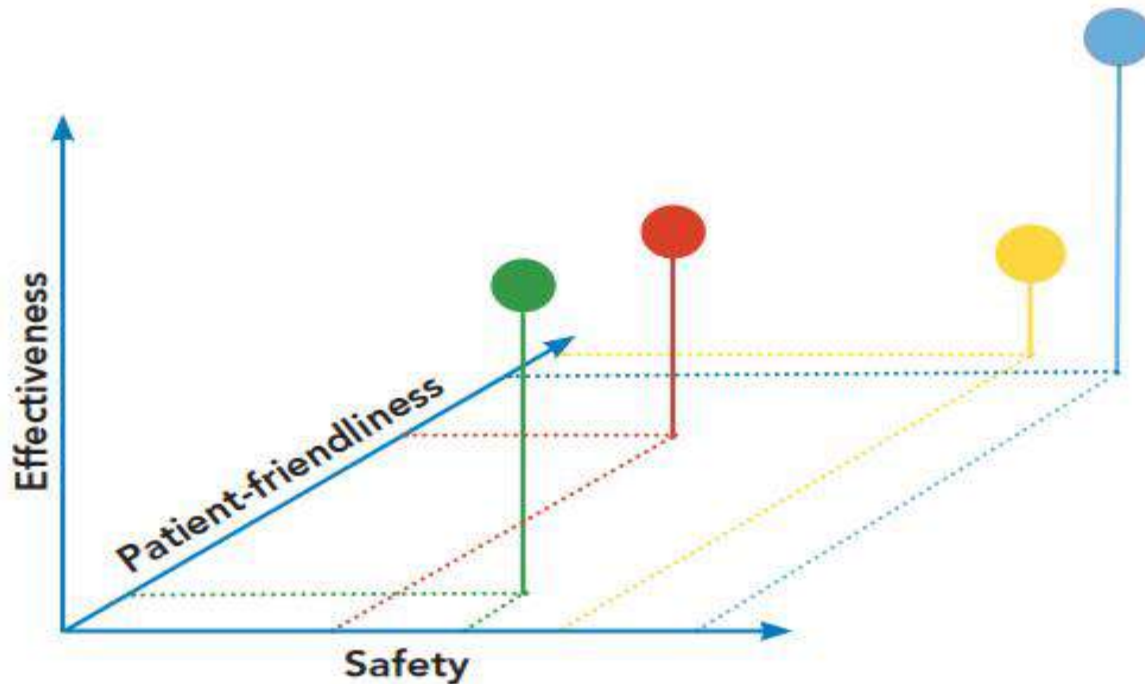
1995

A novel therapy for internal hemorrhoids: ligation of the hemorrhoidal artery with a newly devised instrument (Moricorn) in conjunction with a Doppler flowmeter.

Morinaga K¹, Hasuda K, Ikeda T.



<http://www.surgeoncolorectal.co.uk/procedures/halo-rar-procedure/>



- Conventional haemorrhoidectomy
- Stapler method
- Outpatient procedures
- HAL / RAR

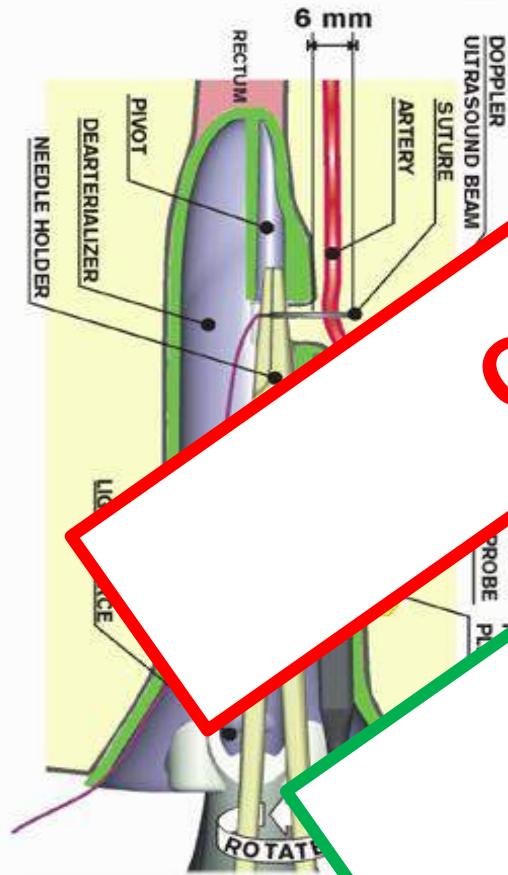
http://www.fumedica.ch/custom/data/ckEditorFiles/Produktbeschreibung/A.M.I.%20HAL-RAR%20System%20Brochure_English%202014.pdf

This diagram represents an assessment made by A.M.I. based partly on published data and partly on evaluations by surgeons who have experience with the HAL and RAR methods.

Am J Gastroenterol. 1995 Apr;90(4):610-3.

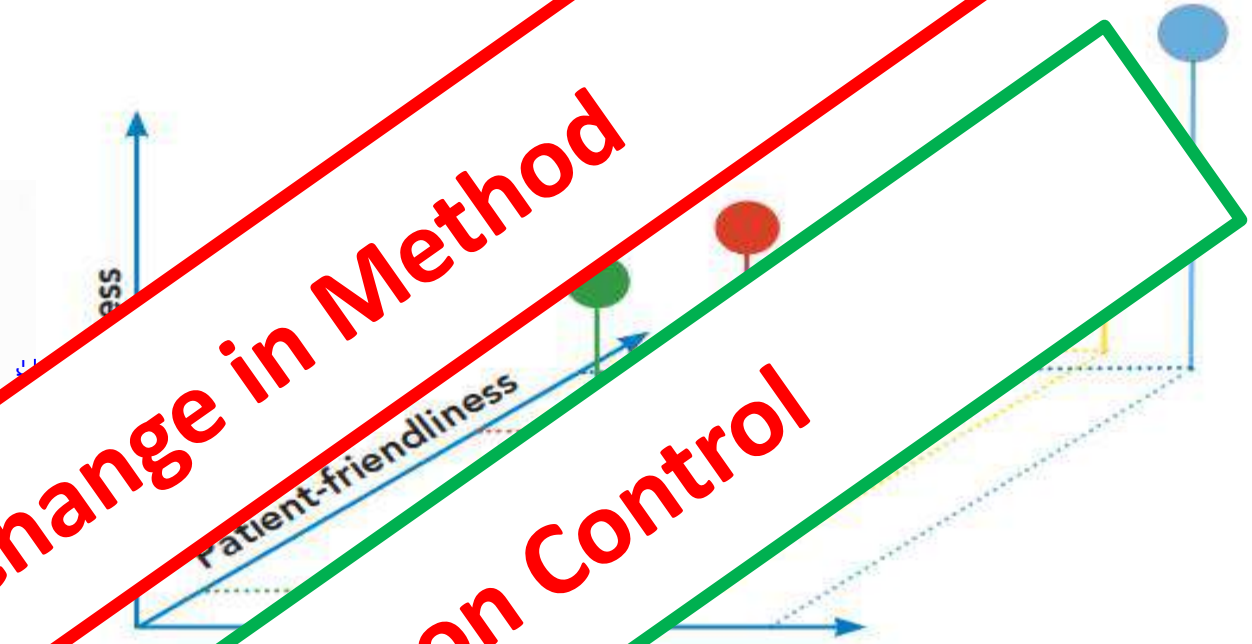
A novel therapy for internal hemorrhoids: ligation of hemorrhoidal artery with a newly devised instrument (Morice) in conjunction with a Doppler flowmeter.

Morinaga K¹, Hasuda K, Ikeda T.



Change in Method

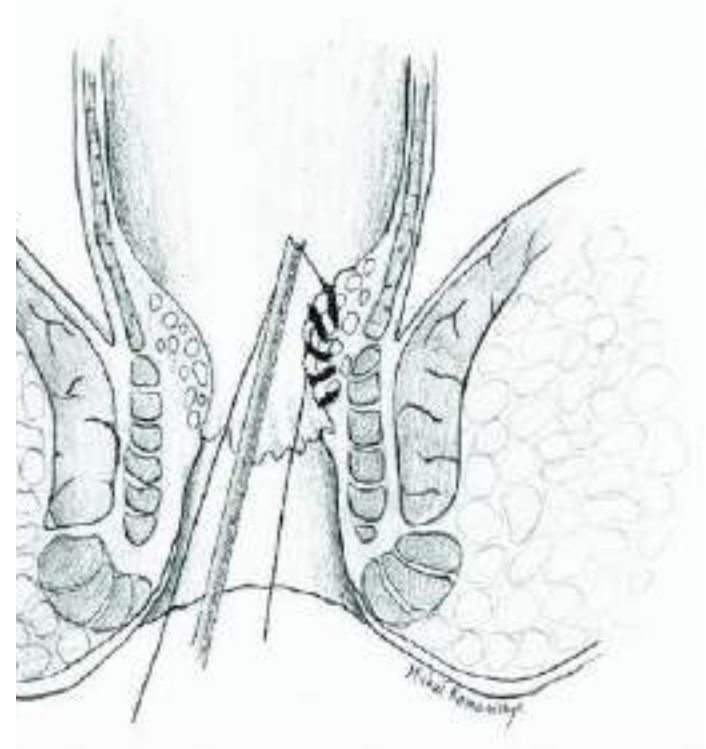
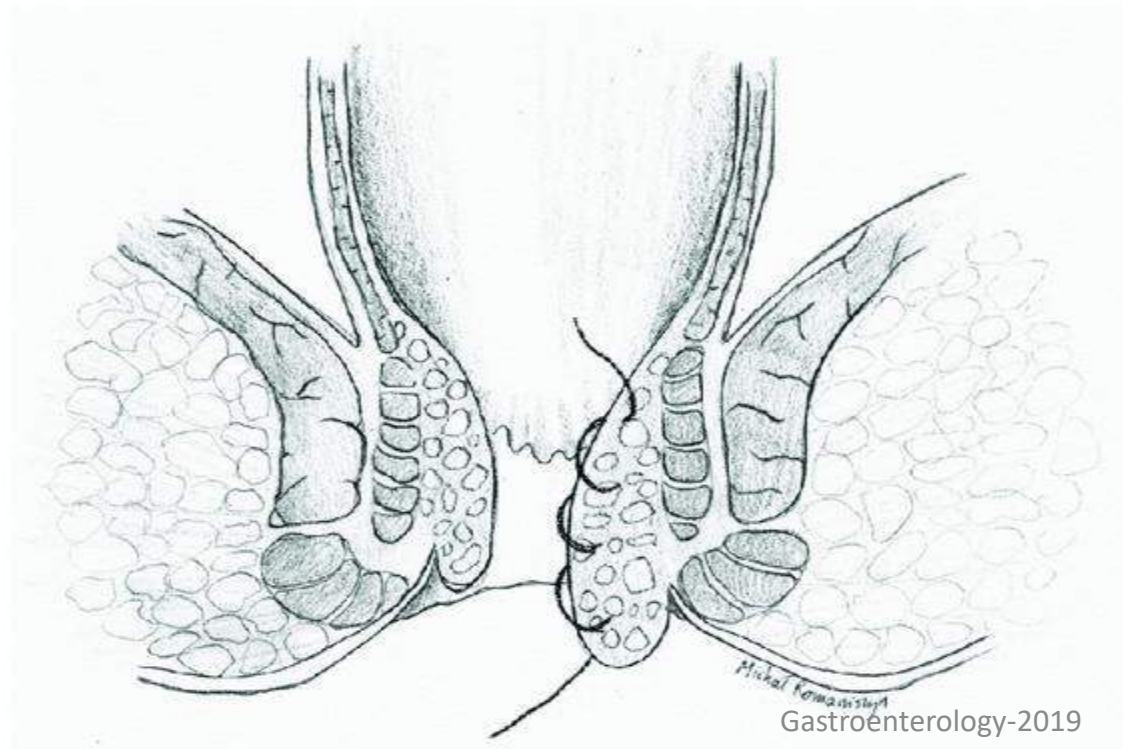
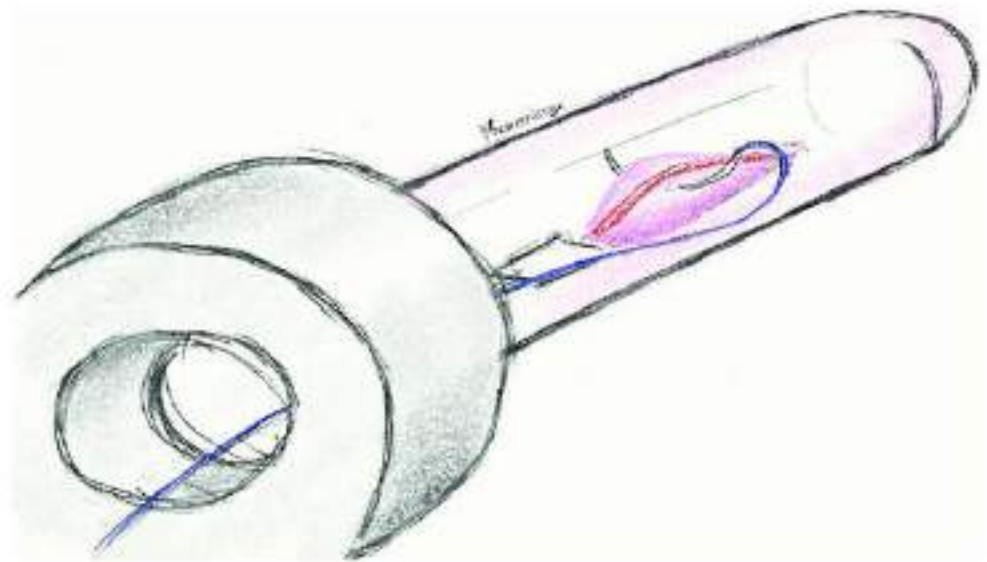
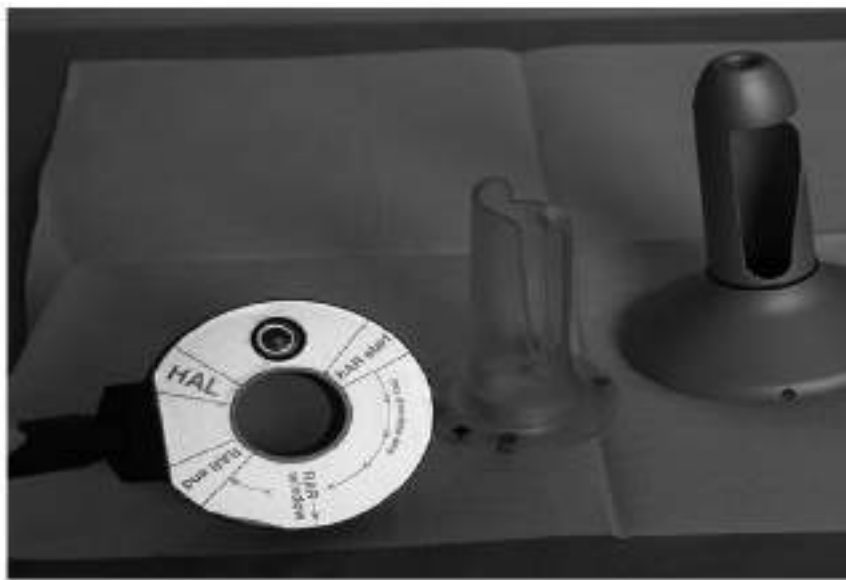
Focus on Control



hemorrhoidectomy
method
patient procedures
HAL / RAR

This diagram represents an assessment made by A.M.I. based partly on published data and partly on evaluations by surgeons who have experience with the HAL and RAR methods.

http://www.fumedica.ch/custom/data/ckEditorFiles/Produktbeschreibung/A.M.I.%20HAL-RAR%20System%20Brochure_English%202014.pdf



