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PRE-OPERATIVE AIRWAY ASSESSMENT STRATEGIES

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DISCLOSURE

I have a financial relationship with Ambu and Karl Storz Endoscopy in the form of funded research and I am an unpaid consultant for Ambu.

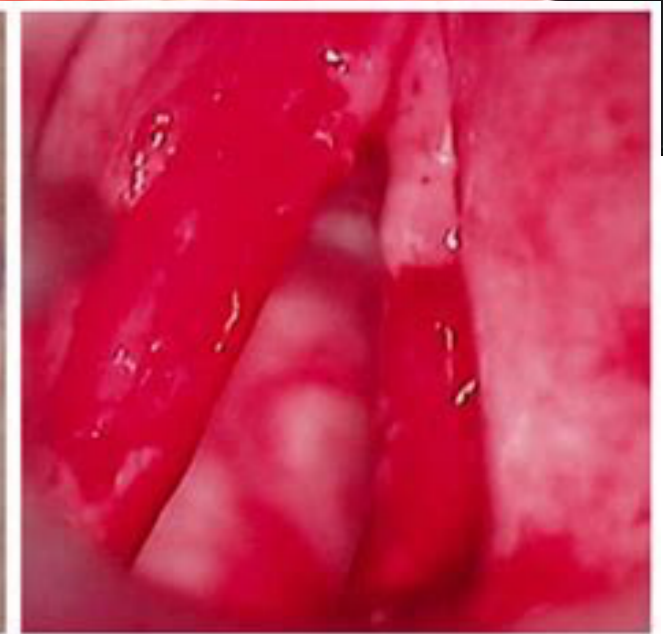
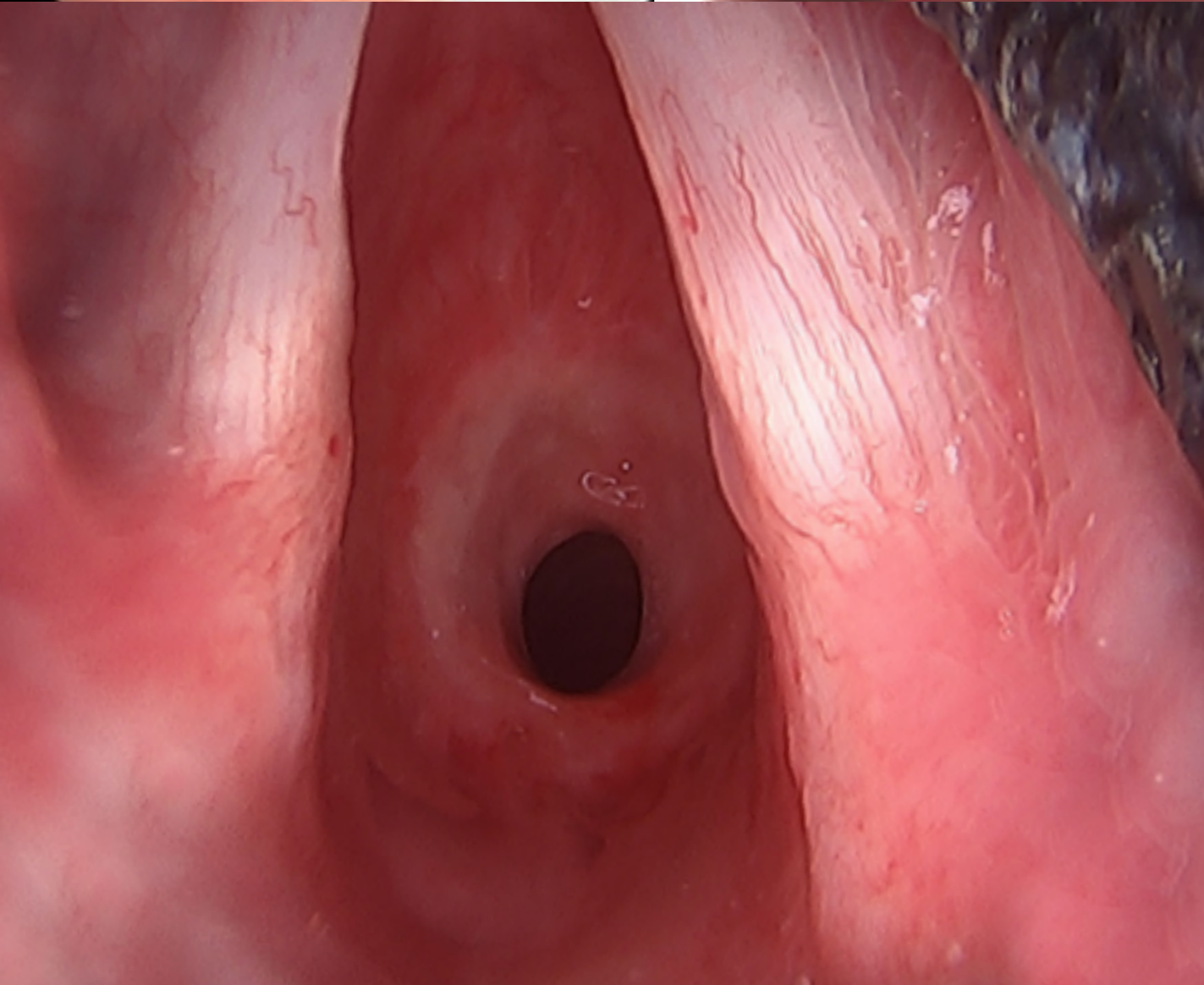
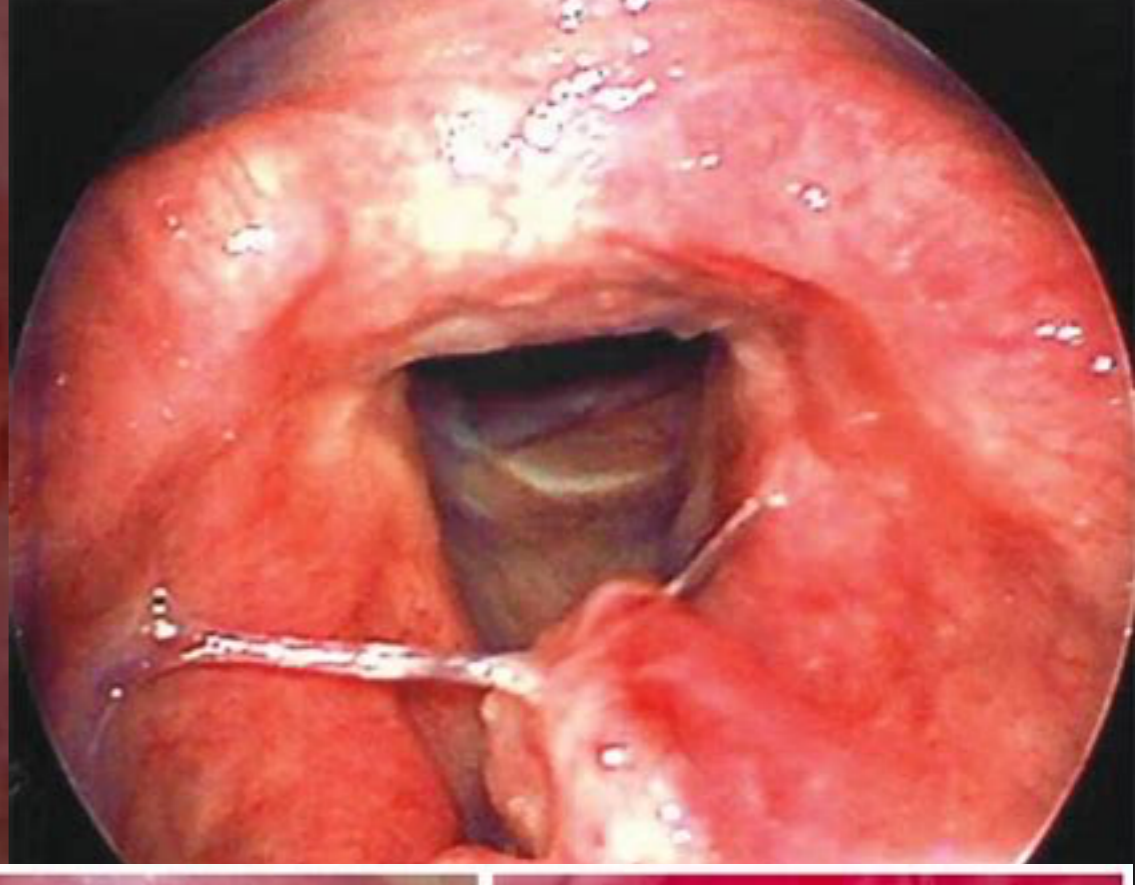
OUTLINE

