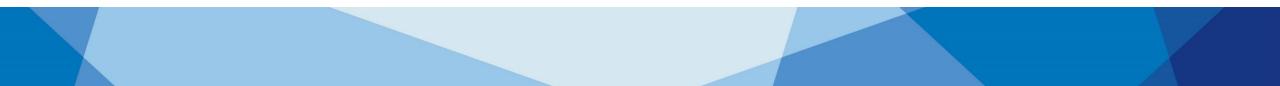




The management of complex hernias

This webinar will start shortly.





An Australian Government Initiative



The management of complex hernias

Zoom webinar – Tuesday 18 March 2025 - 6:30pm to 8:00pm



Acknowledgement of traditional owners

We acknowledge the Tasmanian Aboriginal people as the traditional owners and ongoing custodians of the land on which we are meeting today. We pay our respects to Elders past and present.

We would also like to acknowledge Aboriginal people who are joining us today.

Learning outcomes

After this session, I will be able to:

- Know the risk factors for the development of complex hernias, and strategies for pre-optimisation
- Be familiar with the work-up of complex hernias and their management
- Recognise the emergency presentations of complex hernias

Some housekeeping

- Tonight's webinar is being recorded
- Please use the Zoom Q&A feature to ask questions
- At the end of the webinar your browser will automatically open an evaluation survey. We appreciate you taking the time to complete this to help us improve our events programme
- Please don't forget to register for your next webinar at: <u>https://www.primaryhealthtas.com.au/for-health-professionals/events/</u>

Presenter

Dr Noha Ferrah- General Surgeon,

Tasmanian Health Service - South



Management of complex hernias

Dr Noha Ferrah

Thank you to Prof Richard Turner and Dr Keith Towsey for their assistance in preparing this presentation

Outline

- Case presentation
- Risk factors
- Work up
- Risk assessment
- Pre-optimisation
- Management options
- Surgical techniques
- Post-op care
- Complications
- Emergency presentations

Case presentation

- 56F incisional hernia
 - PMhx
 - BMI 41, T2DM, non-smoker, HTN, OA
 - Prior surgery
 - Abdominal hysterectomy
 - Open appendicectomy





Scope of issue

One of the most common complications after abdominal surgery

Incidence 3 - 20%

Doubles if index operation complicated by wound infection

50% of incisional hernias detected within one year of surgery

Risk of 2% per year

Who is at risk?

Patient factors

- Non-modifyable
 - AAA
 - Connective tissue disorders (Marfan's, Ehlers-Danlos)
- Modifyable
 - Smoking, obesity, T2DM, immunosuppression, nutritional deficiencies

Surgical factors

- Incision site
- Surgical technique

Post-operative factors

- Surgical site infections
- Post-operative ileus, coughing, vomiting

What makes a hernia complex?

- Size of defect
- Location
- Loss of domain
- Contamination
- Foreign material
- Quality of soft tissue

Hernia (2014) 18:7-17 DOI 10.1007/s10029-013-1168-6

ORIGINAL ARTICLE

Criteria for definition of a complex abdominal wall hernia

N. J. Slater · A. Montgomery · F. Berrevoet · A. M. Carbonell · A. Chang · M. Franklin · K. W. Kercher · B. J. Lammers · E. Parra-Davilla · S. Roll · S. Towfigh · E. van Geffen · J. Conze · H. van Goor

Size & Location	Contamination & Soft Tissue	History & Risk Factors	Clinical Situation
≥ 10 cm in width	Class III or IV	Recurrent, prior mesh, prior C/S	Emergency
Parastomal, lumbar, lateral and subcostal locations of hernia	Full-thickness abdominal wall defects	RFs for wound healing, ie obesity, DM, age	Intra-peritoneal mesh removal
Loss of domain ≥20%	Distorted anatomy	Increase intra- abdominal pressure	Multiple defects
	Denervation	Prior wound dehiscence	Component separations
	Other: skin grafts, wound ulcers/non-healing, open abdomen, disease- related, enterocutaneous fistula	Prior mesh infection	

Complex Hernia Service – RHH

Incisional hernias

Recurrent hernias

Primary (no previous surgery) midline hernias >4cm

Unusual locations eg. flank, subcostal, diaphragmatic

Parastomal hernias

Large inguinoscrotal hernias

Work up

Hx

- Impact on ADL
- Prior surgery
- Prior hernia repair
 - Mesh
 - Which layer?
 - Complications seroma, infection, fistula

Exam

- Bulge in the region of the surgical scar.
- Fascial edges
- Skin changes

CT A/P

- Non-contrast
- IV contrast if concern infection
- Number, size, location of defects
- Rectus diastasis

Who can vs who should have an operation?