Embolization of the hemorrhoidal arteries (the emborrhoid technique): A new concept and challenge for interventional radiology

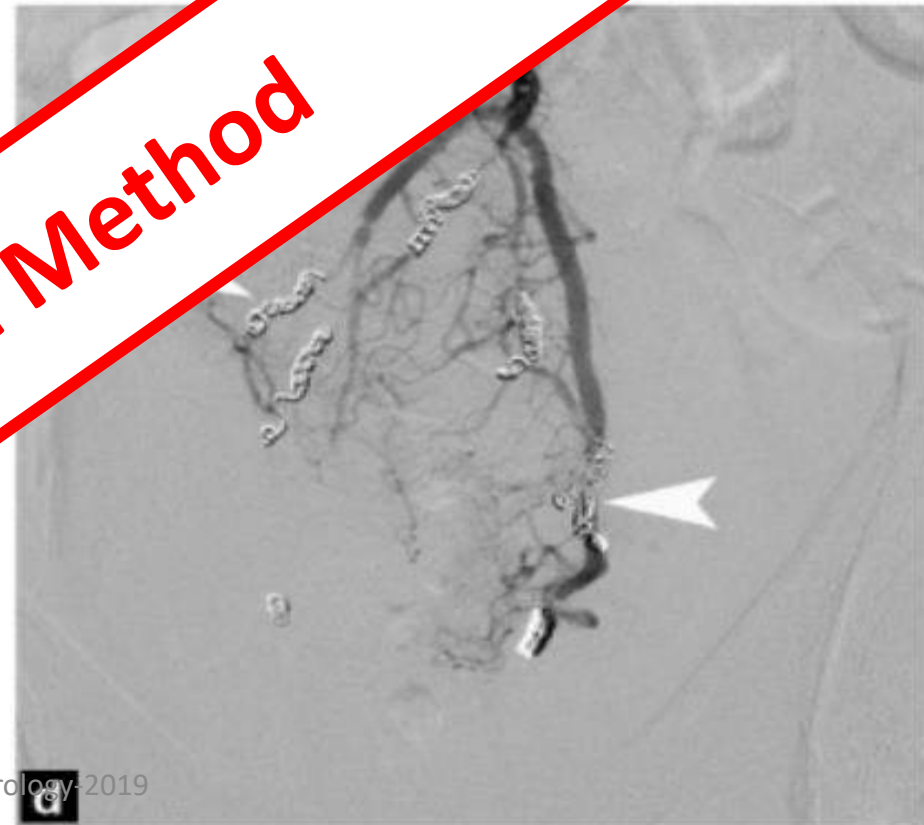
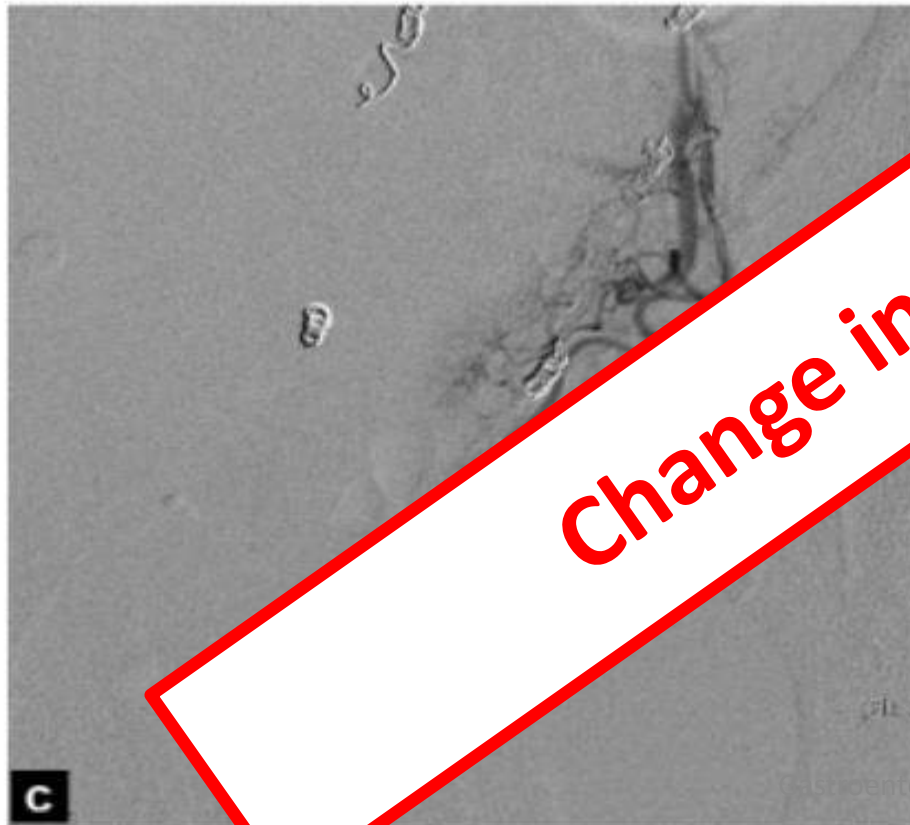


V. Vidal^{a,*}, G. Louis^a, J.M. Bartoli^a, J. L. Lagneff^b

^a Department of Radiology, Hôpital de la Timone
cedex 5, France

Marseille

Change in Method



c

d

Major Paradigm Shifts

Improving

Parks

Ferguson

Sokol

Historic

Trial and error

Pre classic

Applying logic

Classic

Effective logic - MMH

Post classic

In search of better option

New Era

Intention to cure

Post classic

Improving

Searching new options

Technology

Mixed or hybrid

Searching new options

RBL

Sclerotherapy (?)

Cryosurgery

Lord's

HAL (?)

Technology

New Methods

Energy Devices

New Methods

SH/ PPH

THD /DG HAL

Emborrhoids

Energy Devices

IRC

Harmonic

Laser

Starion

Ligasure

Bipolar - BICAP

RFA

Direct current – ULTROID

Different types of available energy sources and tissue effect pr

Type

Monopolar

Conventional bipolar

Advanced bipolar

Ultrasonic technology

Hybrid device

Laser energy

Argon beam coagulator

Radiofrequency (RF) energy

ligasure, pk gyrus, ENSEAL

Ultracision harmonic scalpel, Harmonic ACE,
Harmonic focus, SonoSurg, AutoSonix

Thunderbeat

Nd: YAG laser, Argon laser, CO₂ laser

System 7550TM ABC, Cardioblade

RF 3000, starburst, cardioblade

Change in Method

Major Paradigm Shifts

Historic	Trial and error
Pre classic	Applying logic
Classic	Effective logic - MMH
Post classic	In search of better option
New Era	Intention to cure



New Era

Intention to cure



**Preserving Anatomy, Physiology and
Function**



**Personalized, Purposeful, Predictable and
Precise Fibrosis (4PF)**

EMERGING TECHNOLOGY SAGES 2019



SAGES

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[PUBLICATIONS](#)

ADVANCE HAEMORRHOIDS: LAST LINE – PERSONALIZED, PURPOSEFUL, PREDICTABLE AND PRECISE FIBROSIS (4PF)

Parshottambhai B Patel, Dr¹, Kush Patel, MS Molecular Science and
Nanotechnology², Lav Parshottambhai Patel³. ¹Shiv Shraddha Nursing Home,
²SnapFinance LLC, ³University of Kansas Medical Center

4PF: Until Now -Presented

- SAGES 2019 USA , Emerging Technology
- Keynote Address
 - Gastroenterology 2019, Amsterdam
- Proctology 2019
- APDW 2020
- WORLDCON 2020



**Grade III
and IV**

Vascular

• Challenging

Secondary

**Circumferentially
Prolapsing**



**First Bleeding ,
most vascular**

This image shows a surgical dissection of a breast specimen. The tissue is highly vascularized, appearing bright pink and moist. A surgical instrument, likely a scalpel or forceps, is visible in the lower left, interacting with the tissue. The background is a reddish-brown surgical drape. Several text annotations in red, bold font are overlaid on the image, each enclosed in a white oval with a black border. The annotations include: 'First Bleeding , most vascular' (top left), 'First Step' (top right), 'Upper most' (middle right), 'Gentle' (bottom left), and 'Pull' (bottom left, below 'Gentle').

**First
Step**

Upper most

Gentle

Pull

**End
Result**

See more details : **4PF How I Do it**
at Hemorrhoid University on cancervijay.com

EMERGING TECHNOLOGY SAGES 2019



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ABOUT

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ABOUT

PUBLICATIONS

Change in Understanding
Focus on Cure

ADVANCE H
LINE – P
PREP
(4
PURPOSEFUL,
PRECISE FIBROSIS

Parshotambhai Patel, MS Molecular Science and
Nanotechnology, Parshotambhai Patel³. ¹Shiv Shraddha Nursing Home,
²SnapFinance, ³University of Kansas Medical Center

Major Paradigm Shifts

Historic	Trial and error
Pre classic	Applying logic
Classic	Effective logic - MMH
Post classic	In search of better option
New Era	Intention to cure

Post classic

Improving
Searching new options
Technology
Mixed or hybrid

Searching new options

RBL
Sclerotherapy (?)
Cryosurgery
Lord's
HAL (?)

Technology

New Methods
Energy Devices

Energy Devices

IRC	Harmonic
Laser	Starion
Ligasure	Bipolar - BICAP
RFA	Direct current – ULTROID

New Methods

SH/ PPH
THD /DG HAL
Emborrhoids

New Era

Intention to cure

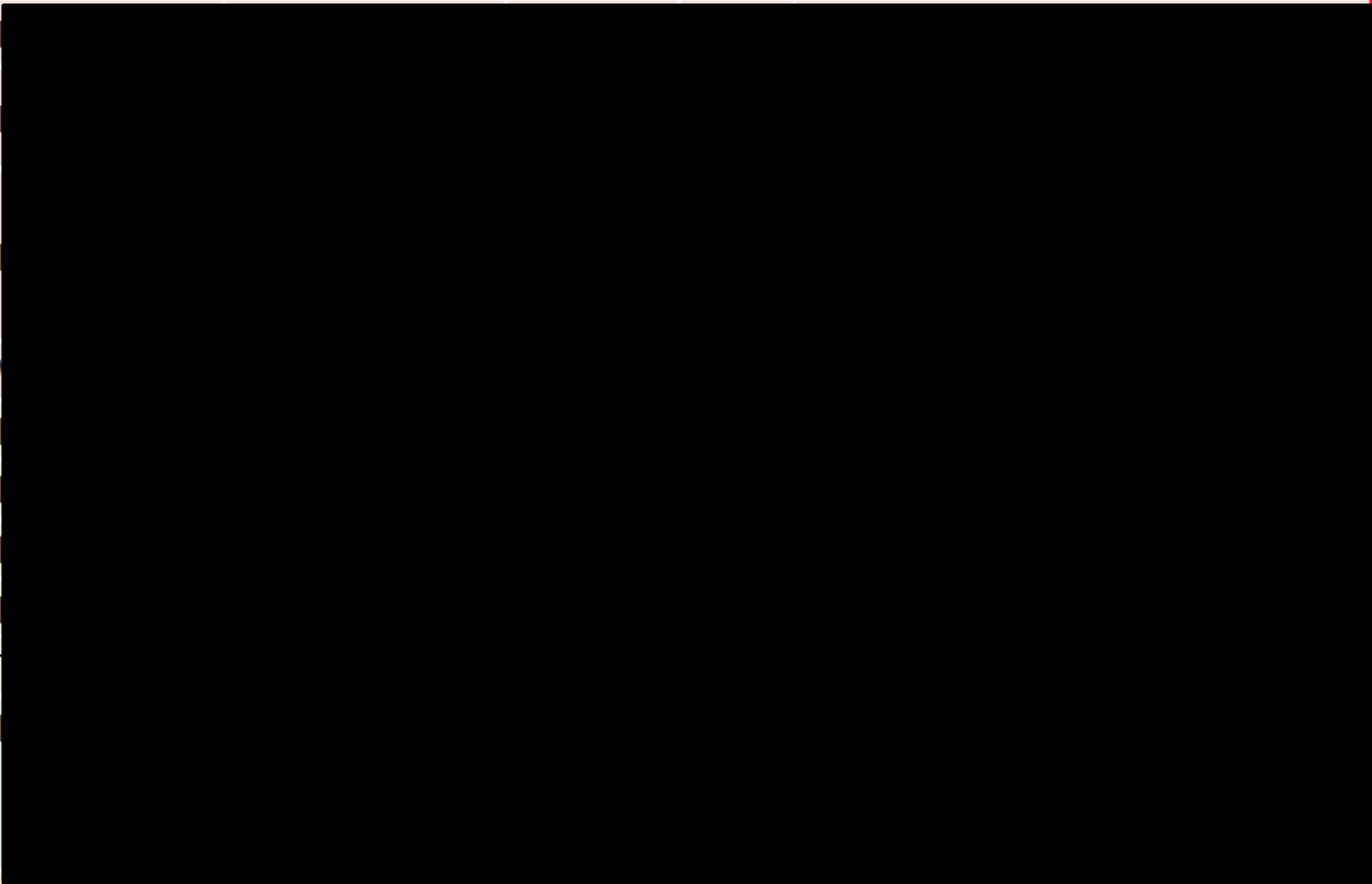
Preserving Anatomy,
Physiology and Function

Personalized,
Purposeful,
Predictable and
Precise Fibrosis (4PF)

Improving

Parks
Ferguson
Sokol

Hemorrhoids- Ideological Classification of End Result of Treatment

Principle	Method	Sub method	MuEx	ExHe	Examples
Remove					
Repair					
Replace					
Mix					

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MuEX= Mucosal Excision, ExHe= External Hemorrhoids Addressed,

EH =Excisional Hemorrhoidectomy; 4PF= Personalized, Purposeful, Predictable and Precise Fibrosis

Hemorrhoids- Ideological Classification of End Result of Treatment

Principle	Method	Sub method	MuEx	ExHe	Examples
Remove	Excision	Complete	Complete	Yes	EH- Open , Closed, Semi, Sub
	Ligation	incomplete	More then Hemorrhoid	No	RBL, Ayurvedic- KSHARA SUTRA
	Destruction	Energy devices	Complete	?	Laser, Bipolar –BICAP, Direct current – ULTROID, LigaSure™ , Harmonic R, Starion™ , RFA,
	Vaporization	Atomizer™	Complete		Atomizer™
Repair	Fixation	Pull up	Above	No	Stapled hemorrhoidectomy
	Blood Supply	Arterial Ligation	No	No	DG-HAL, RAR maybe needed
	Blood Supply	Embolization	No	No	Emborrhoid
	Blood Supply	Thermal Occlu.	No	No	DG-Laser
	Tone	Reduction	No	No	Lord
Replace	Fibrosis	4PF	Only if	Yes	4PF
		Precise	No	No	IRC
		Diffuse	Damage	No	Sclerotherapy, Cryosurgery, Laser