- conventional airway assessment strategies
- new airway assessment strategies
- future directions of airway assessment

OUTLINE

- **conventional airway assessment strategies**
- new airway assessment strategies
- future directions of airway assessment





Failure to evaluate the airway and predict difficulty is the ***single*** most important factor leading to a failed airway

ASA Closed Claims Analysis



CHAPTER 17 Airway assessment and planning



Dr Adrian Pearce



Dr Jan Shaw

- **Deficiencies** in the undertaking or recording of an airway assessment
- Failure to undertake **additional** airway investigations
- Failure to **review** the investigations even when this would have been extremely useful



Learning points and recommendations

- A quarter to one-third of anaesthesia patients had no recorded airway assessment.
- Mallampati grading, mouth opening and neck mobility were the most commonly performed bedside interactive tests.
- The commonest predicted problem was difficult direct laryngoscopy or intubation.
- Nasendoscopy was the commonest additional airway investigation.
- The risk of aspiration was not always assessed and some of these patients aspirated.
- Awake intubation would have prevented some described adverse events.
- Deficiencies in judgement are more commonly cited as influential in adverse events than deficient knowledge or skills.
- An airway plan suggests a single approach to management of the airway. A strategy is a co-ordinated combination of plans, which aim to achieve good gas exchange and prevention of aspiration. Anaesthetists should approach airway management with strategies rather than plans.
- Some responses to airway events suggested that anaesthetists and others managing the airway lacked good knowledge of published guidelines and some responses lacked structure and logic.



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CHAPTER 17 Airway assessment and planning



Dr Adrian Pearce



Dr Jan Shaw

- An airway evaluation should be undertaken in ***all patients*** who may require airway support or an airway intervention
- While most commonly applies to patients undergoing surgery, it includes patients in ***ICU or emergency dept***

ADEQUATE PRE-OP EXAM

- Previous airway difficulty history
- Medical conditions associated with difficulty
- Previous surgery or radiotherapy to the head, neck or mediastinum
- External overall assessment
- Bedside interactive tests
- Availability of the cricothyroid membrane
- Implications of the presenting disease

PRACTICE GUIDELINES FOR MANAGEMENT OF THE DIFFICULT AIRWAY

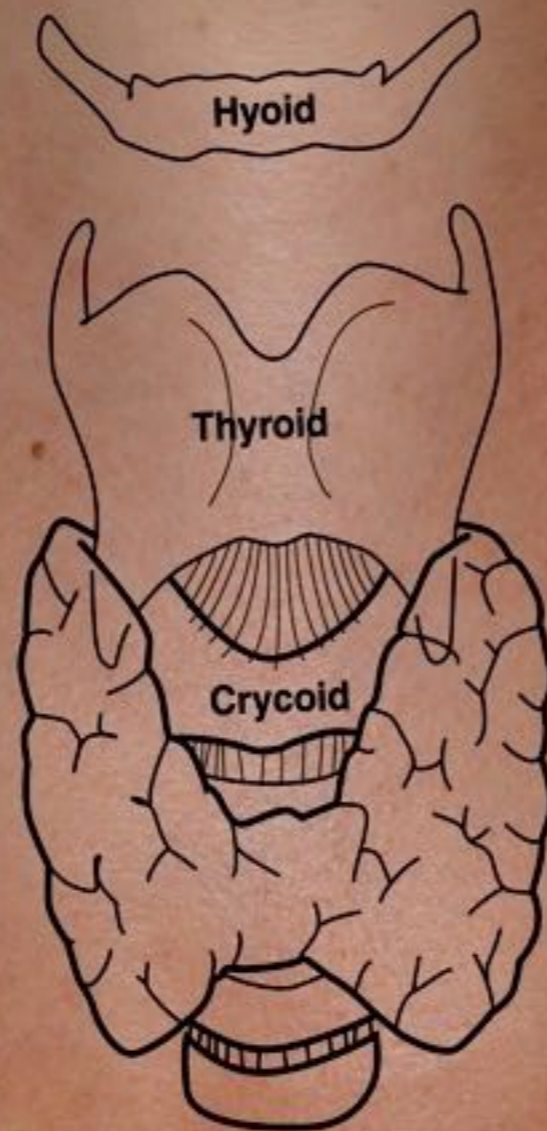
*An Updated Report by the American Society of
Anesthesiologists Task Force on Management of
the Difficult Airway*



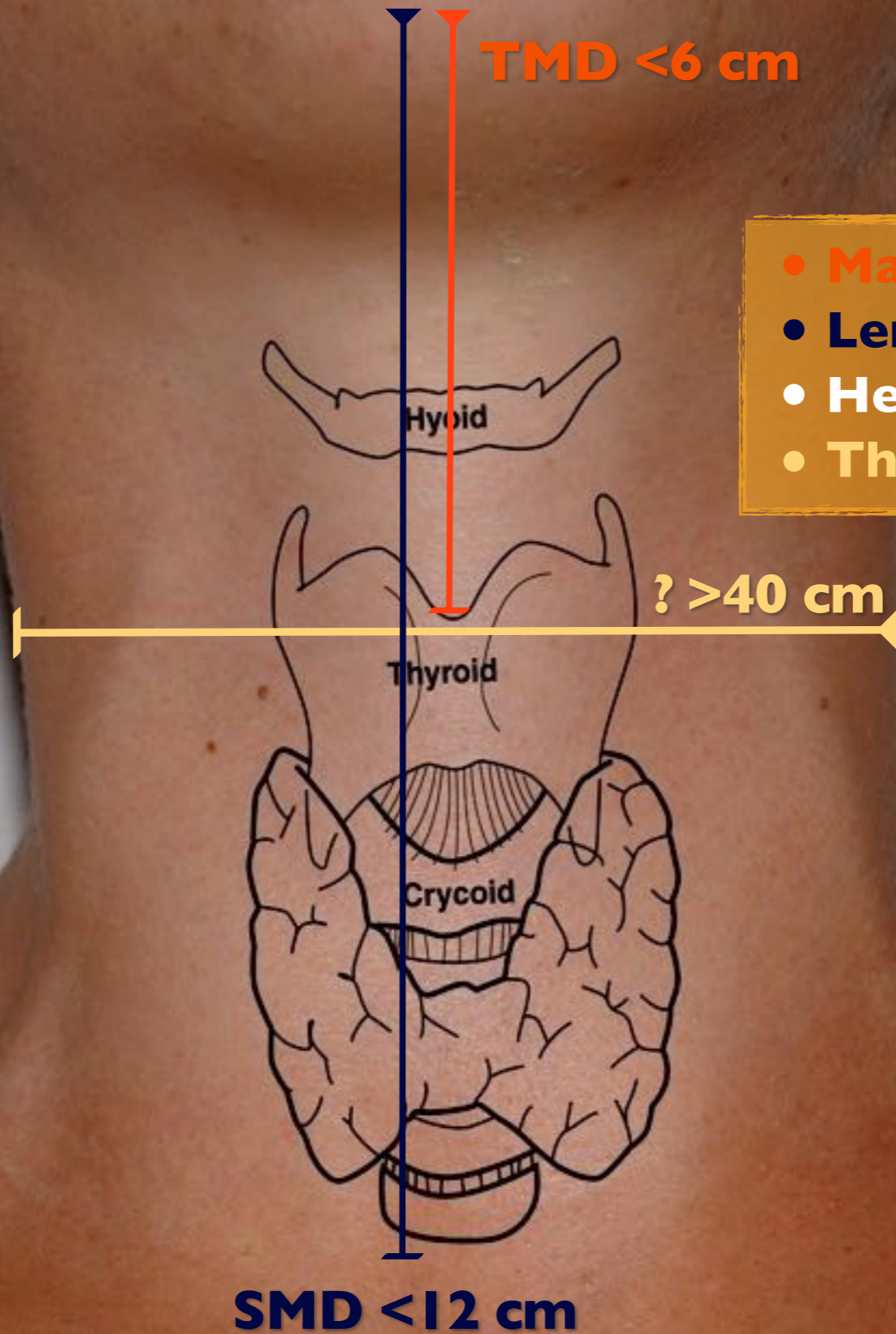
Jeffrey L. Apfelbaum, MD (Committee on Standards and Practice Parameters Chair), Carin A. Hagberg, MD, and selected members of the Task Force on Management of the Difficult Airway: Robert A. Caplan, MD (Task Force Chair), Casey D. Blitt, MD, Richard T. Connis, PhD, and David G. Nickinovich, PhD