Balance the risk of surgery vs risk of complications if left untreated

Little info on risk of major complications

Most hernias will enlarge with time

If patient can safely have GA, and chance of successful repair high, surgery is indicated

If high anaesthetic risk or surgical repair technically difficult, conservative management more appropriate

Risk assessment

- Risk scoring tool
- CeDAR app from Carolinas Healthcare



The dollar amounts displayed above represent additional charges over and above national estimates for the average patient undergoing open ventral hernia repair with your specific risk profile.

Edit Answers to See Changes

Defining Your CeDAR Outcome

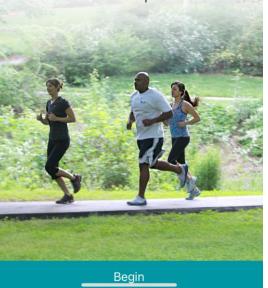
The Carolinas Equation for Determining Associated Risk (CeDAR) is a powerful predictive model designed to calculate risk of wound complications following ventral hernia repair as well as the related medical costs. By analyzing vast amounts of prospectively collected data, this tool enables surgeons and patients to better assess preoperative risk and proactively modify key risk factors to improve outcomes and reduce costs.

CeDAR establishes a calculated percentage risk of post-operative wound complication based on your pre-operative risk factors (prior to undergoing ventral hernia repair) and the other information which you supplied in the application. Our extensive



Carolinas Equation for Determining Associated Risks

The Carolinas Equation for Determining Associated Risks (CeDAR) predicts the risks and financial impact of woundrelated complications following ventral hernia repair.



Pre-optimisation

- Risk factors for recurrence and wound complications
 - Obesity (OR 1.08x for each BMI point)
 - Diabetes (OR 2.01x for HbA1C>7.2)
 - Smoking (OR 2.17)
 - Active infection (OR 2.07)
 - Previous repair (OR 2.64)
- Objectives
 - BMI < 35
 - Non-smoker > 4 weeks
 - HbA1c < 7

Reduction in complications %

BMI reduction

1 point	6.9	
2 points	14.6	
3 points	22.8	
4 points	31.3	
5 points	40.5	
Stop Smoking	19.5	
HbA1c reduction		
0.5 points	7.7	
1 point	8.5	

Case presentation

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Ce	eDAR	Start Over
Risk of Complications		
		54%
In-Hospital Charges	Fol	lowup Charges
\$11,054	\$	26,319

The dollar amounts displayed above represent additional charges over and above national estimates for the average patient undergoing open ventral hernia repair with your specific risk profile.

Edit Answers to See Changes

Defining Your CeDAR Outcome

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Defining Your CeDAR Outcome

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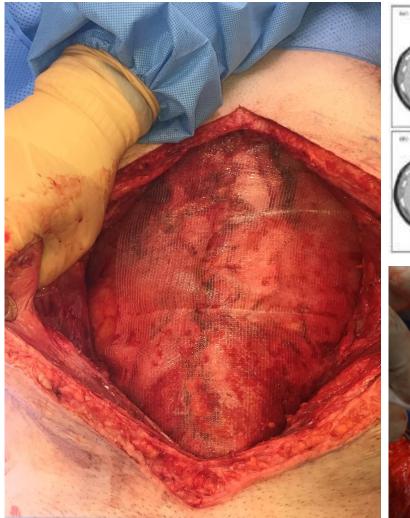


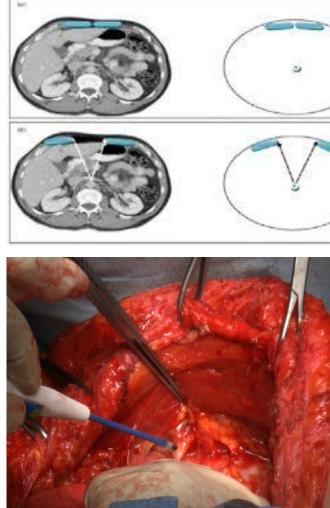
Management options

Non- operative	Watchful wait for small aSx, or large defect and not fit for surgery
Operative	Suture repair (primary hernia <2cm) Mesh repair