Mix

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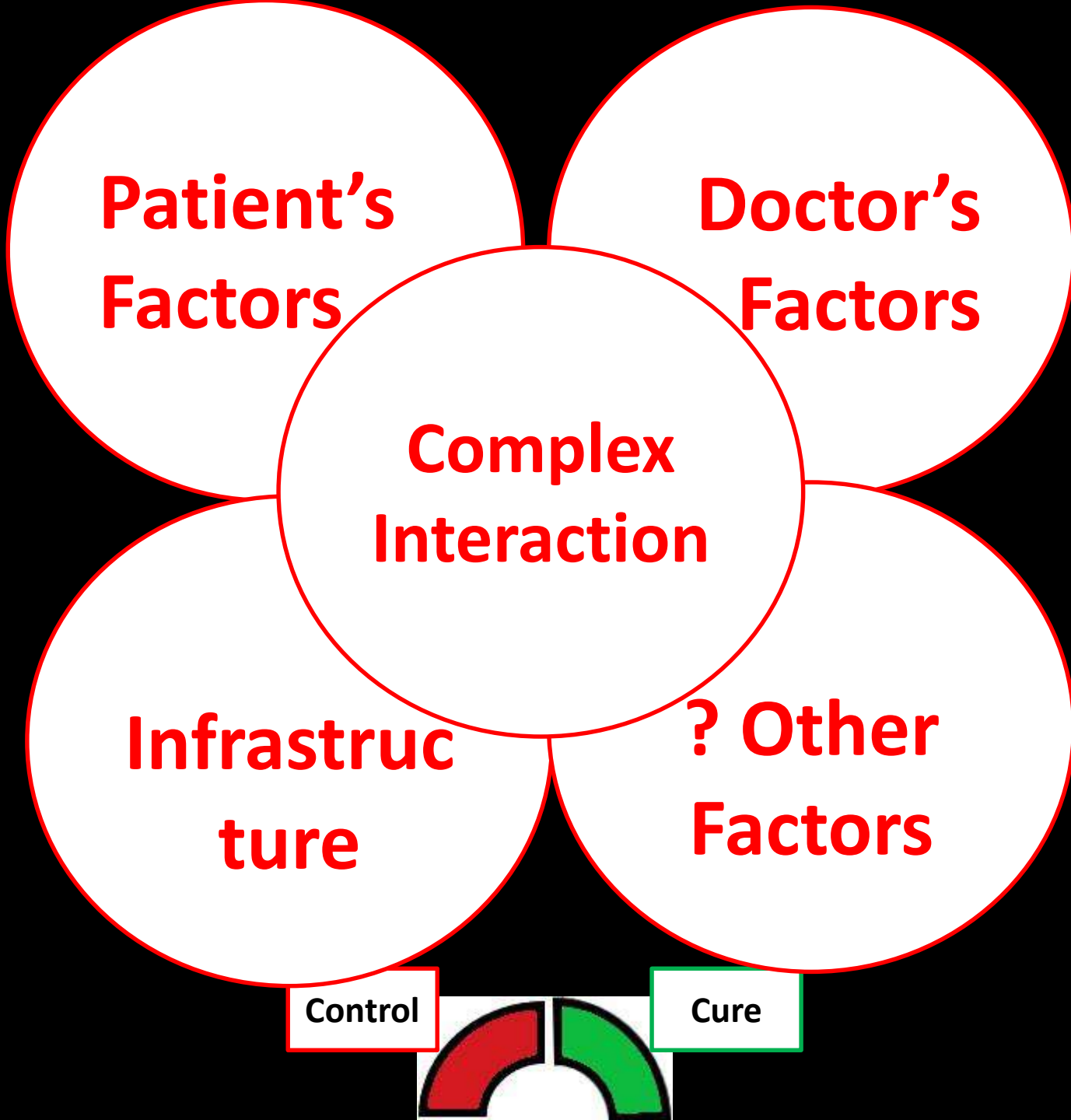
MuEX= Mucosal Excision, ExHe= External Hemorrhoids Addressed,

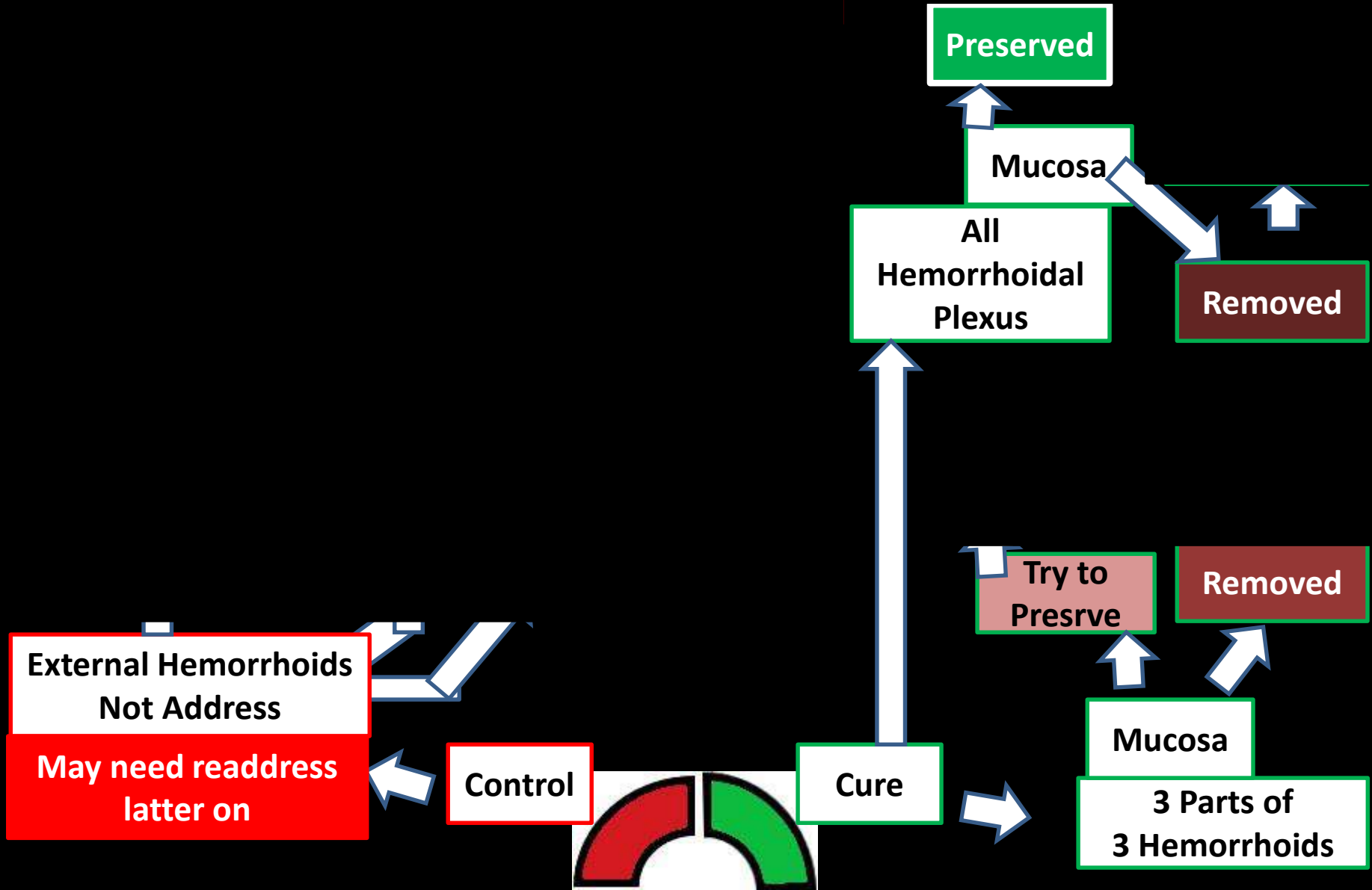
EH =Excisional Hemorrhoidectomy; 4PF= Personalized, Purposeful, Predictable and Precise Fibrosis