ESSENTIAL ROUTINE PREOPERATIVE AIRWAY EVALUATION

- Length of upper incisors
- **Involuntary:** maxillary teeth anterior to mandibular teeth
- **Voluntary:** protrusion of mandibular teeth anterior to maxillary teeth - lip bite test
- Interincisor distance <4 cm
- Oropharyngeal class (3 or 4)
- Narrowness of palate
- Mandibular space compliance



ESSENTIAL ROUTINE PREOPERATIVE AIRWAY EVALUATION



- Mandibular space length
- Length of neck
- Head/Neck ROM
- Thickness of neck

Basic Management Problems

- ❖ Difficulty with patient cooperation or consent
- ❖ Difficult mask ventilation
- ❖ Difficult supraglottic airway placement
- ❖ Difficult laryngoscopy
- ❖ Difficult intubation
- ❖ Difficult surgical airway access



Difficult Surgical Airway





Comparing success rates of anesthesia providers versus trauma surgeons in their use of palpation to identify the cricothyroid membrane in female subjects: a prospective observational study

Kenneth N. Hiller, Ron J. Karni, Chunyun Cai, John B. Holcomb, Carin A. Hagberg

Abstract

Purpose: The primary aim of this study was to compare the success rates of anesthesia providers vs trauma surgeons in their use of palpation to identify the cricothyroid membrane (CTM). The secondary aim was to explore whether prior training and experience performing surgical airways affected the success rates for identifying the CTM. **Methods:** Four female adults participated in this prospective observational study. The participants had varying measurements of neck anatomy that were known or theorized to affect the accuracy of identifying the CTM location. For test purposes, the subjects were positioned with optimal neck extension via placement of a shoulder roll. Anesthesia providers ($n = 57$) and surgeons ($n = 14$) of various training levels and clinical experience marked the presumed CTM location on each subject. These palpation markings were then referenced against the ultrasound-confirmed CTM location, and the success rates for identifying the CTM were compared between groups. **Results:** The overall success rate using palpation to identify the CTM was $\leq 50\%$, and there were no differences in success rates between the anesthesia providers and trauma surgeons (16% vs 26%, respectively; absolute difference, -10% ; 95% confidence interval, -23 to 3 ; $P = 0.15$). Furthermore, there were no significant differences in the success rates for identifying the CTM based on either clinical experience or emergency surgical airway experience. **Conclusion:** The success rates for identifying the CTM using palpation were low and not significantly different for anesthesia providers and surgeons, collectively, as well as for the various levels of training. Anesthesiologists' ability to mark the CTM location correctly did not improve with years of experience.



PALPATION AND CTM IDENTIFICATION

- Success rate of both anesthesia providers and trauma surgeons for identifying CTM by palpation was \leq **50%**, even in non-obese females with optimized neck extension
- No significant differences in the success rates of CTM identification based on either ***clinical experience*** following completion of residency or ***prior emergency surgical airway experience***



Diagnostic accuracy of anaesthesiologists' prediction of difficult airway management in daily clinical practice: a cohort study of 188 064 patients registered in the Danish Anaesthesia Database

A. K. Nørskov,^{1,2} C. V. Rosenstock,³ J. Wetterslev,⁴ G. Astrup,⁵ A. Afshari⁶ and L. H. Lundstrøm³

- Both ASA and NAP4 recommend a ***pre-op airway assessment***
- Choice of assessment is at the ***discretion*** of the anaesthesiologist
- Investigated the diagnostic accuracy of the anaesthesiologist's prediction of difficult ***mask ventilation*** and difficult ***tracheal intubation***



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Difficult mask ventilation

- 94% unanticipated
- when anticipated, only 22% were actually difficult

Difficult intubation

- 93% unanticipated
- when anticipated, only 25% were actually difficult



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A. K. Nørskov,^{1,2} C. V. Rosenstock,³ J. Wetterslev,⁴ G. Astrup,⁵ A. Afshari⁶ and L. H. Lundstrøm³

Summary

- Demonstrates the ***inaccuracies of airway assessment*** in daily practice
- ***Prediction*** of airway difficulties ***remains a challenging task***
- Underline the importance of being ***constantly prepared for unexpected difficulties***



Cochrane
Library

Cochrane Database of Systematic Reviews

Airway physical examination tests for detection of difficult airway management in apparently normal adult patients (Review)

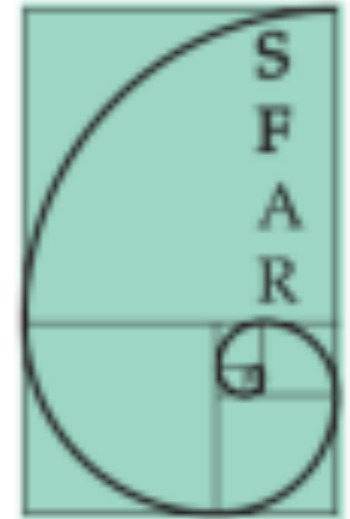
Roth D, Pace NL, Lee A, Hovhannisyan K, Warenits AM, Arrich J, Herkner H

CONCLUSIONS

- Bedside airway examination tests designed as **screening tests**
- **Low sensitivities with high variability, high specificities**
- **Upper bite lip test** most diagnostic accuracy
- **Future research** needed to develop tests with **high sensitivities** to make them useful for screening DMV, FI



SIAARTI
PRO VITA CONTRA DOLOREM SEMPER



Airway Assessment
included in guidelines



ANZCA GUIDELINES

Airway Management Special Interest Group Cognitive Aid



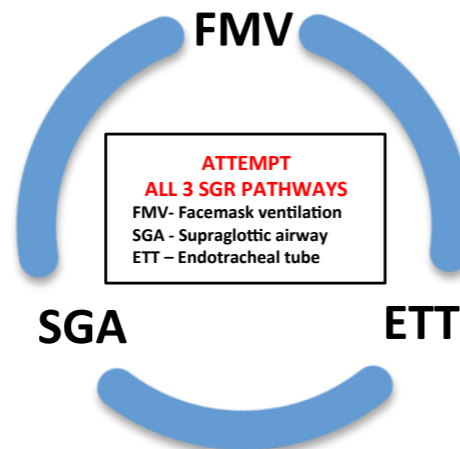
Airway Assessment & Planning

Brief team and prepare for airway rescue in high risk patients

Pre-Oxygenation

General Anaesthesia or LOC

SGR Supraglottic Rescue



1/3 CALL FOR HELP

2/3 PREPARE FOR IGR

3/3 DECLARE CICO

CICO: ETT (3) SGA (2) SaO₂ <90%

IGR Infraglottic Rescue

PREPARE

CONSIDER WAKING PATIENT UP

CORE AIRWAY ASSESSMENT QUESTIONS:

- 1 History of difficult intubation?
- 2 How does the surgery affect the airway?
- 3 Bedside predictors of difficulty with intubation?
- 4 Predictors of difficult bag mask ventilation?
- 5 Prediction of difficult supraglottic airway device?
- 6 Predictors of difficult cricothyroidotomy?
- 7 Cardiorespiratory reserves?
- 8 Aspiration risk?
- 9 Extubation risk?