Surgical techniques







Surgical techniques -Open

- Large incisional hernias, excess skin
- Retro-rectus or preperitoneal repair
- Component separation
 - For defects >10cm
 - Flap abdo wall mobilised to midline







Figure 1 Endoscopic view of mesh-like material protruding through cecal wall (A-D)

Surgical techniques - Laparoscopic

- ''IPOM''
 - Coated mesh to reduce visceral adhesions
 - Placed in intraperitoneal cavity
 - Hernia defect may or may not be closed
- ''IPOM + ''
 - Pre-peritoneal flap, close defect

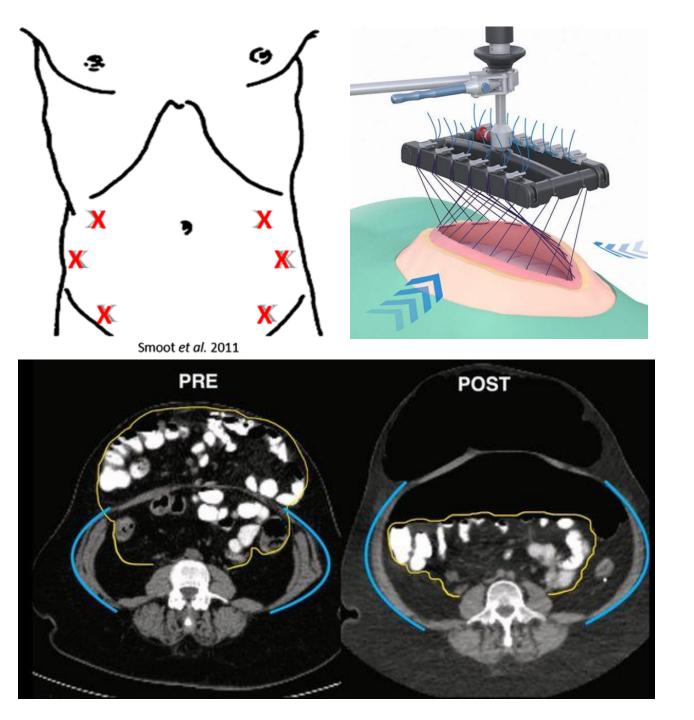
Surgical techniques -Robotic

- Similar technique to laparoscopic
- Ergonomic and articulated arms
- Fastest growing use is hernia repair



Surgical techniques -Adjuncts

- Botox
- Progressive pneumoperitoneum
- Fasciotens



Post-operative care

Laparoscopic/Robotic

Open

- Longer length of stay
- Drains
- Binder

Complications

Early

- Haematoma
- Seroma
- Wound infection
- Deep collection
- Enterocutaneous fistula

Late

- Mesh infection
- Recurrence
- Chronic pain
 - >6 months post-surgery
 - •~10%
 - CT to check for hernia recurrence
 - Refer back to operating surgeon

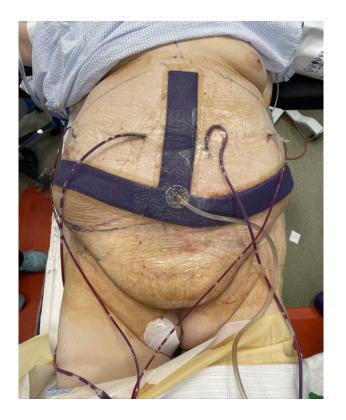
Emergency presentations

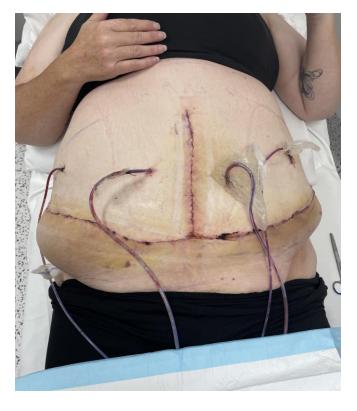
- The 'bowel issue' and the 'hernia issue'
- Keep it simple
 - Do what is necessary and nothing more
 - Avoid complexity
 - Don't burn bridges
 - Avoid mesh if evidence of sepsis
 - Accept risk of recurrence
 - Bring back for elective repair



Case presentation







Conclusion

- Resources for patients
 - Videos in Patient area of European Hernia Society website
 - <u>https://europeanherniasociety.eu/patien</u> <u>t-area/</u>
 - Patient booklet on epigatric and umbilical hernia
- THP Referral pathways
- Calvary Health care Montagu House
 - 49 Augusta road Lenah Valley TAS 7008
- Questions?