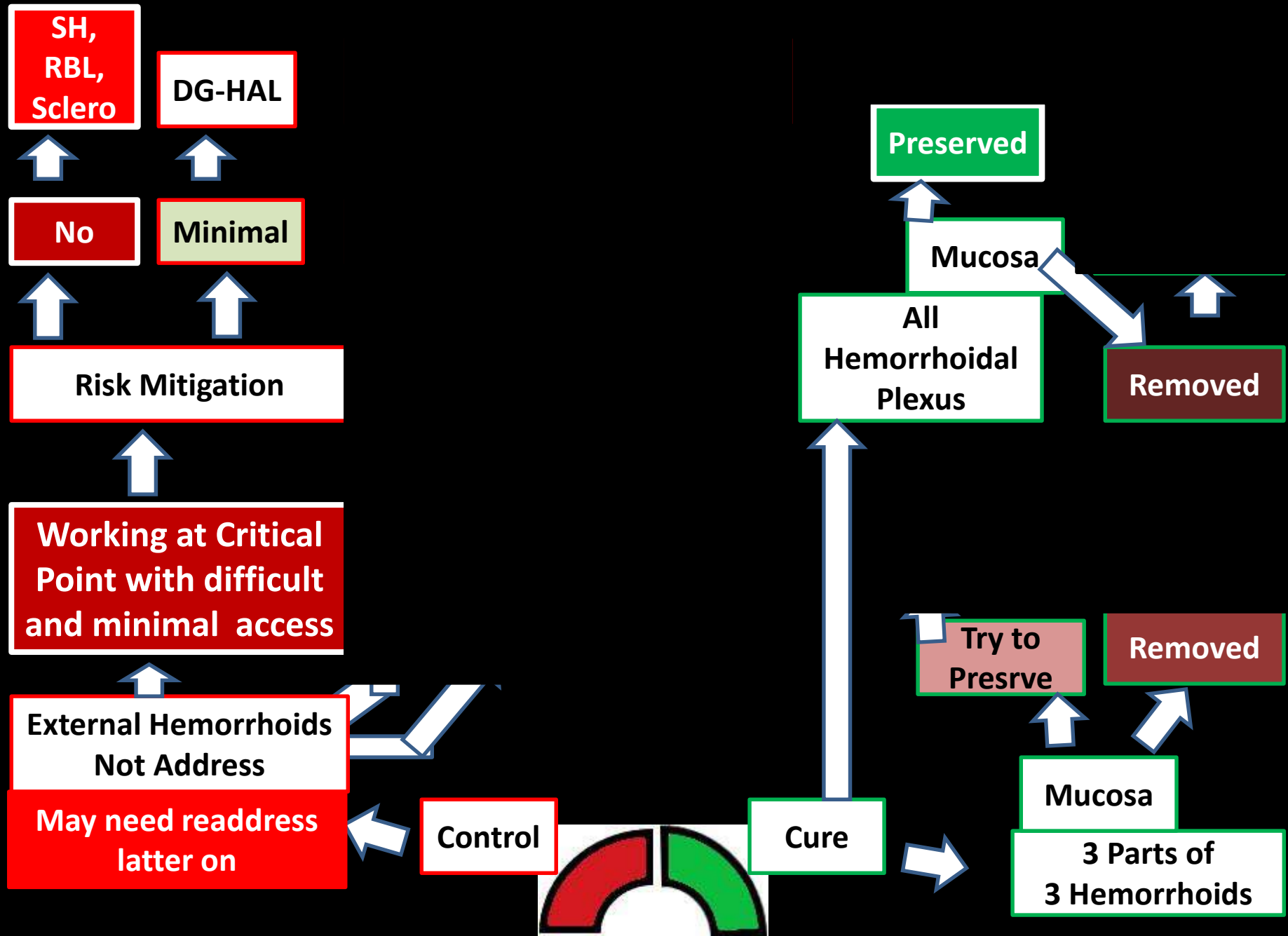
Control

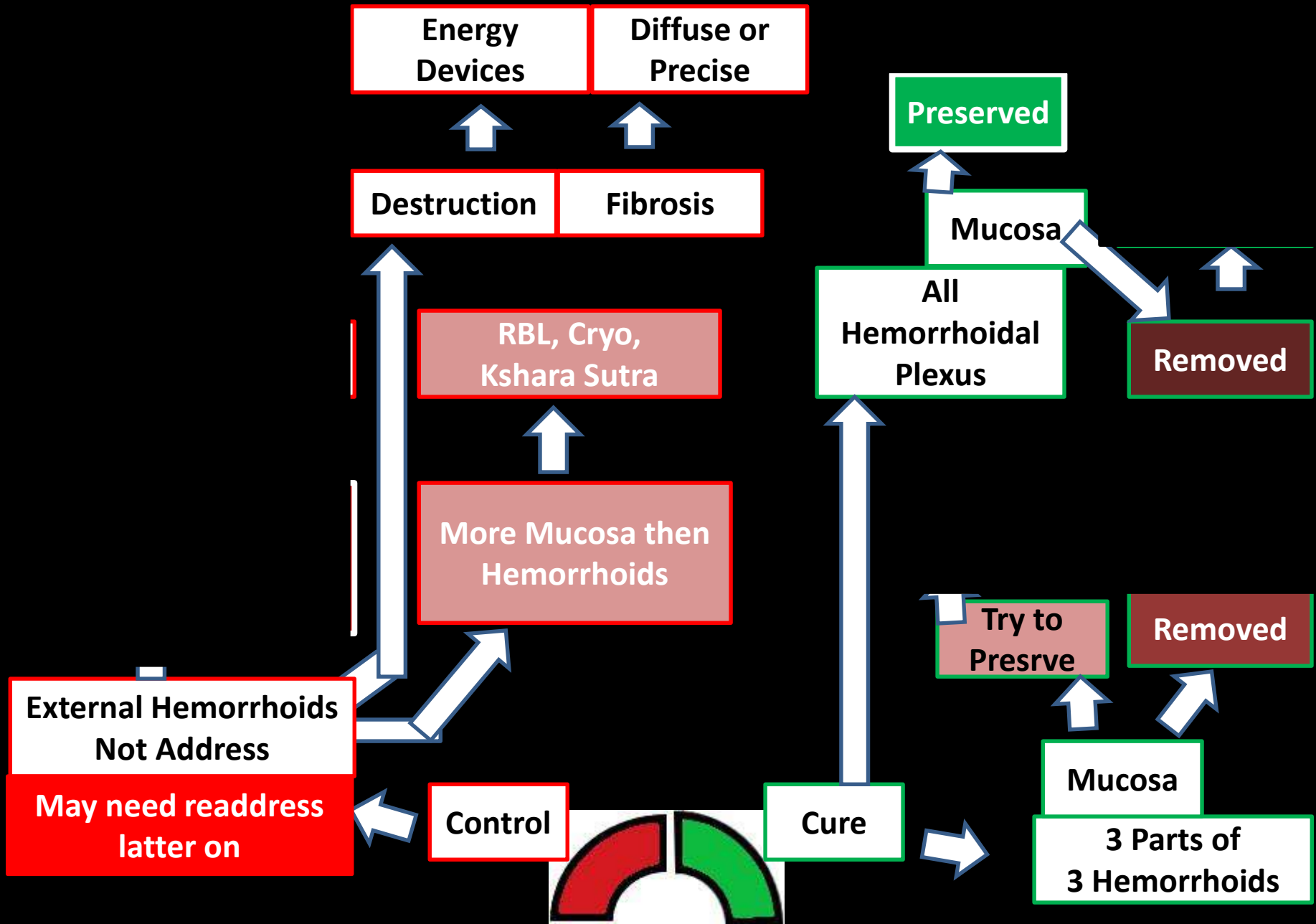


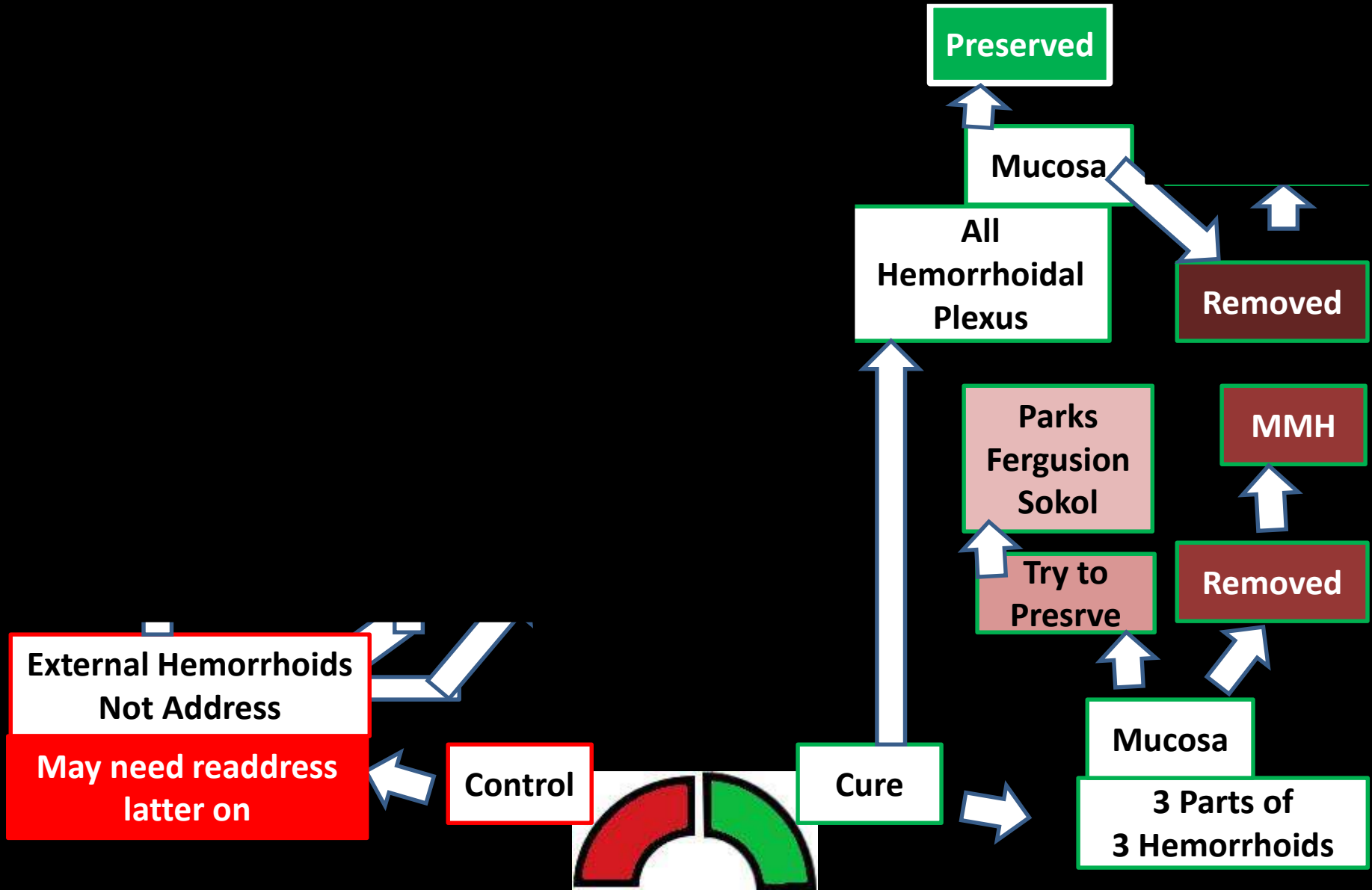
Cure

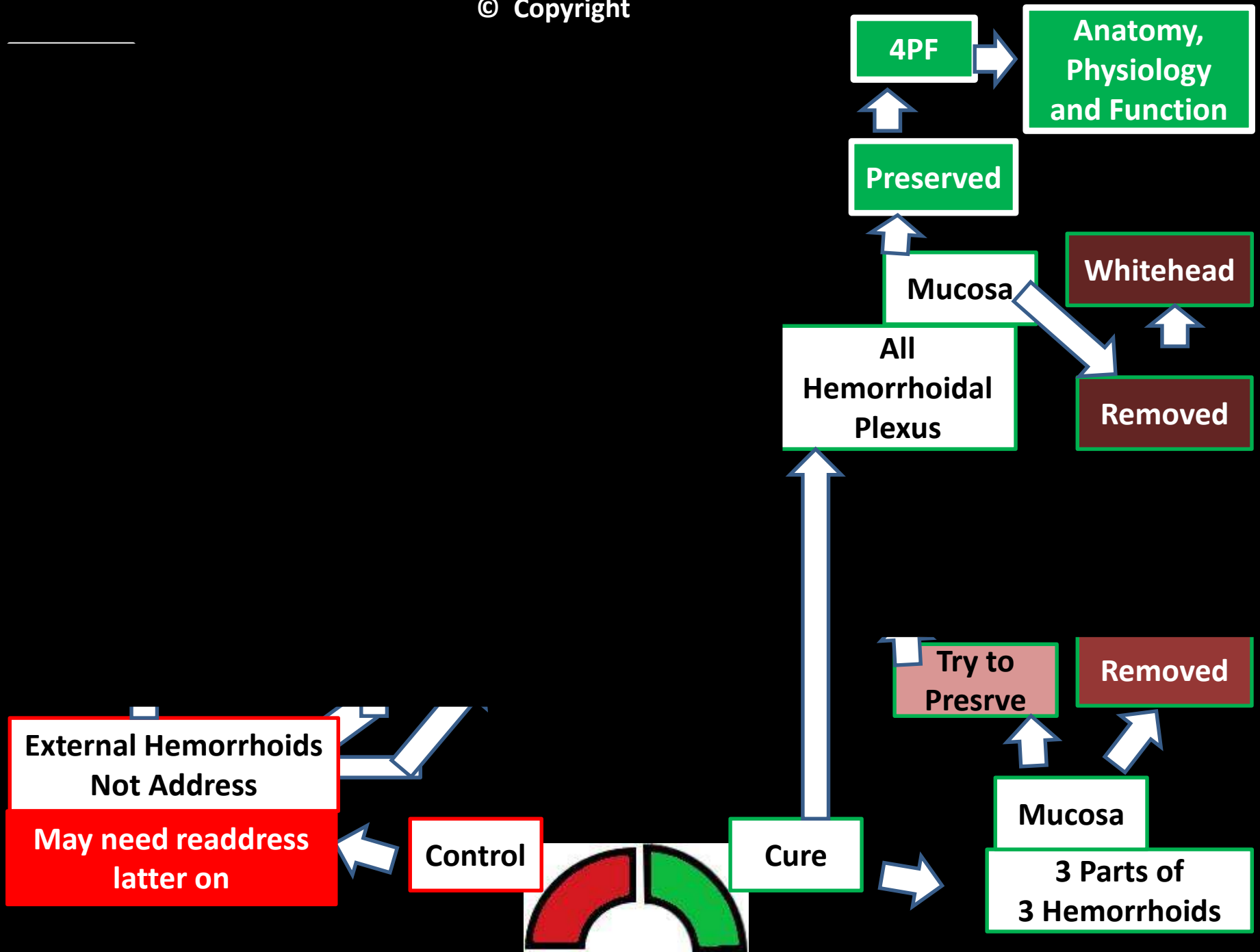


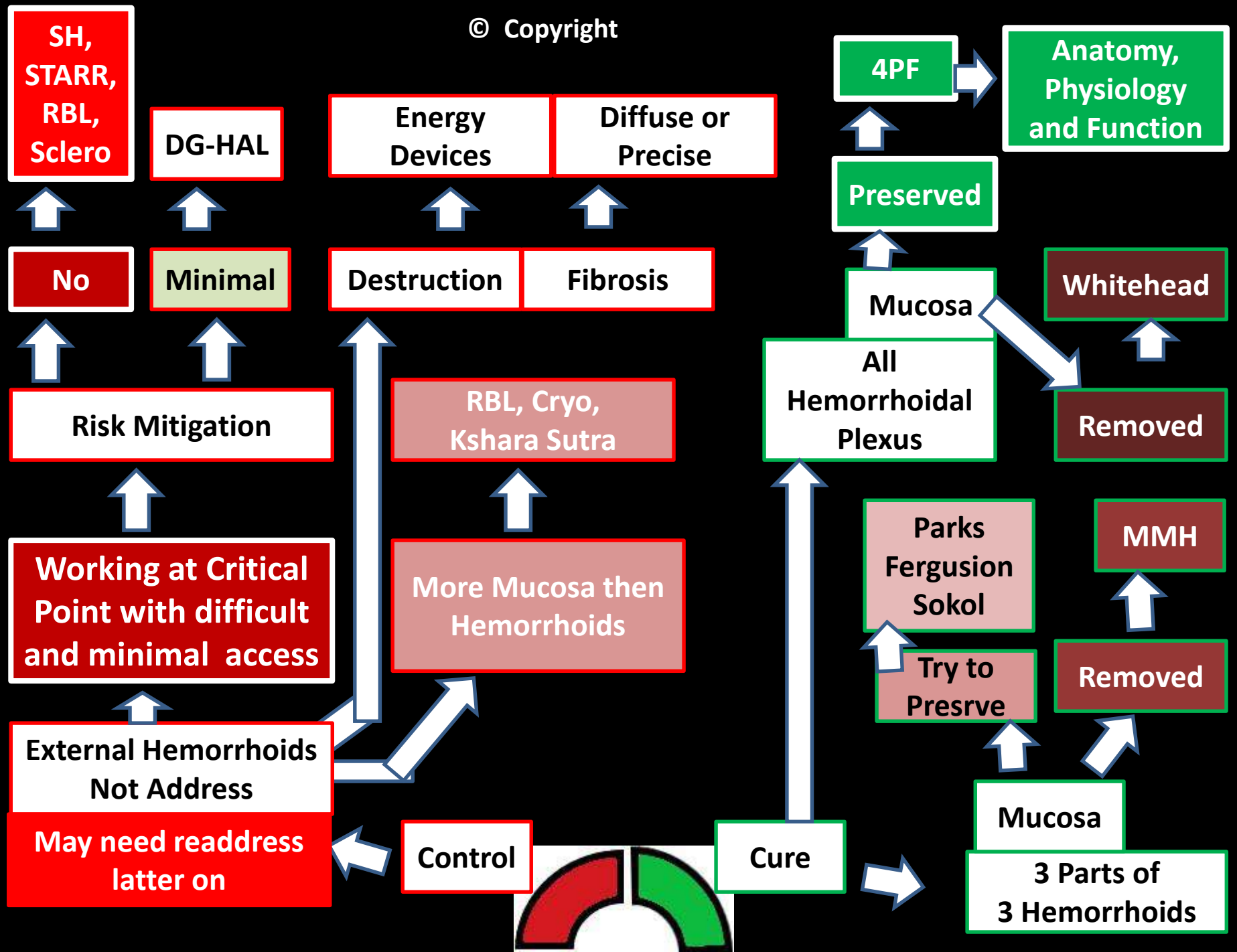












Risk Of Complications

Life threatening

Major Local Complications

IRC
4PF

RBL

Sclero

ED

Sclero

Cryo

MM

Parks,
Ferguson

SH

Whitehead

SH,
STARR

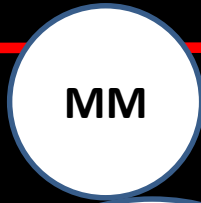
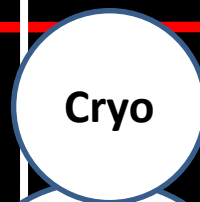
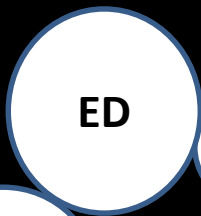
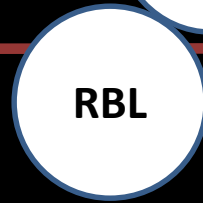
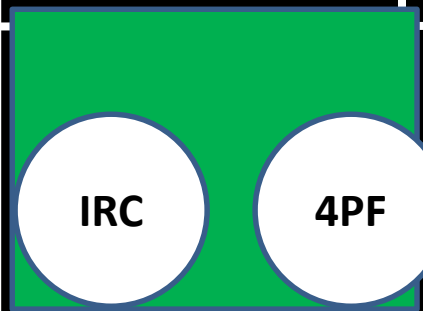
High

Very High

Operator Dependency

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..Precise to Diffuse



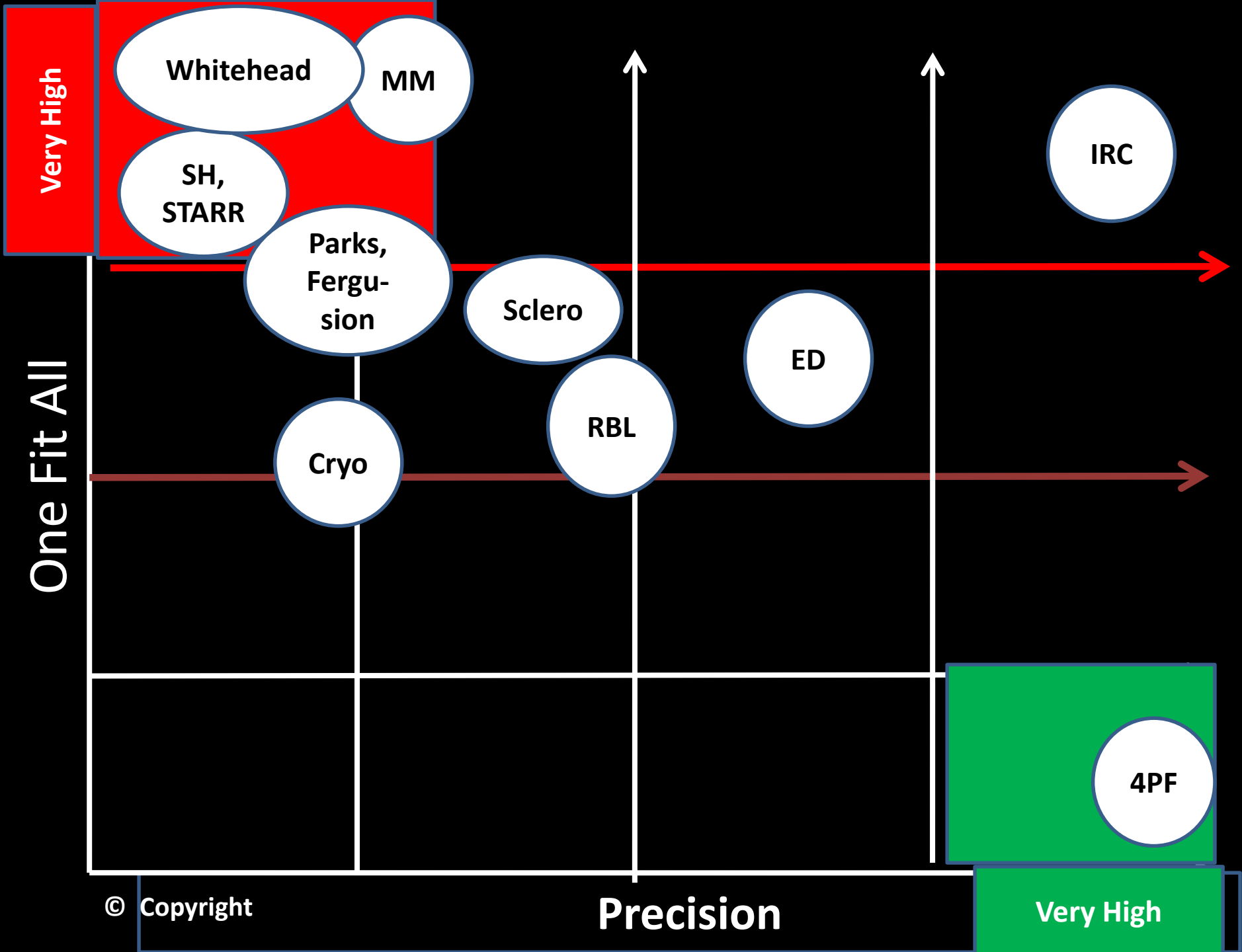
Anorectum

Deep





















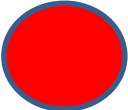




Fibrosis

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Comparing Various methods of treatments of Hemorrhoids

	WH	EH	RBL	IRC	Cryo	SH	DG HAL	Laser	4PF
Pedicle									
Internal									
External									
Secondary									
Circumferential									
Non of above	 High Local Cost							 Conditions Apply	