**Consider awake or alternate technique
In high risk patient**

SGR-FMV

- Optimal head position
- 2 handed ventilation
- Oro/nasal pharyngeal airway
- Dentures in
- Muscle relaxation

SGR-SGA

UP TO 2 ATTEMPTS

- Position head
- Alternative type or size

SGR-ETT

UP TO 3 ATTEMPTS

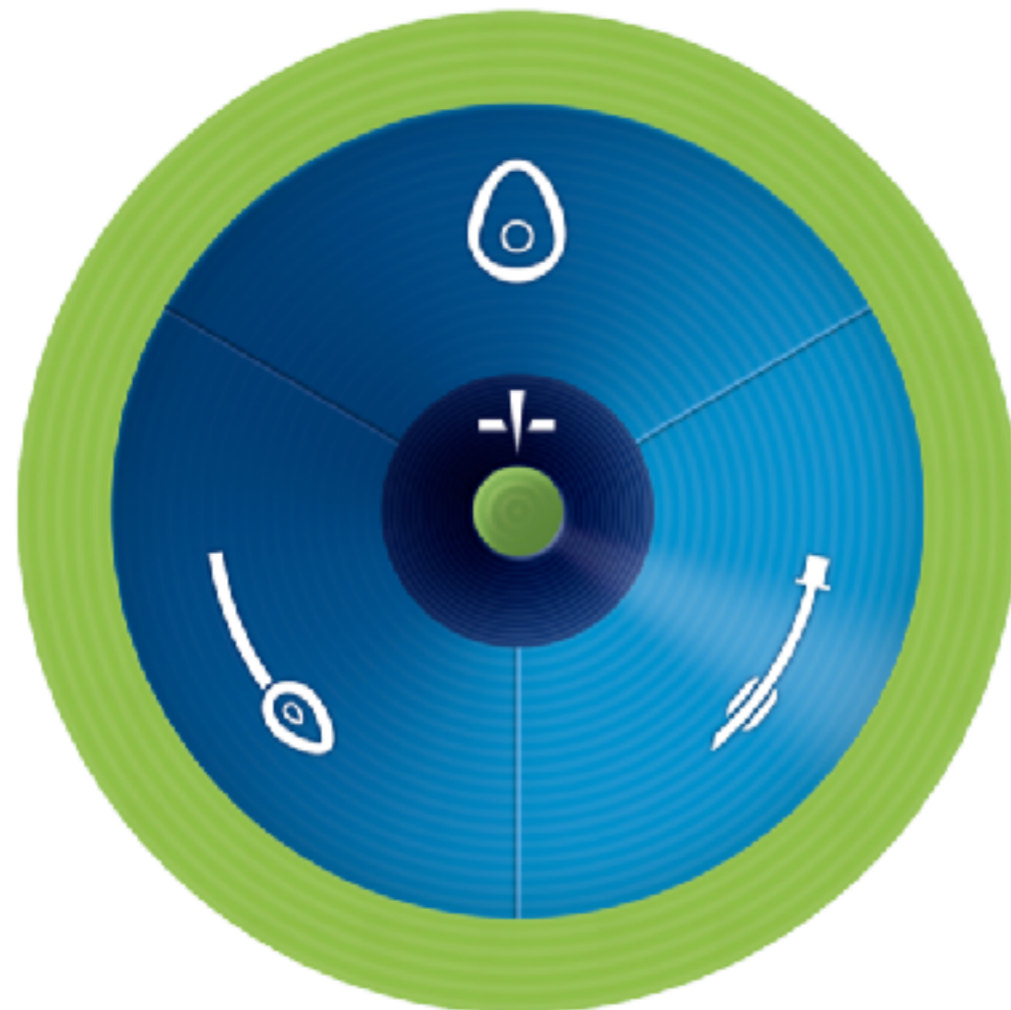
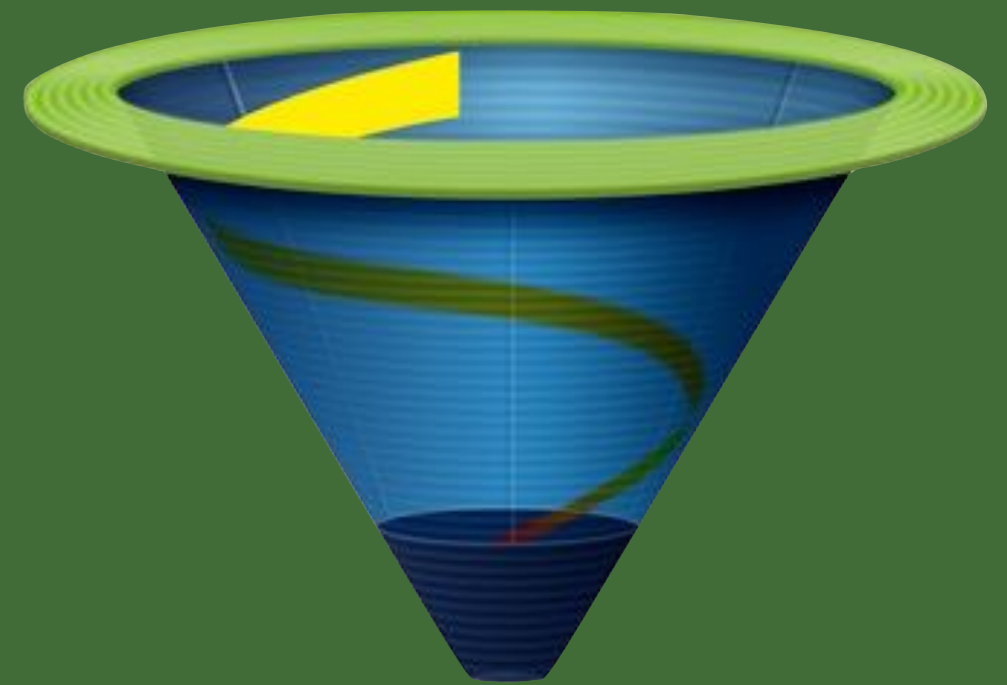
- Head position
- Dentures out
- Muscle relaxation
- Adjuvant device: Stylet or Bougie
- Alternative blade type or size
- Videolaryngoscope:
 - Macintosh type
 - Hyper-angulated type
 - Channeled device or with styletted ETT