Tasmania	Q, Seach HealthPathogs					
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				Colorectal Gallbladder Polyps Gallstones and Billary Colic Hernia in Aduits Incidental Liver Lesions PEG Tube Issues Soft Tissue Lumps and Sarcoma in Aduits Elective Procedures and Diabetes General Surgery Requests Neurosurgery Ophthalmology Orthopaedics / Musculoskeletal Paediatric Surgery Chectic Gurgery	 Take a history Perform a physical examination Perform a physical examination Consider risk factors Consider risk factors Assess for complications: Strangulation Obstruction - symptoms and signs of intestinal obstruction co-exist with irreducible hernia Irreducible i.e., contents cannot be completely emptied from the sac Most hernias require clinical assessment alone. If diagnosis is uncertain, consider imaging Ultrasound is overused an not aid diagnosis of inguinal hernia with groin pain and no lump. Advise patient to take hard copies (not just a report) with their appointment. Management If irreducible hernia or severe pain or vomiting suggestive of obstructed or strangulated hernias, refer for emergency assee and request general surgery advice. 	h them to

2. If small asymptomatic hernias, especially in the elderly or medically unfit patients, manage with o



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For access to the Tasmanian HealthPathways,

Urology

Please email:

Healthpathways@primaryhealthtas.com.au



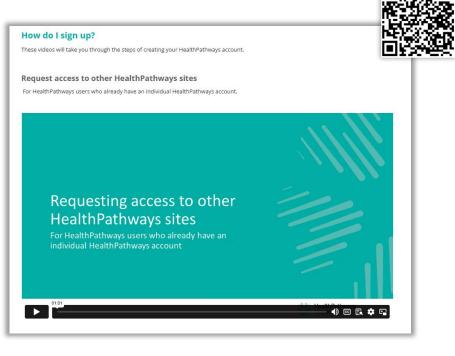
Update- New personalised accounts

From 10th March 2025, HealthPathways introduced personalised accounts.

Users will be logged out and prompted to register for a new personalised account.

Have a question? Contact the Tasmanian HealthPathways team <u>HealthPathways@primaryhealthtas.com.au</u>

Click here to learn more



Scan to learn more

Q&A on the Tasmanian HealthPathways New Personalised Logins

Tasmanian Health Pathways - Personalised Logins	
Primary Health Tasmania	
Thursday 20 March - From 12:30pm to 1:00pm	
Online	
Audience: All Primary Health Professionals	

The Tasmanian HealthPathways have launched personalised logins.

From March 10 Tasmanian Health Professionals will be able to register for personalised accounts on the HealthPathways platform. This new feature is designed to enhance the user experience and streamline access to key features. While you can continue to use your shared login details to access the Tasmanian HealthPathways, we encourage all users to register for a free personalised account.

To help you navigate this transition smoothly, we are hosting a **live Q&A session** where the HealthPathways team will answer any questions you may have about the new features and what this means for you.

- · Learn how personalised accounts will improve your HealthPathways experience
- · Step-by-step guidance on creating your individual account
- Get answers to any questions you may have about the new features
- Drop in anytime during the session no need to stay for the full event



To help you navigate this transition smoothly, we are hosting three **live Q&A sessions** where the HealthPathways team will answer any questions you may have about the new features and what this means for you.

> *Thursday 20 March:* 7:00-7:30am *Thursday 20 March:* 12:30-1:00pm *Thursday 27 March:* 7:00-7:30pm

Some final words

- After this webinar end, your browser will open a link to an evaluation survey.
- Statements of attendance will be emailed to participants.
- For event queries, please contact <u>events@primaryhealthtas.com.au</u>

Thank you

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