WH- Whitehead, EH- Excisional Hemorrhoidectomies, RBL-Rubber Band Ligation, IRC- Infra Red Coagulation, Cryo- Cryosurgery, SH- Stapled hemorrhoidopexy, ED- Energy Devices, 4PF- Personalised Purposeful, Predictable Precise Fibrosis DG- HAL -Doppler Guided Hemorrhoidal Artery Ligation

Comparing Various Methods of Hemorrhoids Treatment

More Info	Invesive				Minimally Invesive								
Hemorrhoids University	Cure with a Cost				Control with a Cost								Cure
	Operation				Day Care	Office	Day Care		Office	Day Care	Office	Day Care	Over Night
			ED			ED as Photocoagulation							
http://cancervijay.com/	WH	EH	Knife	Destruction	DH-HAL	IRC	HeLP	LHP	Sclero	Cryo	RBL	SH, STARR	4PF
Pedicle													
Internal													
External				?				?					
Secondary								?					
Circumferential													
Non of above													
Stage	III, IV ++	III, IV			II , III								II, III, IV ++
Recureence	Very Low	Low			Very High			High					Very Low
Operator Dependency	VeryHigh	High			Very High	Very Low	High		Medium			Higest	Medium
Potentially Risky	Very high	High				Very Low			High		High	Higest	Low
Mucosa	Removed				As it is			Submucos Fibrosis	Destroy	Remove	Remove-Reposition	Almost As it is	
Fibrosis	++++	+++				Pricise		Diffuse				+++	Precise
Fibrosis	Circular											Deep Circular	
Risk Mitigation					Minimal				No		No	No	
End result	Remove				Repair			Replace			Remove	Repair	Replace
Pain	+++++	++++			+			++	++	+++	++	++	+++
Discharge	+++++	++++						+	+	++++	+	++	+++
	High Local Cost			Conditions Apply			What if			Mucosa More			

WH- Whitehead, EH- Exdsional Hemorrhoidectomies, ED- Energy Devices [Laser(-CO2, HeLP, LHP), IRC, LigaSure, Harmonic, RFA, BICAP, ULTROID, Atomizer etc] Dr.P. B. Patel, Mob +91 98 98 98 96 26

DG-HAL-doppler guided hemorrhoidal artery ligation, IRC- Infra Red Coagulation, HeLP- hemorrhoid laser procedure, LHP- laser hemorrhoidoplasty, Sclero- Sclerotherapy cancervijay@gmail.com

Cryo- Cryosurgery, RBL-Rubber Band Ligation, SH- Stapled hemorrhoidopexy(PPH, MPH, STARR) , 4PF-Personalised Purposeful, Predictable Precise Fibrosis © Copyright Ahmedabad 380004

SURGICAL ANATOMY OF THE ANAL CANAL
with special reference to the
SURGICAL IMPORTANCE OF THE
INTERNAL SPHINCTER AND CONJOINT
LONGITUDINAL MUSCLE

by

C. Naunton Morgan, M.S., F.R.C.S.

and

Henry R. Thompson, F.R.C.S.

Consultant Surgeons, St. Mark's Hospital

*“ If terms be incorrect, then statements do not accord with facts; and when
statements and facts do not accord, then business is not properly executed.”*

Confucius

"If terms be incorrect,

**Then statements do not accord with facts; and
when statements and facts do not accord, then
business is not properly executed."**

Confucius

**1937 To 2020
Problems as it is**



"If terms be incorrect,

DATA ARE NOT COMPARABLE

**when statements and facts do not accord, then
business is not properly executed."**

Confucius

**1937 To 2020
Problems as it is**



Comparing Incomparable

Guiding Principles

- Too Much - Too less
- Appropriate - Inappropriate
- Lifetime cost
- Anatomy Physiology and Function
- Sensory Inputs
- Fibrosis

TOO L E S S

Re ccurence
Re Operation
Dr. Visits
Long term medication

External Haemorrhoids not addressed

No recurrence
No Follow ups
No longterm Medications

RBL : Rubber bend ligation
SH/PPH : Stapled Haemorrhoidectomy
HAL : Haemorrhoidal artery ligation
Scle : Sclero Therapy
EH : Excisional Haemorrhoidectomy
ED : Energy Devices

Long Term Medication
Dr. Visits
Re Operation
Incontinence
Stricture

TOO MUCH



Life long

**Fibrosis as
enemy**

**Difficult to
treat**

Permitted by: Cruz GMG. Doença hemorroidária. São Caetano do Sul, SP: Yendis, 2008.

***Figure 3.** Various macroscopic aspects of post-hemorrhoidectomy anal stenosis, at the inspection, during the proctologic exam.*

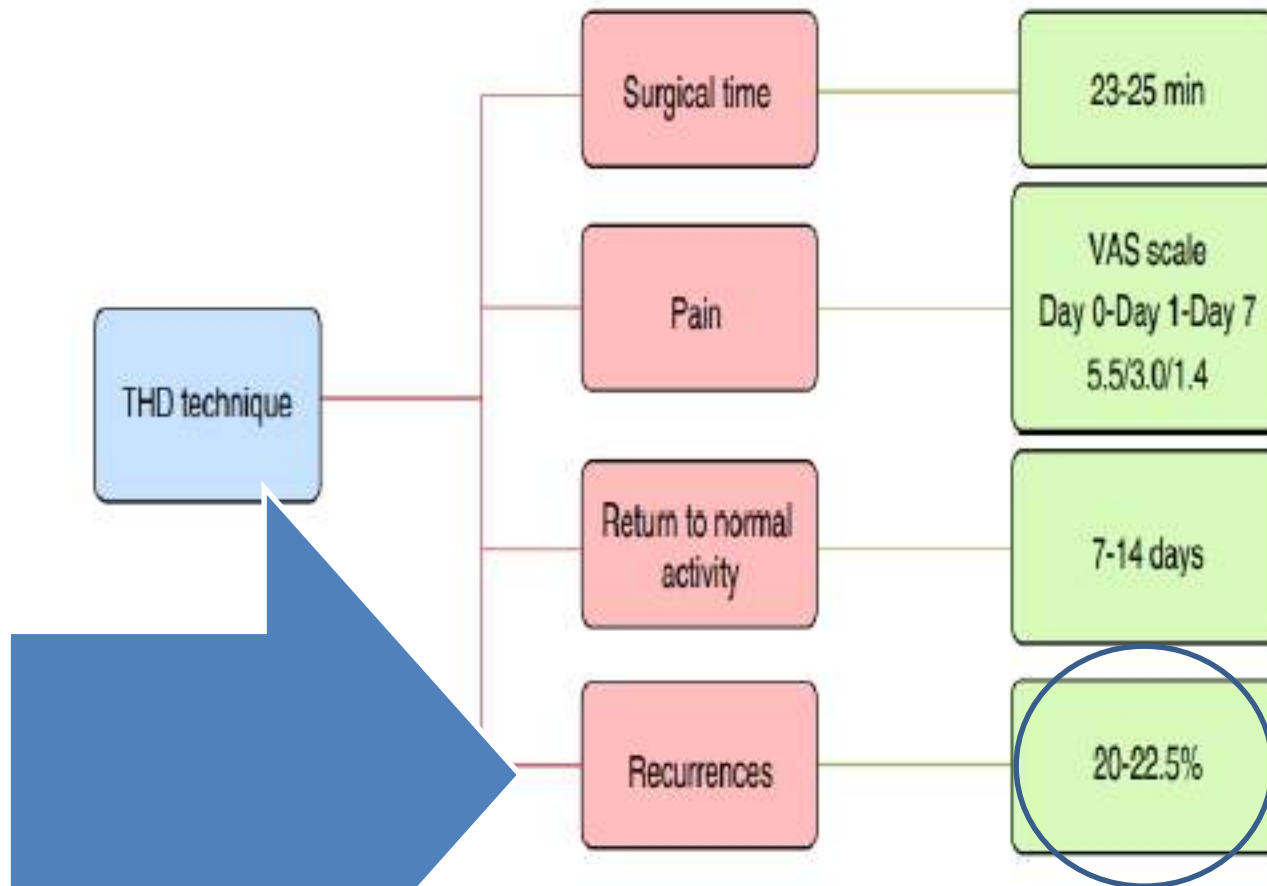


Fig. 4 - Distribution of studies according to surgical time, pain, return to activity and recurrences in the THD technique, 2009-2015.

Re currence
Re Operation
Dr. Visits
Long term medication

No recurrence
No Follow ups
No longterm Medications

External Haemorrhoids not addressed

4PF

**RBL
SH
HAL**

RBL : Rubber bend ligation
SH/PPH : Stapled Haemorrhoidectomy
HAL : Haemorrhoidal artery ligation
Scler : Sclero Therapy
EH : Excisional Haemorrhoidectomy
ED : Energy Devices

EH, ED

Long Term Medication
Dr. Visits
Re Operation
Incontinence
Stricture

TOO
LESS

TOO MUCH

I
n
a
p
p
r
o
p
r
i
a
t
e

New Post op Symptoms
Unique Complications

Multiple procedures

Not effective for large external or Thrombosed Hemorrhoids

Long term medication

Recurrence

Dr Visits

RBL : Rubber Bend Ligation

SH/PPH : Stapled Haemorrhoidectomy

Hal : Haemorrhoidal Artery Ligation

Scle : Sclerotherapy

No Recurrence

No Follow ups

No Long Term Medications

Appropriate

potential for catastrophic complications

Rectal perforation
Rectovaginal fistulae
Fournier's gangrene

careful technique and patient selection

Table 3

Case reports

[Int Surg](#). 2015 Jan; 100(1): 44–57. doi: [10.9738/INTSURG-D-13-00173.1](#) PMCID: PMC4301293 PMID: [25594639](#)

Documented Complications of Staple Hemorrhoidopexy: A Systematic Review

[Liesel J. Porrett](#), [Jemma K. Porrett](#), and [Yik-Hong Ho](#)

Study	Complication	Treatment	Death, n
Aumann <i>et al</i> ³⁷	Intra-abdominal hemorrhage	Colostomy	
Blouhos <i>et al</i> ³³	Hemoperitoneum	Laparotomy for anterior resection	
Büyükasik <i>et al</i> ³⁹	Rectal obliteration	Removal of anal staples	
		Use of manual suture to repair	
Ciprani <i>et al</i> ⁴⁰	Tenesmus	Stricture release	
	Mucus soiling		
	Rectal bleeding		
	Rectal obstruction		
	Rectal stricture		
Cirroco ¹¹	Intestinal obstruction and perforation	Hartmann's procedure	1
	Sepsis		
	Air retroperitoneum		
	Multi-organ failure		
	Rectal obstruction and perforation		
Del Castillo <i>et al</i> ³⁶	Perforation	Abdominal exploration	
		Loop ileostomy	
		Repair and colostomy	
Filingeri (2005) ⁸⁵	Rectal perforation	Surgical exploration	
Gao <i>et al</i> ⁸³	Passage of food per rectum	Sutured perforation closed via transanal route	1
	Staple line dehiscence	None	
	Rectal perforation		
	Rectal perforation	Perforation repair	
	Rectal perforation	Terminal ileostomy	
	Peritonitis		
	Rectal perforation	Perforation repair	
	Abdominal pain and distension	Transverse colostomy	
	Peritonitis	Perforation repair	
	Pain, fever	Colostomy	
	Rectal perforation	Pelvic drainage	
	Pain, distension	Perforation repair	
	Fever	Transverse colostomy	
	Pain, distension	Perforation repair	
	Fever	Sigmoid colostomy	
	Pain, distension	Exploratory laparotomy	
	Fever		
Giordano <i>et al</i> ⁴¹	Rectal obliteration	Flexible sigmoidoscopy	
		Gastrografin enema	
		Dilatation	
Herold (2000) ⁸⁶	Rectal perforation	Temporary stoma	
	Rectal perforation	Temporary stoma	
	Rectal perforation	Temporary stoma	

**New Post op Symptoms
Unique Complications**

RBL : Rubber Bend Ligation
SH/PPH : Stapled Haemorrhoidectomy
Hal : Haemorrhoidal Artery Ligation
Scle : Sclerotherapy

Multiple procedures

Not effective for large external or Thrombosed Hemorrhoids

Long term medication

Recurrence

Dr. Visits

**RBL
SH
HAL
Scle**

**No Recurrence
No Follow ups**

4PF

No Long Term Medications

Appropriate

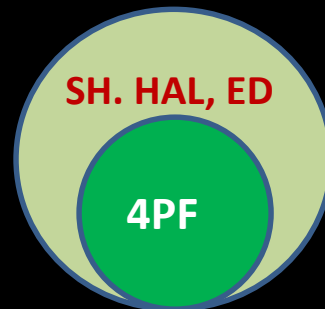
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HEMORRHOIDS- LIFETIME COST CALCULATOR

ALL

Diagnosis and First Treatment Cost

HEMORRHOIDS- LIFETIME COST CALCULATOR



Technology Cost

Diagnosis and First Treatment Cost

standard treatment. The excision can be performed with a cold scalpel, diathermy, scissors, laser, ultrasonically activated scalpel or a bipolar electrothermal sealing device. The use of scissors or laser compared to diathermy provided no significant benefits ([Madoff 2004](#); [Pandini 2006](#)). Conflicting results have been reported concerning the use of an ultrasonically activated scalpel (Ultracission TM) making it impossible to draw definitive conclusions in this respect ([Madoff 2004](#)). A bipolar electrothermal sealing device

Conventional versus LigaSure hemorrhoidectomy for patients with symptomatic Hemorrhoids (Review)

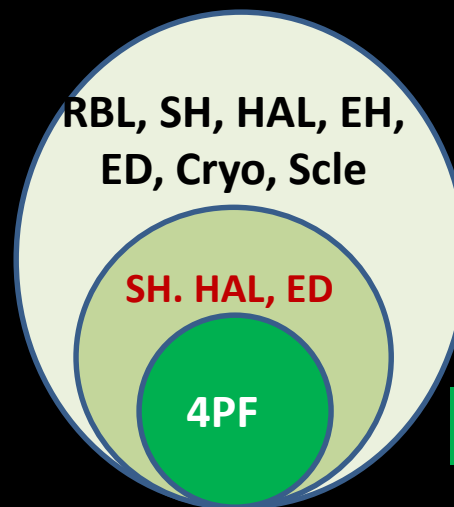
Authors' conclusions

Stapled hemorrhoidopexy is associated with a higher long-term risk of hemorrhoid recurrence and the symptom of prolapse. It is also associated with a higher likelihood of long-term symptom recurrence and the need for additional operations compared to conventional excisional hemorrhoid surgeries. Patients should be informed of these risks when being offered the stapled hemorrhoidopexy as surgical therapy. If hemorrhoid recurrence and prolapse are the most important clinical outcomes, then conventional excisional surgery remains the "gold standard" in the surgical treatment of internal hemorrhoids.