POSTOP DOCUMENTATION & AIRWAY ALERT LETTER

SPEAK UP IF CONCERNED

Dr.'s Nicholas Chrimes & Peter Fritz, 2013
vortex approach.org

THE VORTEX



High Stakes Cognitive Aid



Easy to remember
Simple image
Simple to recall in a crisis

Flexible for any context

Universally applicable template

Consistent and team based

AIRWAY ASSESSMENT

ASSESS ABILITY TO ESTABLISH AIRWAY VIA

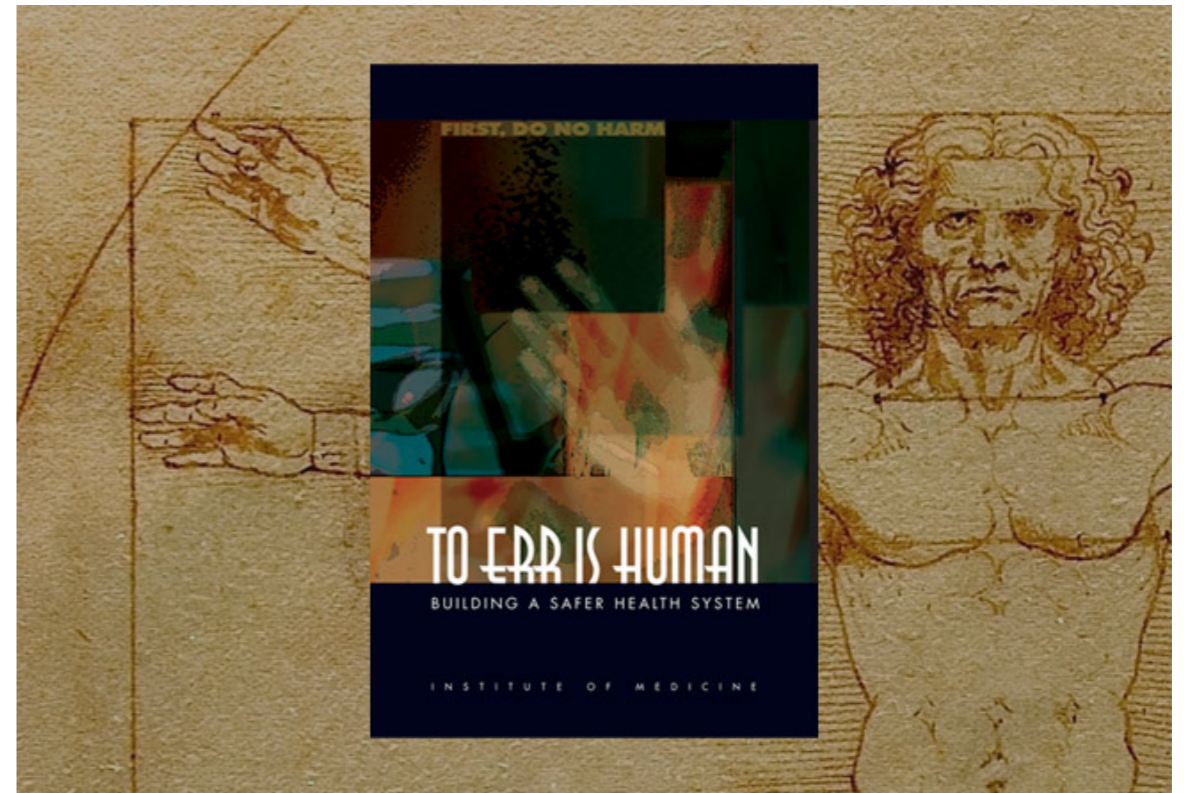


CONSIDER THE FOLLOWING FACTORS

| | |
|------------------|-------------------------|
| PATIENT | AIRWAY HISTORY |
| | PREDISPOSING CONDITIONS |
| | APPEARANCE |
| | DISTORTION |
| | TRAUMA |
| | OBESITY |
| | MOUTH |
| | NECK |
| SAFE APNOEA TIME | |
| SITUATION | EMERGENCY |
| | LOCATION |
| CLINICIAN | EXPERIENCE |
| | FATIGUE |

HUMAN FACTORS

- Environmental influences
- Team behaviors
- Individual performance



ATTITUDE IS EVERYTHING

- Anesthetists ***either do not conduct or actually disregard*** their own pre-operative airway assessments, only to realize following induction of anesthesia that their concerns were well-founded.

Peterson et al. Closed Claims Analysis Anesthesiology 2005; 103:33-9

Cook TM et al. Fourth National Audit Project Br J Anaesthesia 2011; 106:617-31

MISSING LINK



OUTLINE

- conventional airway assessment strategies
- **new airway assessment strategies**
- future directions of airway assessment

Airway Assessment
FOR
DUMMIES

A Reference
for the
Rest of Us!



Airway Assessment Made Easy

VIA Score: 0-6

Factors

- ▶ Difficult mask ventilation (V)
- ▶ Difficult intubation (I)
- ▶ Risk of aspiration (A)



Score

- ▶ Easy (0)
- ▶ Difficult (1)
- ▶ Impossible (2)



Mask Ventilation (M)

0

bag/mask ventilation readily assured

1

SGA needed to ensure ventilation

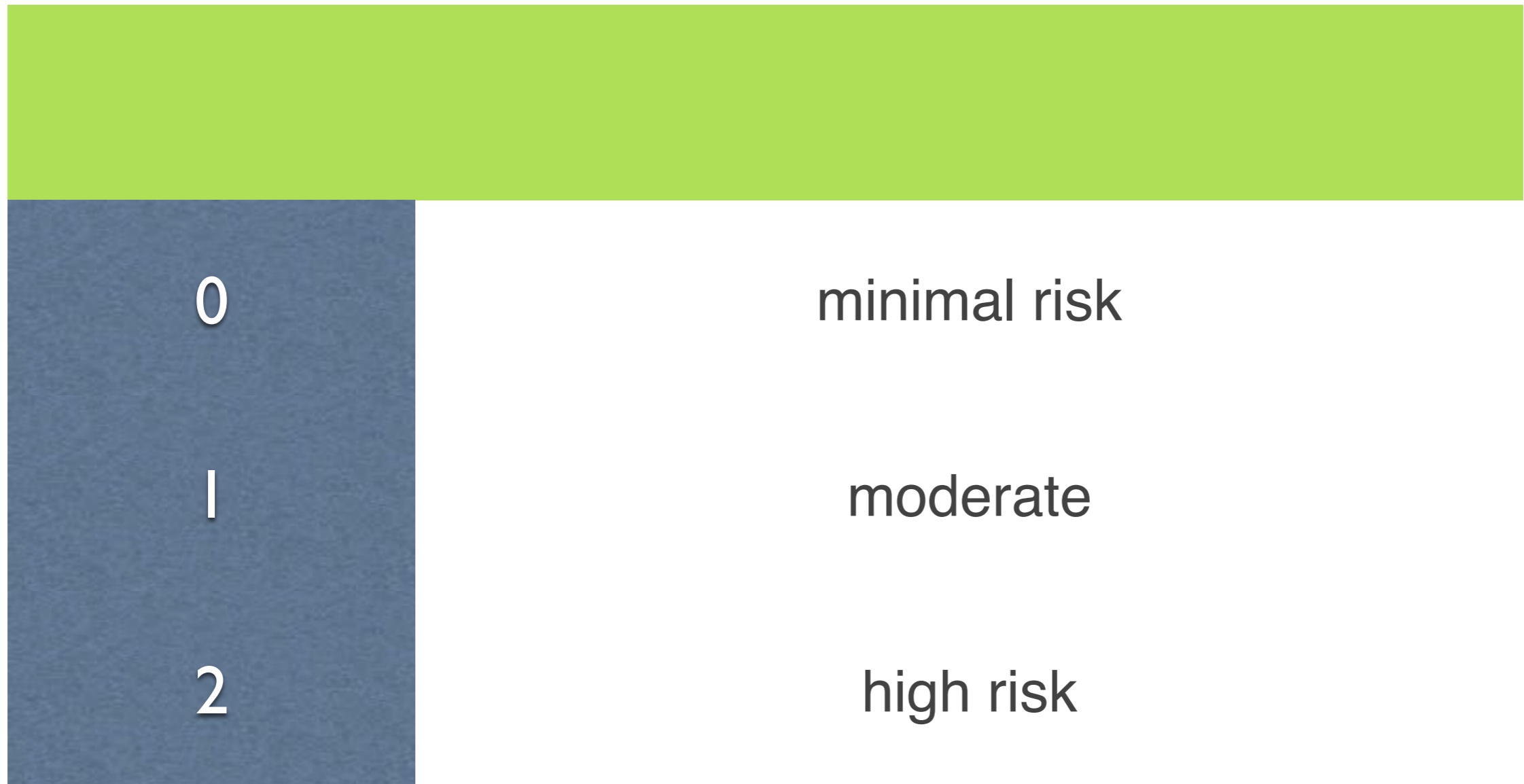
2

impossible to ventilate

Intubation (I)

| | |
|---|----------------------------|
| 0 | successful DL |
| 1 | advanced intubation device |
| 2 | unable to intubate |

Aspiration (A)



| | |
|---|--------------|
| 0 | minimal risk |
| 1 | moderate |
| 2 | high risk |

Final VIA Score

| | risk | management | assistance |
|-----|--------------------|--------------------|-------------------|
| 0 | very low | routine induction | |
| 1 | low | cautious induction | |
| 2 | moderate | awake intubation | |
| 3 | high | awake intubation | surgeon available |
| 4 | very high | awake tracheostomy | surgeon |
| 5-6 | exceptionally high | fem-fem bypass | surgeon |



AIRWAY TIME OUT

RESPIRATION AND THE AIRWAY

Guidelines for the management of tracheal intubation in critically ill adults

A. Higgs^{1,*}, B. A. McGrath², C. Goddard³, J. Rangasami⁴,
G. Suntharalingam⁵, R. Gale⁶, T. M. Cook⁷ and on behalf of Difficult Airway Society, Intensive Care Society, Faculty of Intensive Care Medicine, Royal College of Anaesthetists