Stapled versus conventional surgery for hemorrhoids (Review)

Lumb KJ, Colquhoun PH, Malthaner R, Jayaraman S

HEMORRHOIDS- LIFETIME COST CALCULATOR



Immediate
complication Cost

Technology Cost

Diagnosis and First Treatment Cost

RBL - Complications

up to 14%

occasional reports of life-threatening
bleeding or pelvic sepsis

higher potential complication rate



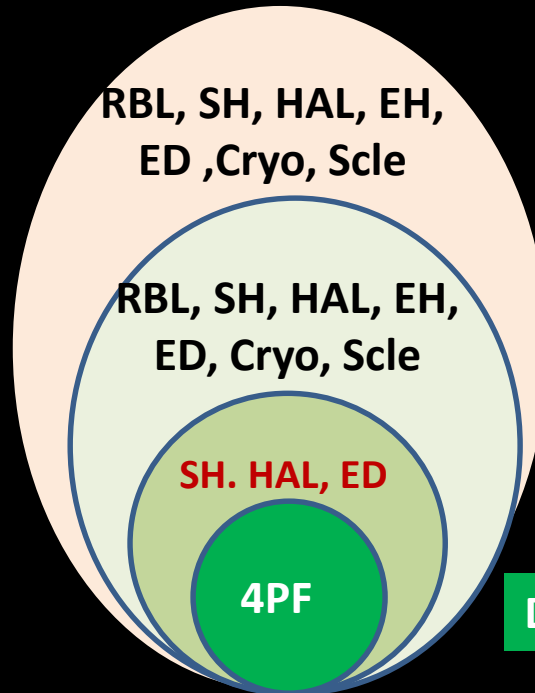
Rubber band ligation versus excisional haemorrhoidectomy for haemorrhoids (Review)

Authors' conclusions

The present systematic review confirms the long-term efficacy of EH, at least for grade III haemorrhoids, compared to the less invasive technique of RBL but at the expense of increased pain, higher complications and more time off work. However, despite these disadvantages of EH, patient satisfaction and patient's acceptance of the treatment modalities seems to be similar following both the techniques implying patient's preference for complete long-term cure of symptoms and possibly less concern for minor complications. So, RBL can be adopted as the choice of treatment for grade II haemorrhoids with similar results but with out the side effects of EH while reserving EH for grade III haemorrhoids or recurrence after RBL. More robust study is required to make definitive conclusions.

HEMORRHOIDS- LIFETIME COST CALCULATOR

Follow up and
Late
complication Cost



Immediate
complication Cost

Technology Cost

Diagnosis and First Treatment Cost

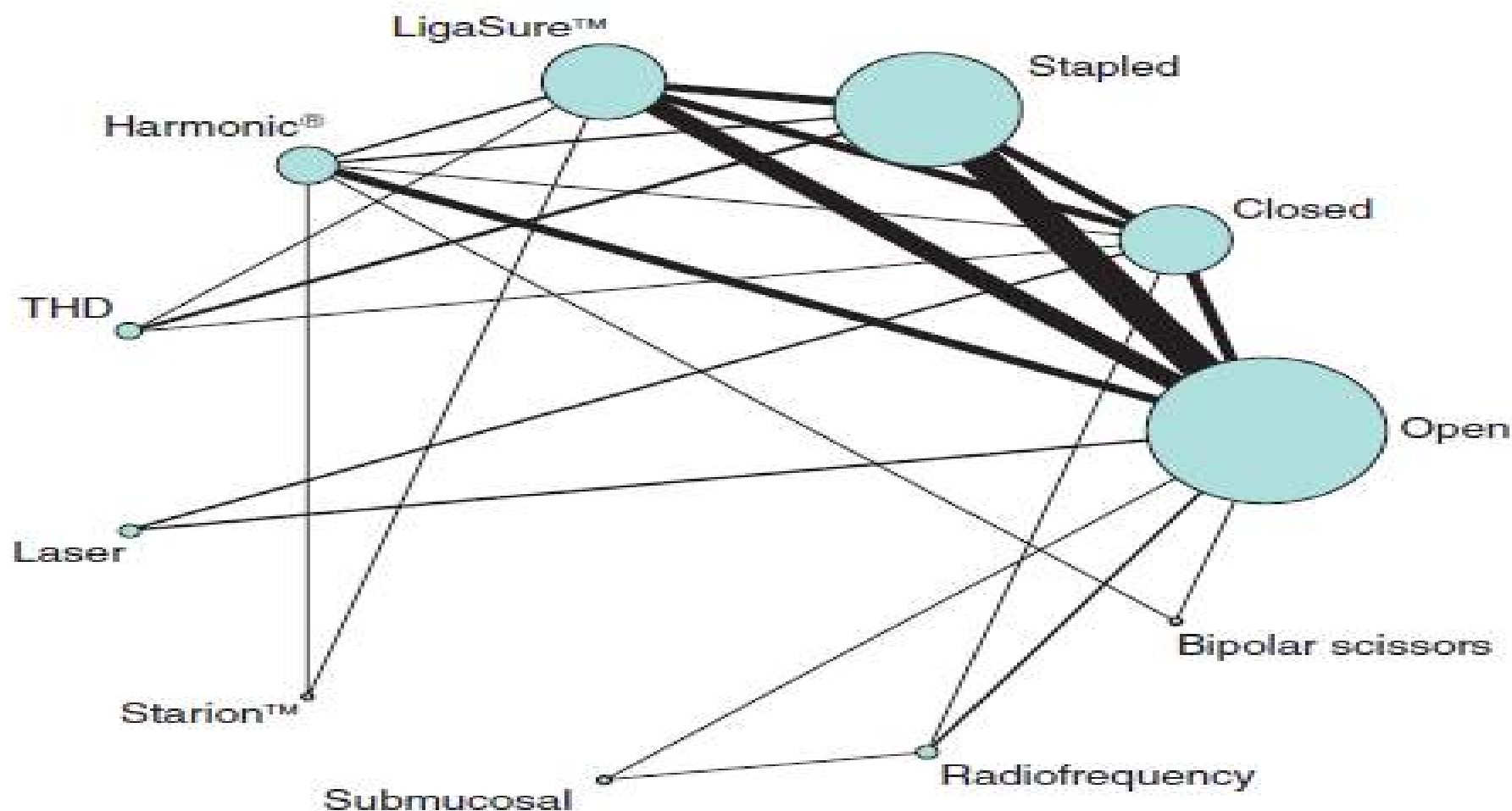


Fig. 3 Network plot for postoperative complications. Similar network plots were produced for each outcome of interest. Circles represent the intervention as a node in the network; lines represent direct comparisons using randomized clinical trials (RCTs); the line thickness indicates the number of RCTs included in each comparison

HEMORRHOIDS- LIFETIME COST CALCULATOR

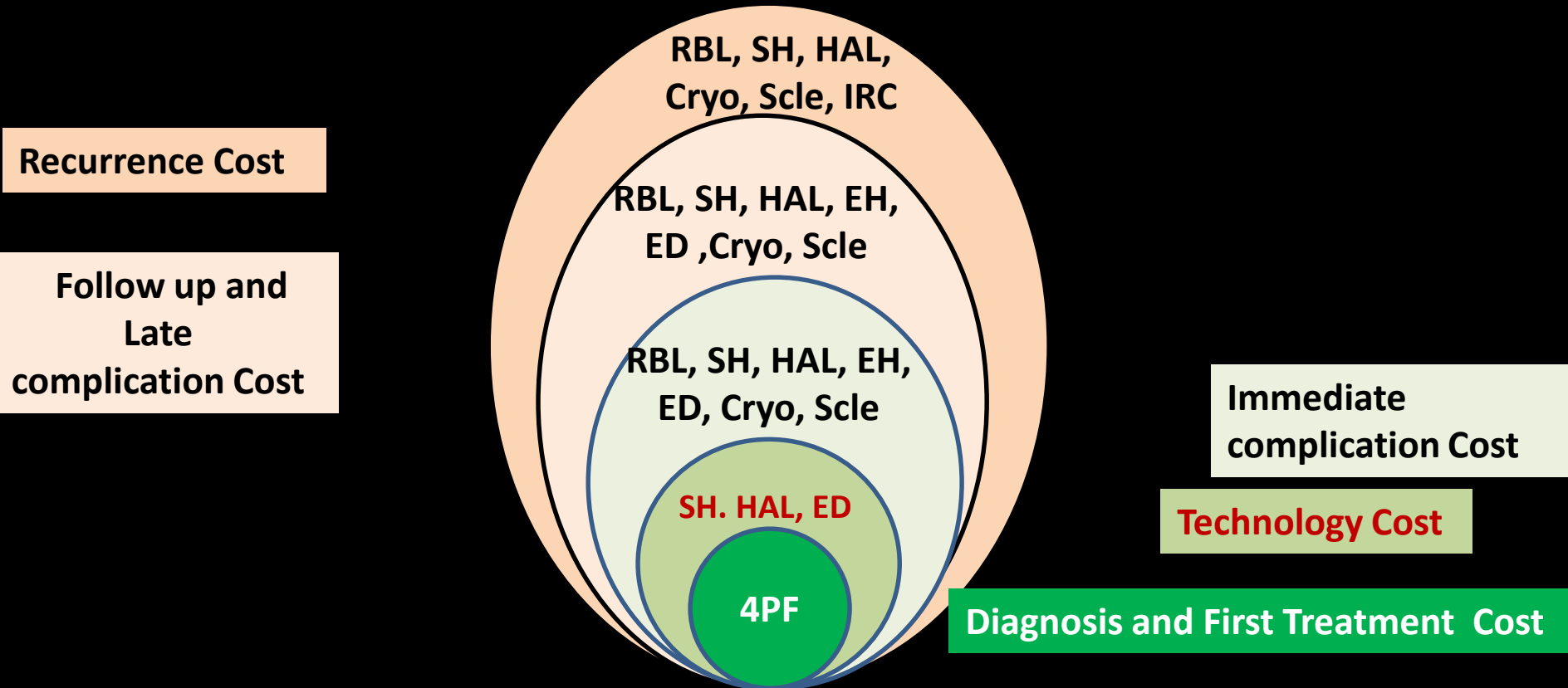


Table 1 Statements and level of evidence

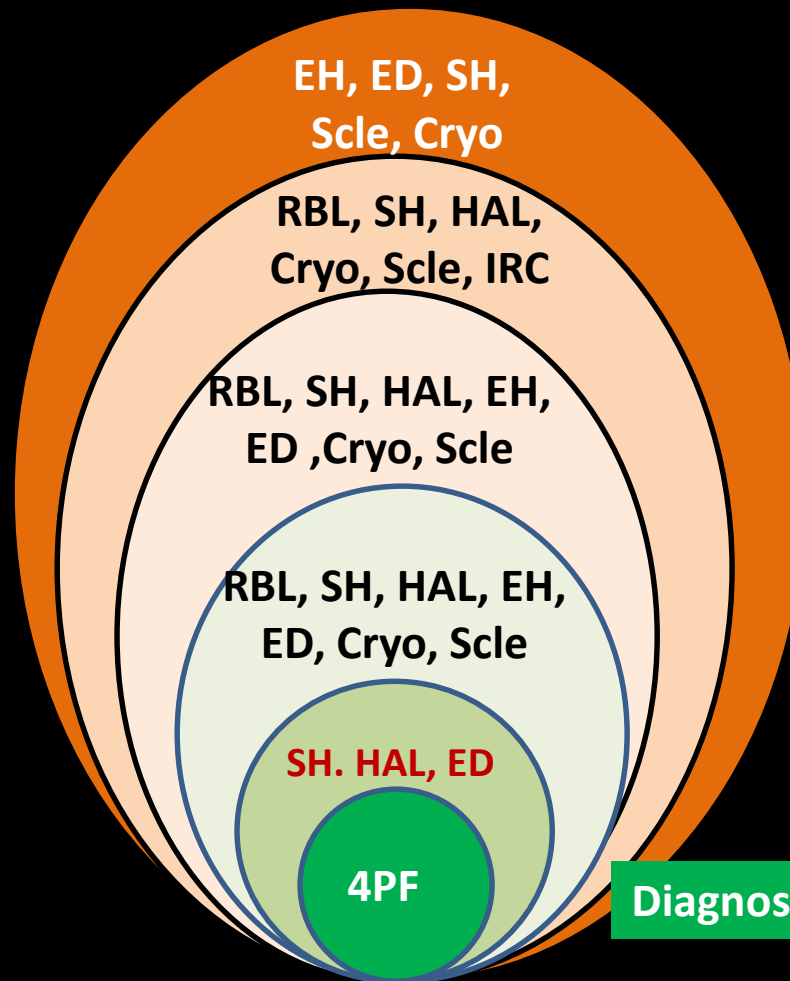
Statement	Level of evidence
SH is an effective treatment for hemorrhoids grade II-III	Ia
SH has a <u>higher rate of additional operations</u> , but less pain than MMH	Ia
SH patients return more rapidly to normal activity compared with MMH	Ia
SH can be repeated if recurrence occur	IIa
SH have <u>higher relapse rate</u> of prolapse than MMH during long-term follow-up	Ia

HEMORRHOIDS- LIFETIME COST CALCULATOR

Lifetime Morbidity
cost

Recurrence Cost

Follow up and
Late
complication Cost

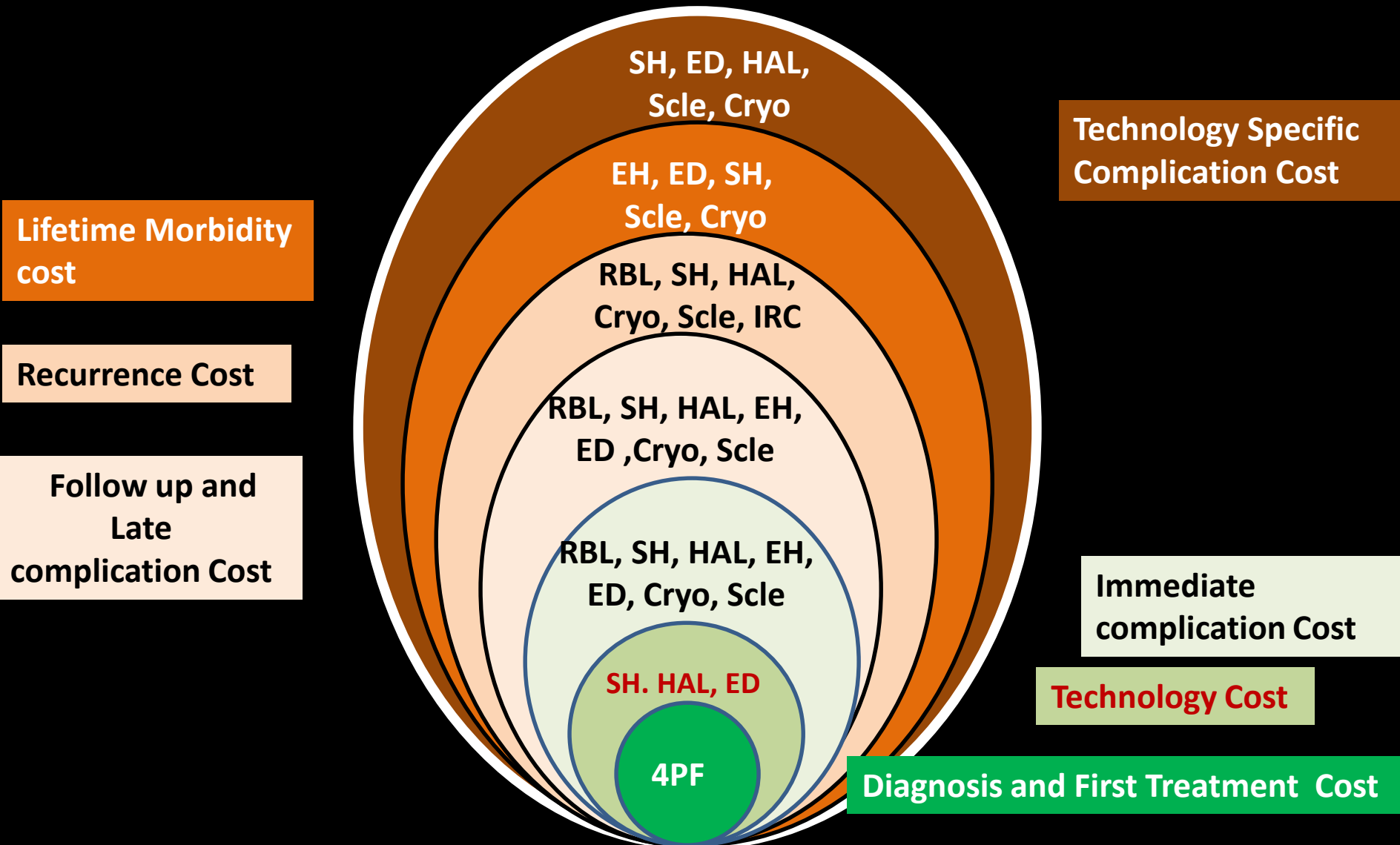


Immediate
complication Cost

Technology Cost

Diagnosis and First Treatment Cost

HEMORRHOIDS- LIFETIME COST CALCULATOR

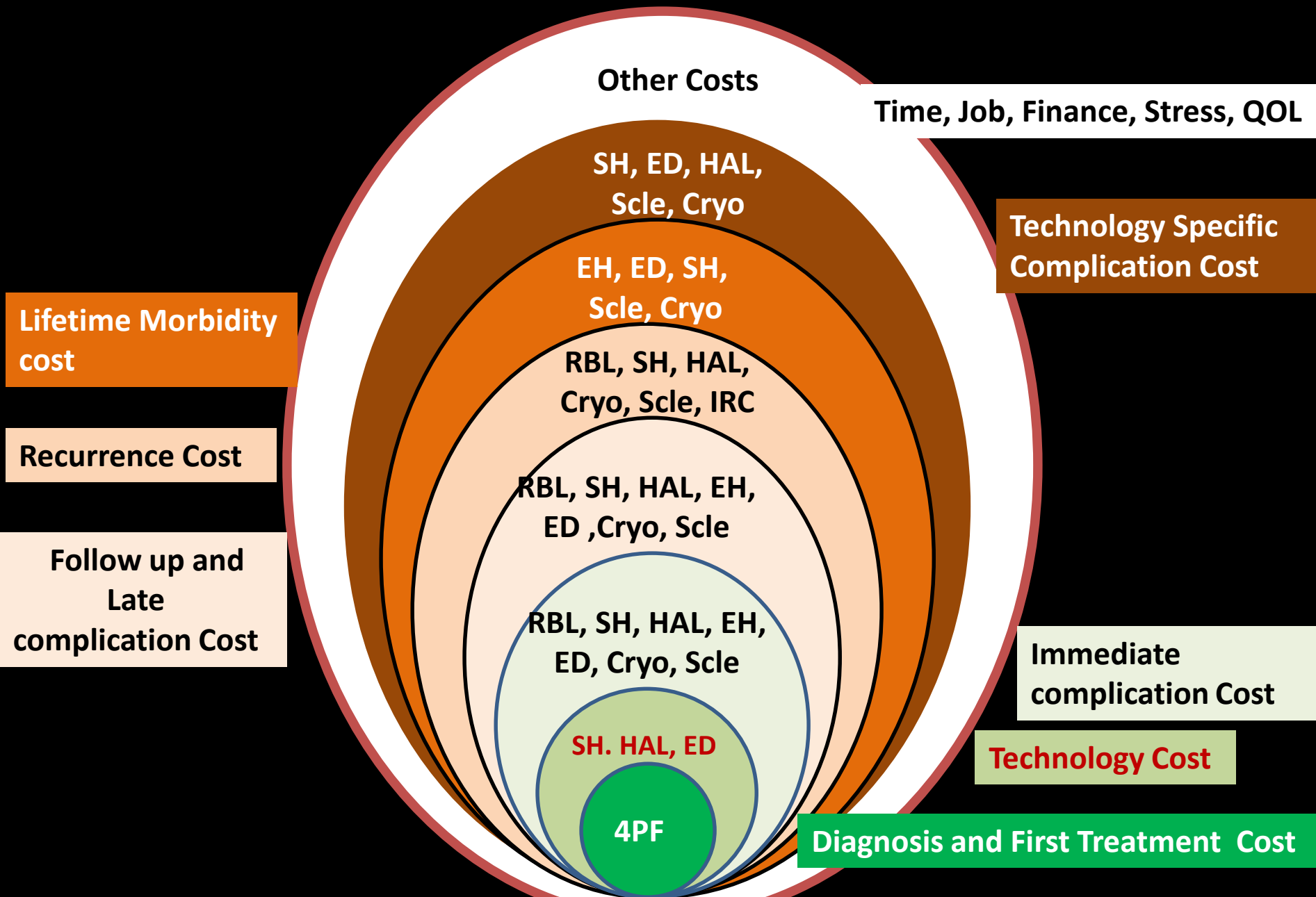


Practice Parameters for the Management of Hemorrhoids (Revised 2010)

David E. Rivadeneira, M.D. • Scott R. Steele, M.D. • Charles Terner, M.D.
Sridhar Chalasani, M.D. • W. Donald Buie, M.D.
Janice L. Rafferty, M.D., on behalf of the Standards Practice Task Force of
The American Society of Colon and Rectal Surgeons

Either open or closed hemorrhoidectomy can be performed with a variety of surgical devices including surgical scalpel, scissors, monopolar cauterization, bipolar energy, and ultrasonic devices.⁴¹⁻⁴³ In general, there appears to be no definitive advantage of one over the other.^{44,45} As such,

HEMORRHOIDS- LIFETIME COST CALCULATOR



Practice Parameters for the Management of

1-year follow-up, the recurrence rate was 11% for pro-lapse, 10% for bleeding, and 9% for pain at defecation. The authors found recurrences were higher for grade IV hemorrhoids and recommended this for use in grade II and III disease.⁵⁴ Currently, larger studies including variations of the Doppler technique and comparisons with other methods with longer follow-up intervals are required before definitive recommendations on this method.^{55,56}

HEMORRHOIDS- LIFETIME COST CALCULATOR

SH/PPH : Stapled Hemorrhoidectomy

HAL: Hemorrhoidal artery ligation

EH: Excisional Hemorrhoidectomy

RBL: Rubber bend ligation

Scle: Sclerotherapy

ED: Energy Devices

**Lifetime Morbidity
cost**

Recurrence Cost

**Follow up and
Late
complication Cost**

**Pictorial Representation
of Possible Events
(beta version)**

Other Costs

Time, Job, Finance, Stress, QOL

**Technology Specific
Complication Cost**

**Immediate
complication Cost**

Technology Cost

Diagnosis and First Treatment Cost

SH, ED, HAL,
Scle, Cryo

EH, ED, SH,
Scle, Cryo

RBL, SH, HAL,
Cryo, Scle, IRC

RBL, SH, HAL, EH,
ED, Cryo, Scle

RBL, SH, HAL, EH,
ED, Cryo, Scle

SH, HAL, ED

4PF

Comparison of Outcomes

TABLE 2

Comparison of Outcomes Between Different Surgical Procedures for Treatment of Hemorrhoids

Procedure	Resolution of symptoms	Reduction of prolapsing tissue (mucopexy)	Likelihood of recurrence	Amount of post-surgical pain	Longer recovery time
Banding (i.e., rubber band ligation)	++	+	++	++	+
Infrared photocoagulation	+	Not applicable	+++	+	+
Open hemorrhoidectomy	+++	++	+	+++	+++
Closed hemorrhoidectomy	+++	++	+	+++	+++
Stapled hemorrhoidopexy	++	+++	++	++	++
Hemorrhoidal artery ligation (without mucopexy)	++	Not applicable	++	+	+
Hemorrhoidal artery ligation (with mucopexy)	++	++	++	++	+

+ = Outcome less likely.

++ = Outcome relatively neutral in comparison with other surgical procedures.

+++ = Outcome more likely.

Information from references 7, 21, and 23 through 28.

Hemorrhoids: Diagnosis and Treatment Options
<https://www.aafp.org/afp/2018/0201/p172.html>

Too many options



**lack of
uniform
outcome
definition,
measurement,
and reporting
in research
data**

**lack of strong recommendations in
treatment guidelines**

Control or Cure

High Recurrence

- Minimal Pain
- Fast recovery



High Complications

Pain
Slow Recovery

**All
others**

Hemorrhoidectomy

HEMORRHOIDS- LIFETIME COST CALCULATOR



4PF

HEMORRHOIDS- LIFETIME COST CALCULATOR

4PF

No Follow Up

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Diagnosis and First Treatment Cost

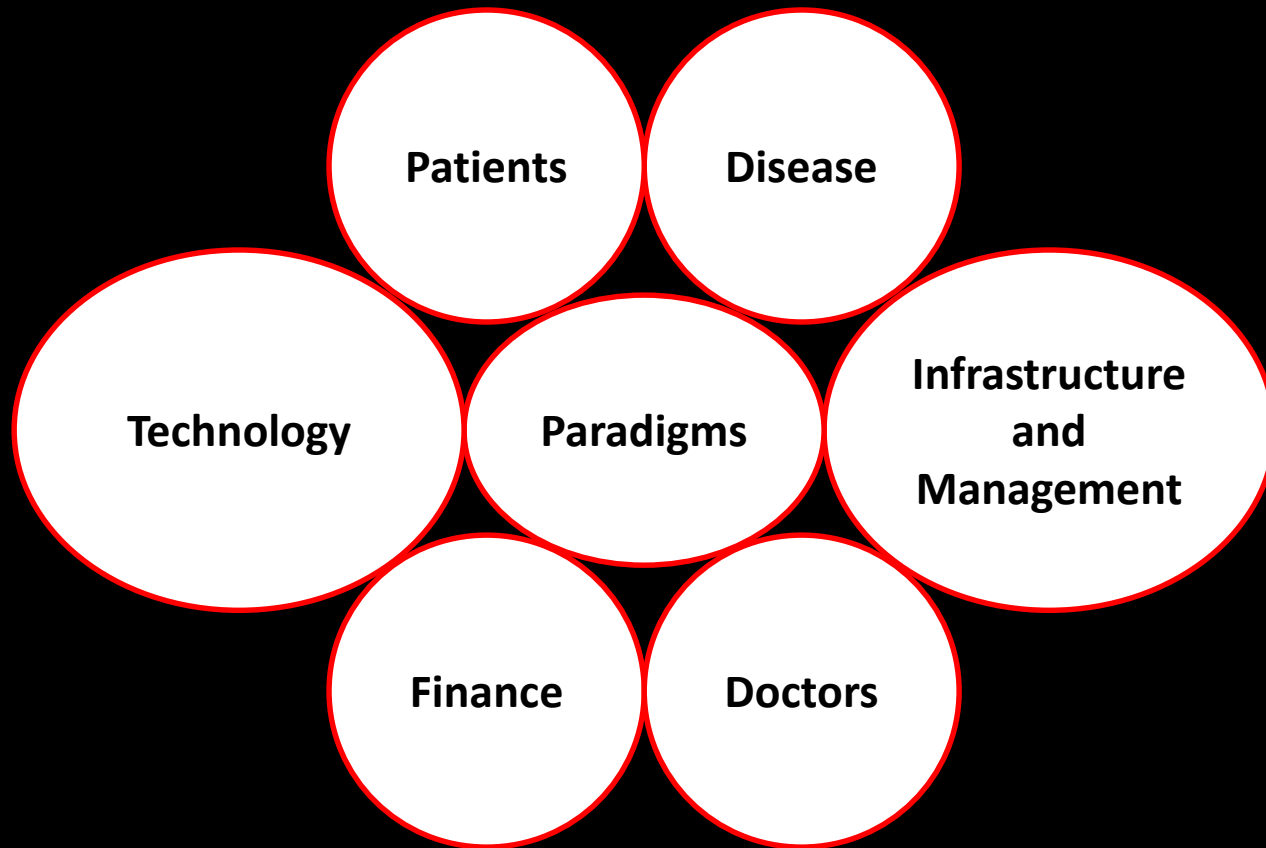
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Sensory	<input checked="" type="checkbox"/>

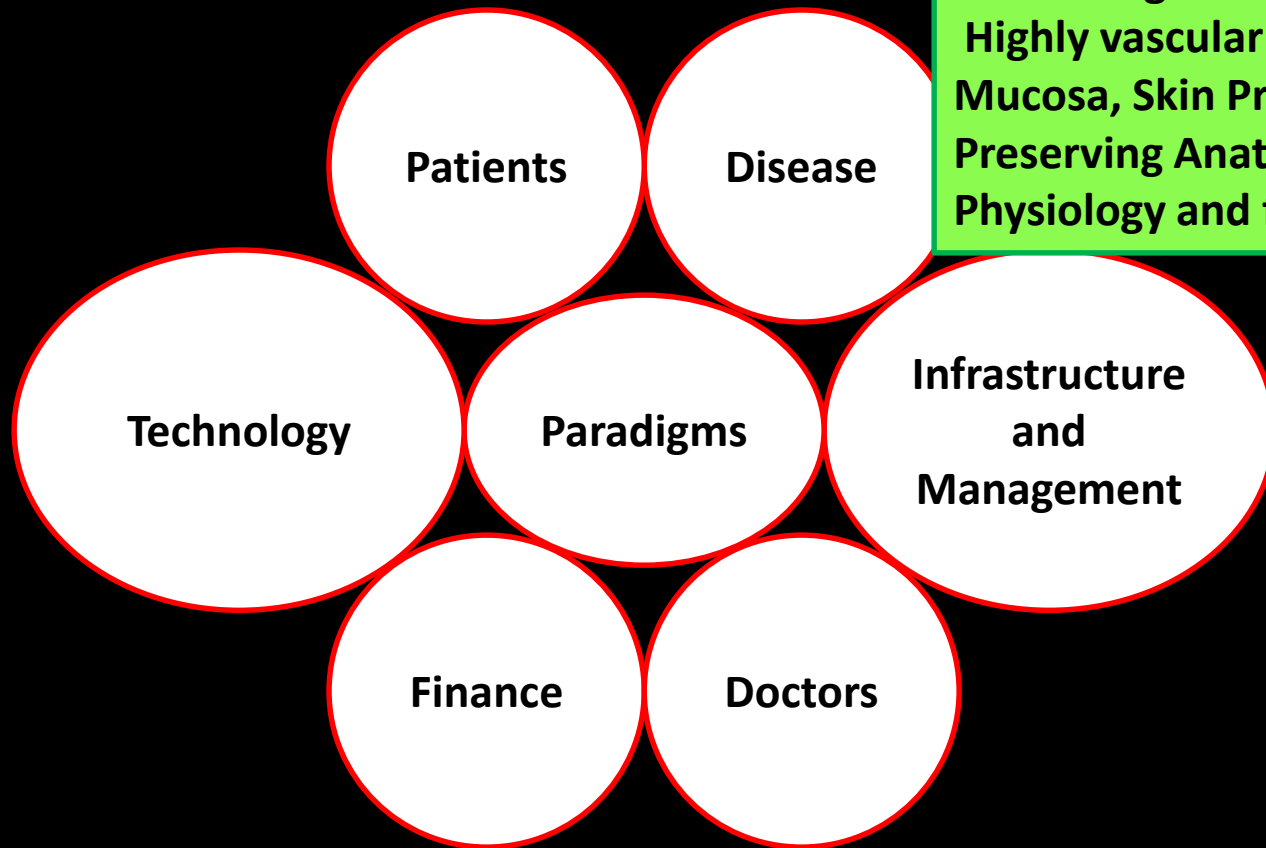
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More Effective	<input checked="" type="checkbox"/>

Reproducible	<input checked="" type="checkbox"/>
Ease of learning	<input checked="" type="checkbox"/>
Basic OT	<input checked="" type="checkbox"/>
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No Dressing	<input checked="" type="checkbox"/>
Time Tested	<input checked="" type="checkbox"/>
Reproducible	<input checked="" type="checkbox"/>