Prepare the patient

- Reliable IV / IO access**
- Optimise position**
 - Sit-up?
 - Mattress hard
- Airway assessment**
 - Identify cricothyroid membrane
 - Awake intubation option?
- Optimal preoxygenation**
 - 3 mins or $ETCO_2 > 85\%$
 - Consider CPAP / NIV
 - Nasal O_2
- Optimise patient state**
 - Fluid / pressor / inotrope
 - Aspirate NG tube
 - Delayed sequence induction
- Allergies?**
 - ↑ Potassium risk?
- avoid suxamethonium

Prepare the equipment

- Apply monitors**
 - SpO_2 / waveform $ETCO_2$ / ECG / BP
- Check equipment**
 - Tracheal tubes x 2
- cuffs checked
 - Direct laryngoscopes x 2
 - Videolaryngoscope
 - Bougie / stylet
 - Working suction
 - Supraglottic airways
 - Guedel / nasal airways
 - Flexible scope / Aintree
 - FONA set
- Check drugs**
 - Consider ketamine
 - Relaxant
 - Pressor / inotrope
 - Maintenance sedation

Prepare the team

- Allocate roles**
One person may have more than one role.
 - Team Leader
 - 1st Intubator
 - 2nd Intubator
 - Cricoid force
 - Intubator's assistant
 - Drugs
 - Monitoring patient
 - Runner
 - MILS (if indicated)
 - Who will perform FONA?
- Who do we call for help?**
- Who is noting the time?**

Prepare for difficulty

- Can we wake the patient if intubation fails?**
- Verbalise "Airway Plan is:"**
 - Plan A:**
Drugs & laryngoscopy
 - Plan B/C:**
Supraglottic airway
Face-mask
Fibreoptic intubation via supraglottic airway
 - Plan D:**
FONA
Scalpel-bougie-tube
- Does anyone have questions or concerns?**

Fig 2. Intubation checklist. Modified from checklist described in NAP4.¹¹ IV: intravenous. IO: intra-osseous. $ETCO_2$: end-tidal oxygen. CPAP: continuous positive airway pressure. NIV: non-invasive ventilation. NG: naso-gastric.

ICU SETTING

Summary

- All ICU patients are “**at risk**” of complications during intubation
- **MACOCHA** score is a **7-item assessment** with ICU-specific factors for DI
- Often **emergent** and **unable to follow commands** (like ED)
- Predictors of **DMV and SGA** ventilation have been described, but not validated in the ICU setting

ICU SETTING

New Guidelines

- Preparation of the multidisciplinary team and environment
- Modified airway assessment
- Pre and peri-oxygenation
- Hemodynamic management
- Primacy of RSI
- Optimal laryngoscopy (videolaryngoscopy)
- Unification of Plans B and C
- Choice of Front of Neck Airway (FONA)

Higgs A, McGrath BA, Goddard C et al. Guidelines for the management of tracheal intubation into critically Difficult Airway Society, Intensive Care Society, Faculty of Intensive Care Medicine, and Royal College of Anaesthetists

MACOCHA SCORE

| | FACTORS | POINTS |
|----------|------------------------------|-----------|
| M | Mallampati score III or IV | 5 |
| A | Apnea syndrome | 2 |
| C | Cervical spine limitation | 1 |
| O | Opening mouth < 3 cm | 1 |
| C | Coma | 1 |
| H | Hypoxia | 1 |
| A | Anesthesiologist non trained | 1 |
| | Total | 12 |

De Jong A et al. Early Identification of Patients at Risk for Difficult Intubation in the Intensive Care Unit. Am J Respir Crit Care Med 2013;187(8):832-839

0=easy; 12=very difficult

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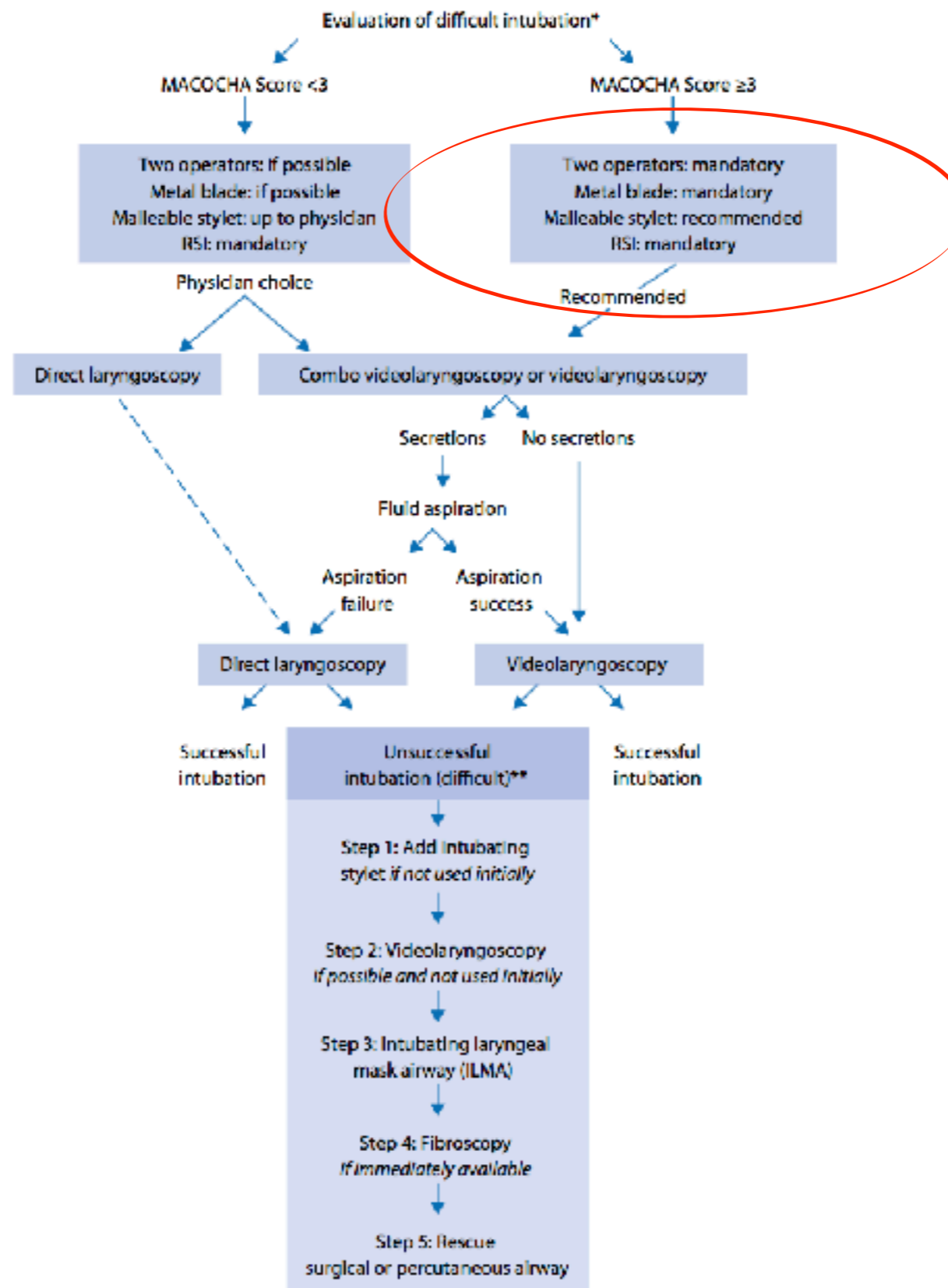
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≥3 DI predicts DI in the critically ill

Figure 1. Airway management algorithm in the intensive care unit. * The availability of equipment for management of a difficult airway is checked, ** During the whole procedure, the patient should be ventilated in case of desaturation < 80%. In case of inadequate ventilation and unsuccessful intubation, emergency non-invasive airway ventilation (supra-glottic airway) must be used. RSI: rapid sequence induction.



COMPUTER

VS

HUMAN

Facial Analysis and Difficult Airway Prediction

▶ **Computer vs Practitioner**

- TMD, MP score, pictures of face

▶ **Better prediction with computer**

- Humans don't strive for "accuracy"
- Try harder to avoid false negative (fail to predict DA) vs false positive (call DA when not)

▶ **Cost underprepared > over prepared**



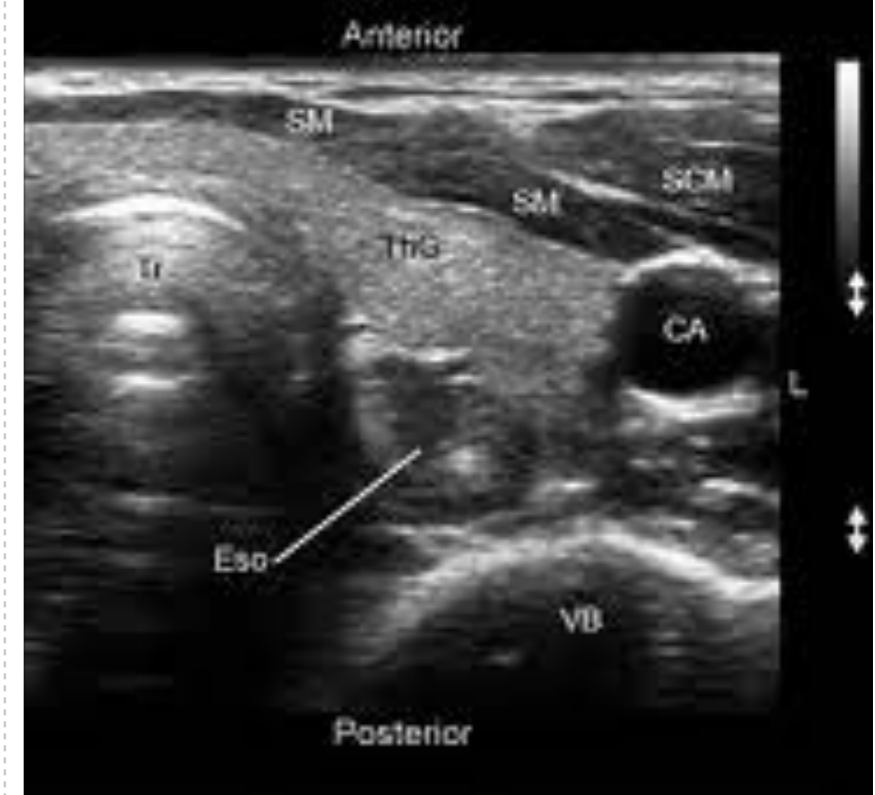


i-CAT™

Award-Winning Cone
Beam 3D Imaging System



Endoscopy



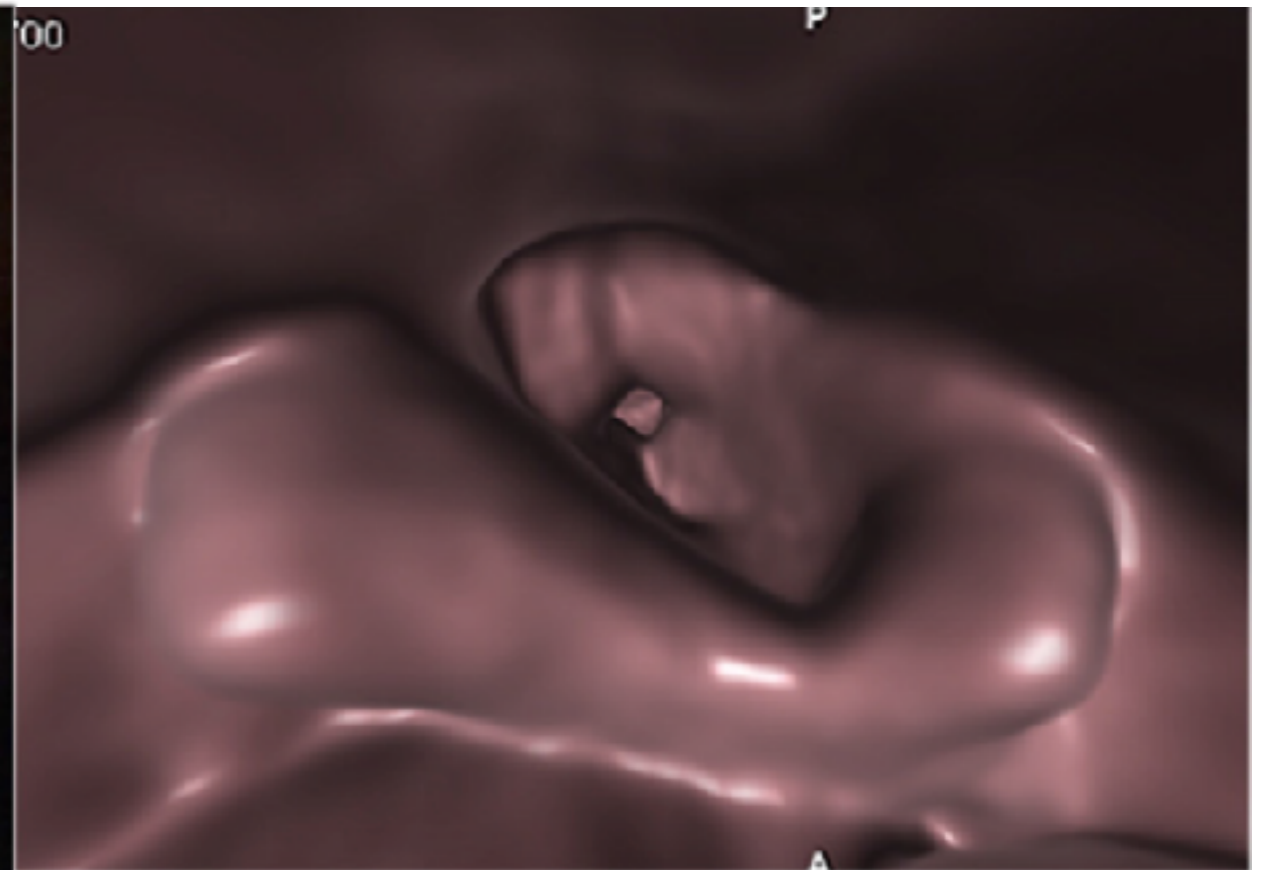
Ultrasound



VIRTUAL ENDOSCOPY (VE)

- free online multidimensional image navigation and display software OsiriX
- reconstructs 3D VE images of the airway from CT images
- facilitates an anatomically accurate reproduction of the endoscopic findings
- format easily interpreted

66 yo male for radical neck dissection as tx for a residual base of tongue carcinoma
previous radiotherapy with dysphagia and reduced tongue protrusion



abnormally shaped epiglottis

ADVANTAGES

- free online software, requires only a short period of self-training
- noninvasive
- allows a full assessment of airway, including subglottis and upper trachea
- plan management strategy for patients with preexisting airway pathology
- useful in teaching (students and patients) and research

3D Models / Larynx 3D models > Internal (262) Organ (220) Torso (193) Spine (176)

Larynx 3D models

19 3D Larynx models available for download. 3D Larynx models are ready for animation, games and VR / AR projects. Use filters to find rigged, animated, low-poly or free 3D models. Available in any file format including FBX, OBJ, MAX, 3DS, C4D