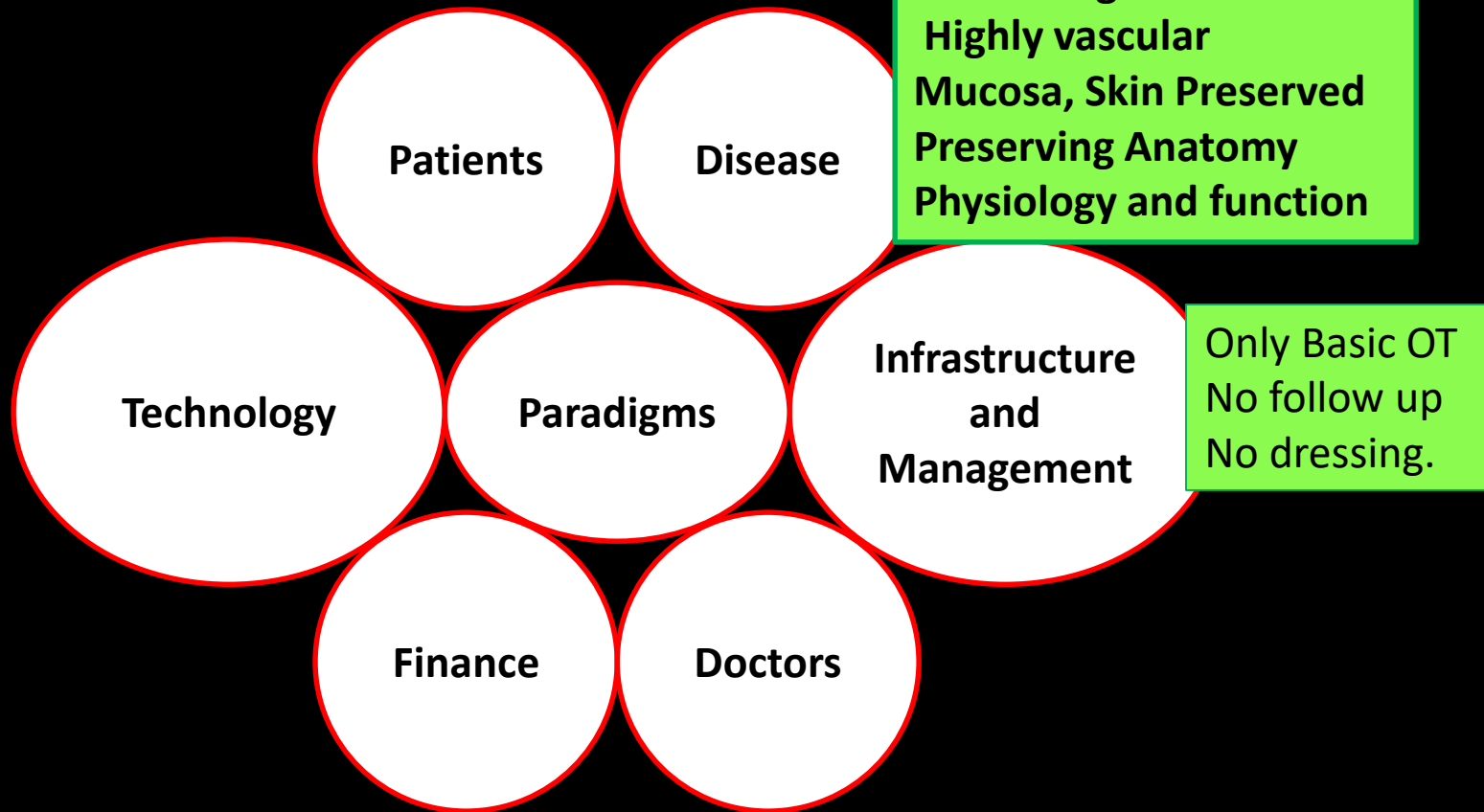
**Join with
us in
Multicentric
trial**

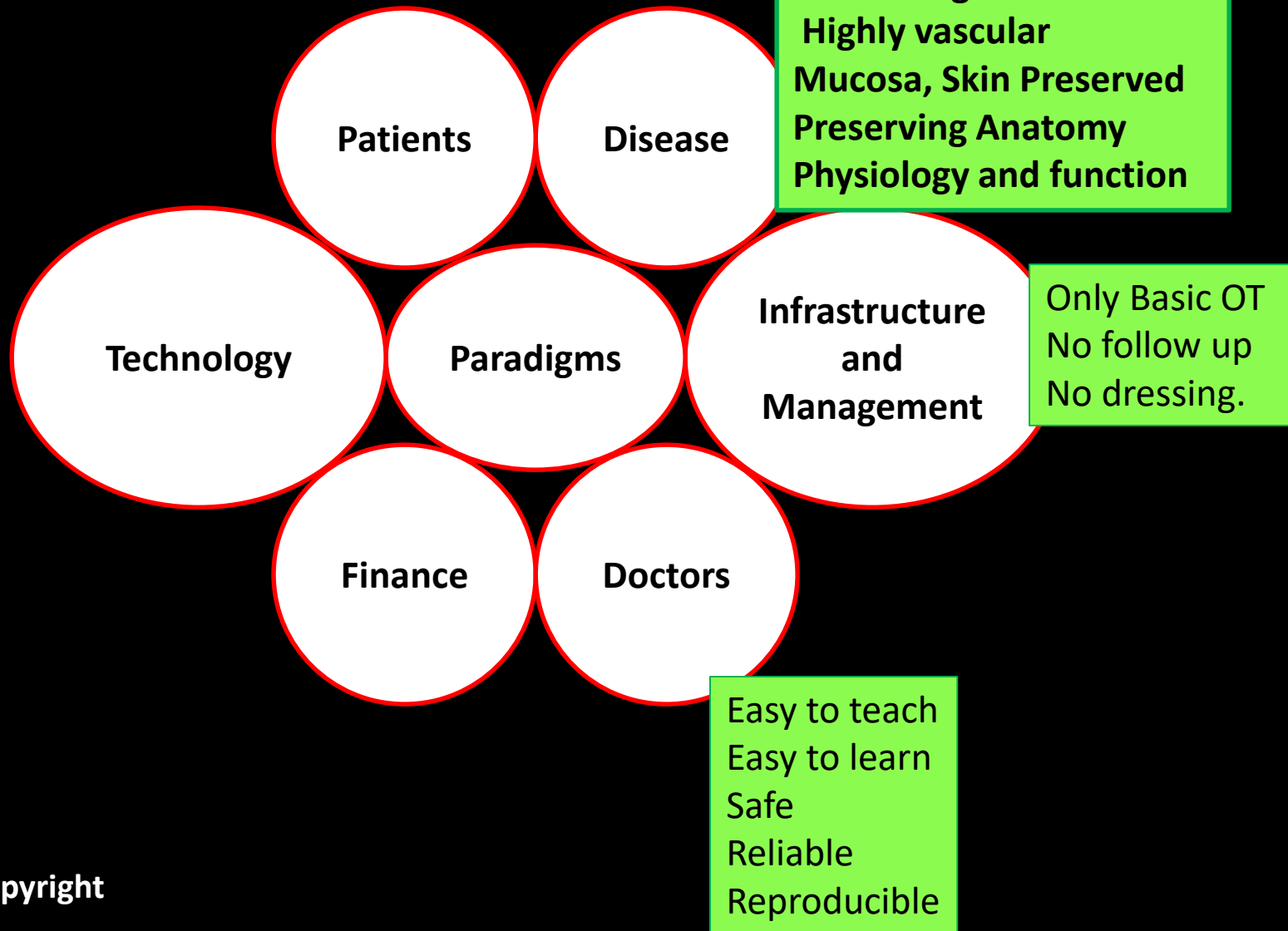
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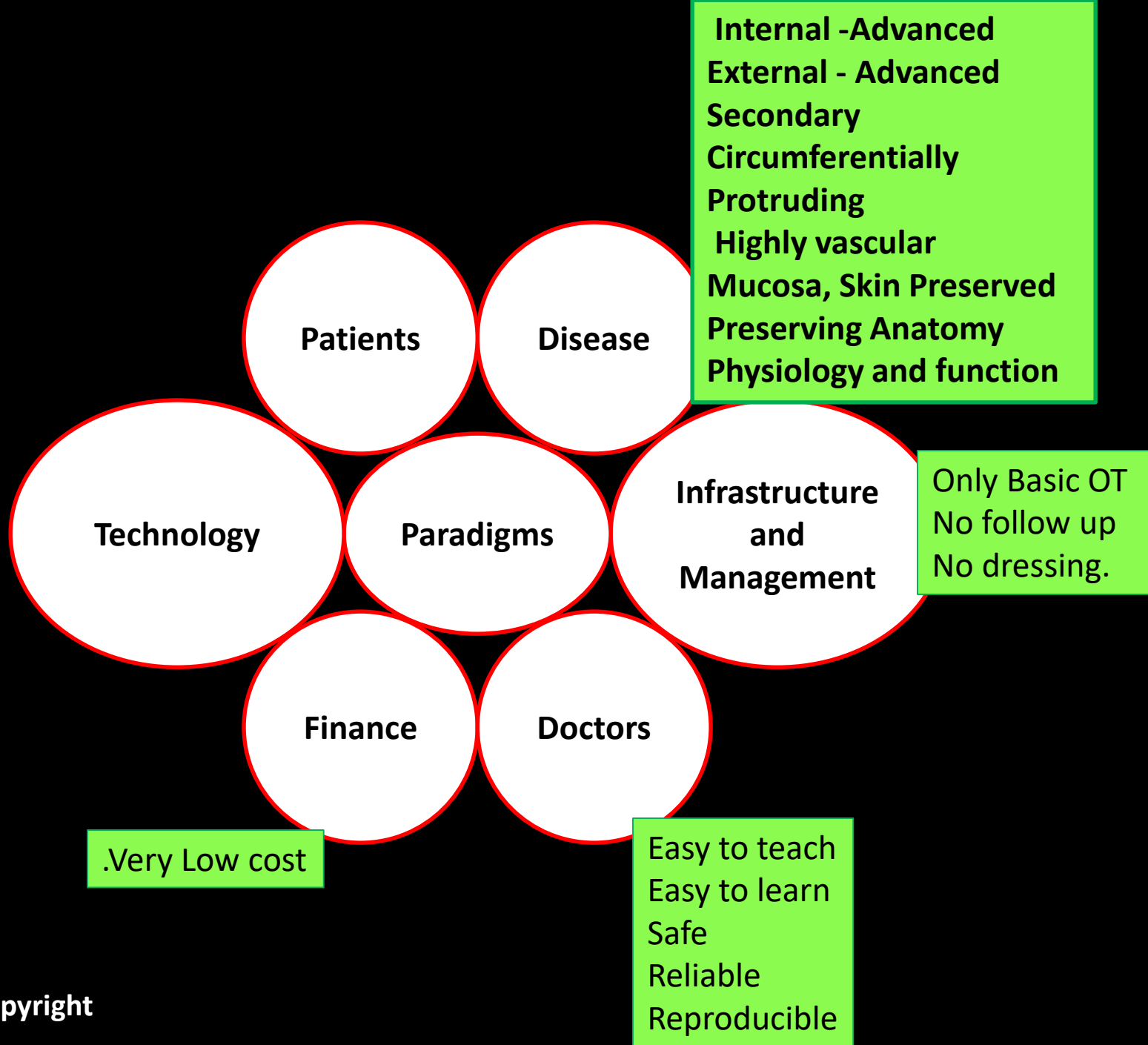


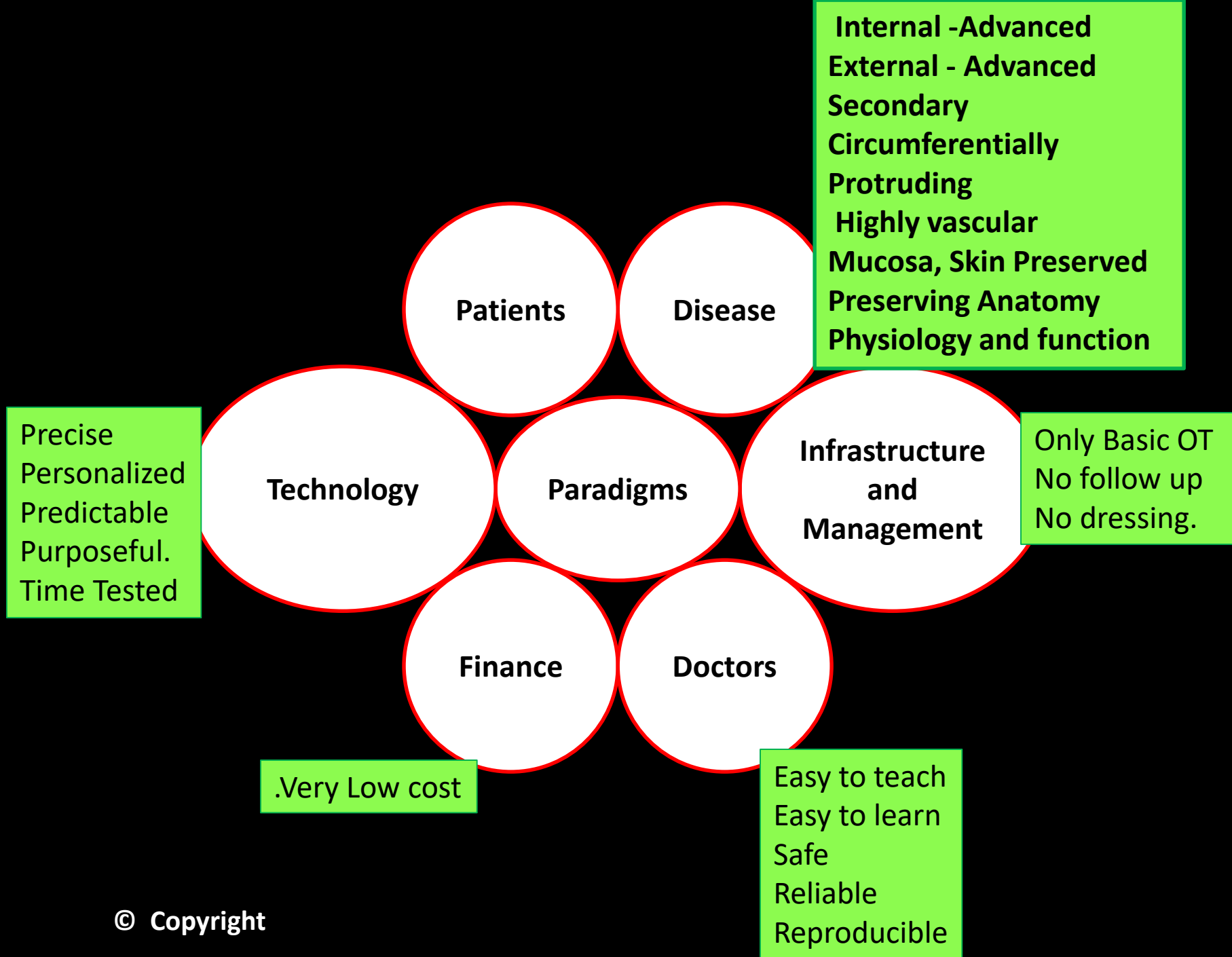


**Internal -Advanced
External - Advanced
Secondary
Circumferentially
Protruding
Highly vascular
Mucosa, Skin Preserved
Preserving Anatomy
Physiology and function**









No follow up
No dressing
No recurrence
No critical
complication

Internal -Advanced
External - Advanced
Secondary
Circumferentially
Protruding
Highly vascular
Mucosa, Skin Preserved
Preserving Anatomy
Physiology and function

Patients

Disease

Technology

Paradigms

**Infrastructure
and
Management**

Only Basic OT
No follow up
No dressing.

Precise
Personalized
Predictable
Purposeful.
Time Tested

Finance

Doctors

.Very Low cost

Easy to teach
Easy to learn
Safe
Reliable
Reproducible

Downloads @

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On cancervijay.com



Feedback

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**Join with us
in
Multicentric
Trial**

**Call
To Action**