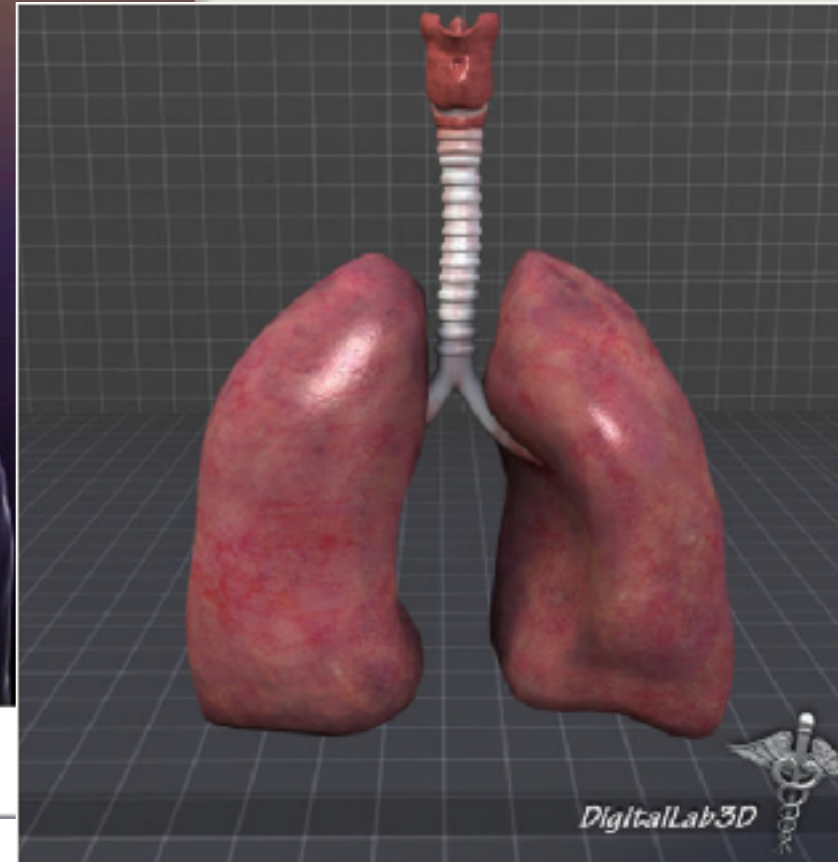
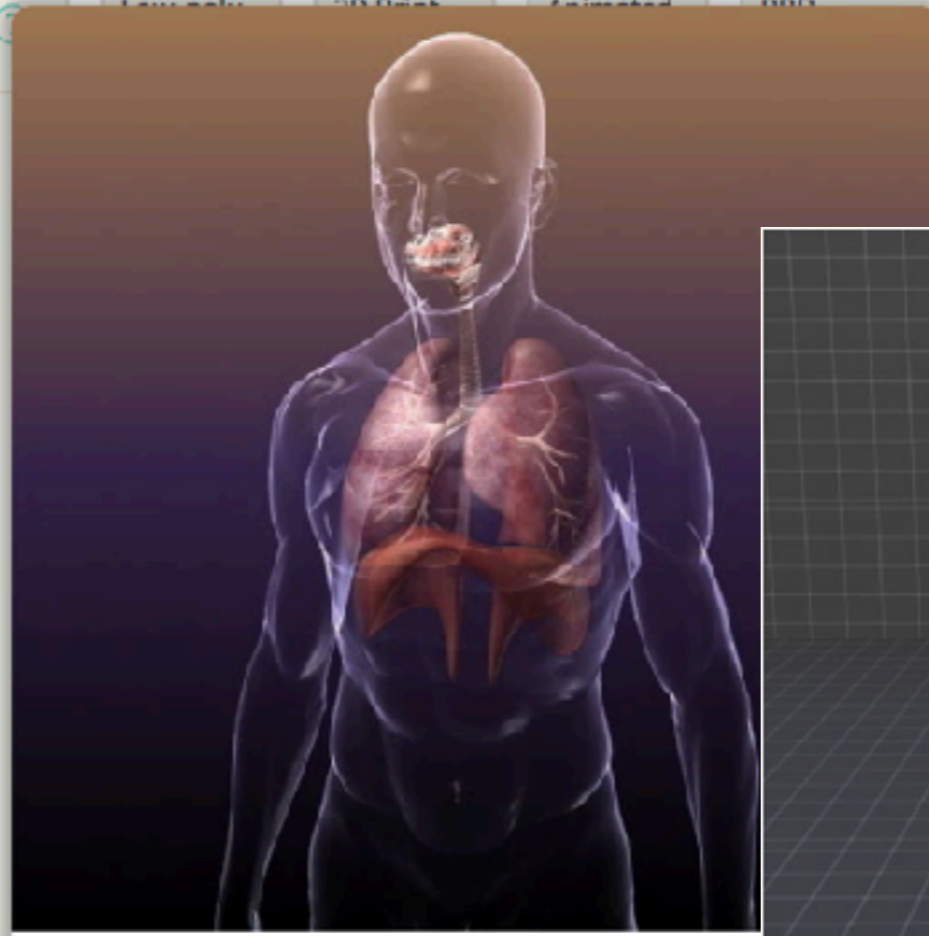
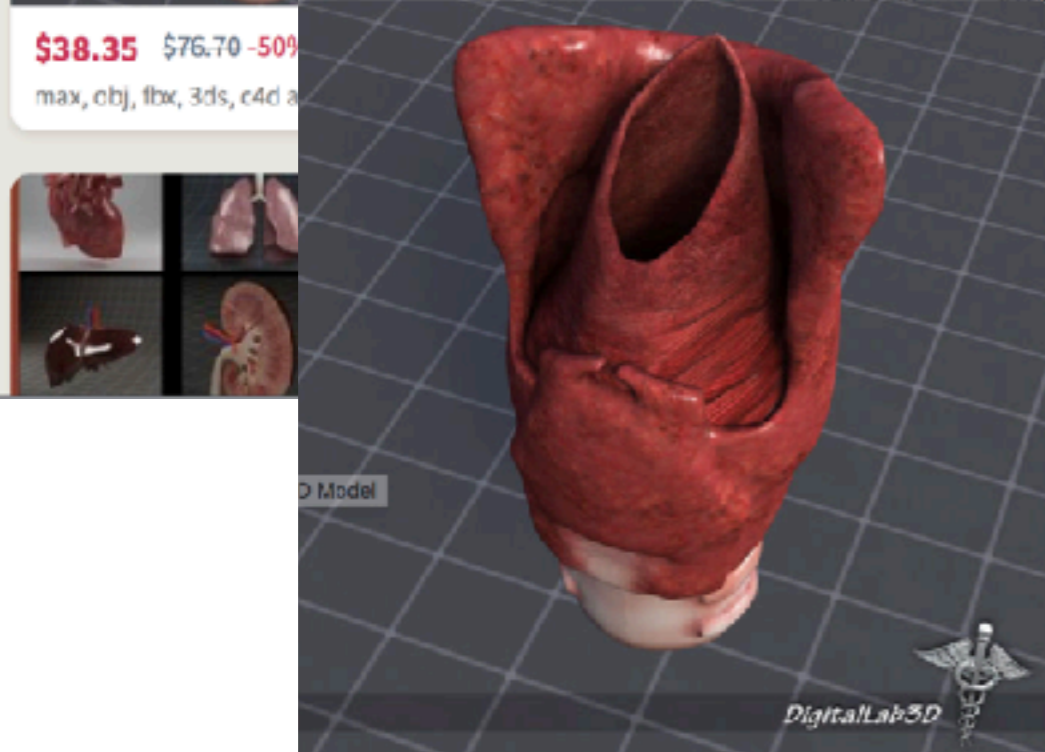
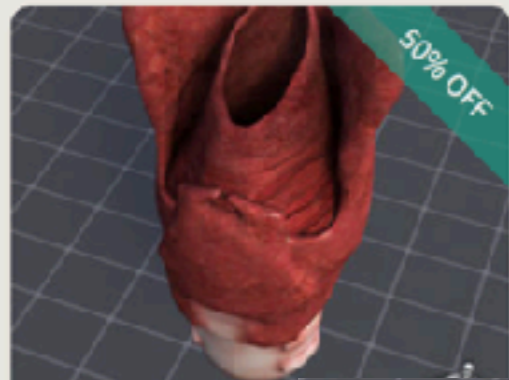
Price

Formats Poly count License Low poly 3D Print Animated RPP

Best Match

Larynx X

Reset filters



Respiratory System Lungs in a Human Body
max, obj, fbx, 3ds, c4d, cxf, lwo, lw, lws, ma and more

Throat Larynx
max, obj, fbx, 3ds, c4d, mtl, lwo, lw, lws, lwo and more **\$38.35**
~~676.70~~ -50%

Mir F, Andi K, Kourtele E, Patel A, Liban Bioprinting of human airway using 3 dimensional printing: a concept for predicting difficult airway. BJA J2016, e903

The Ultrasound Probe in the Hands of the Anesthesiologist

A Powerful New Tool for Airway Management

Michael Seltz Kristensen, MD

*Head of Section for Anesthesia
for ENT, Head, Neck, and Maxillofacial Surgery
Rigshospitalet, University Hospital of Copenhagen, Denmark*

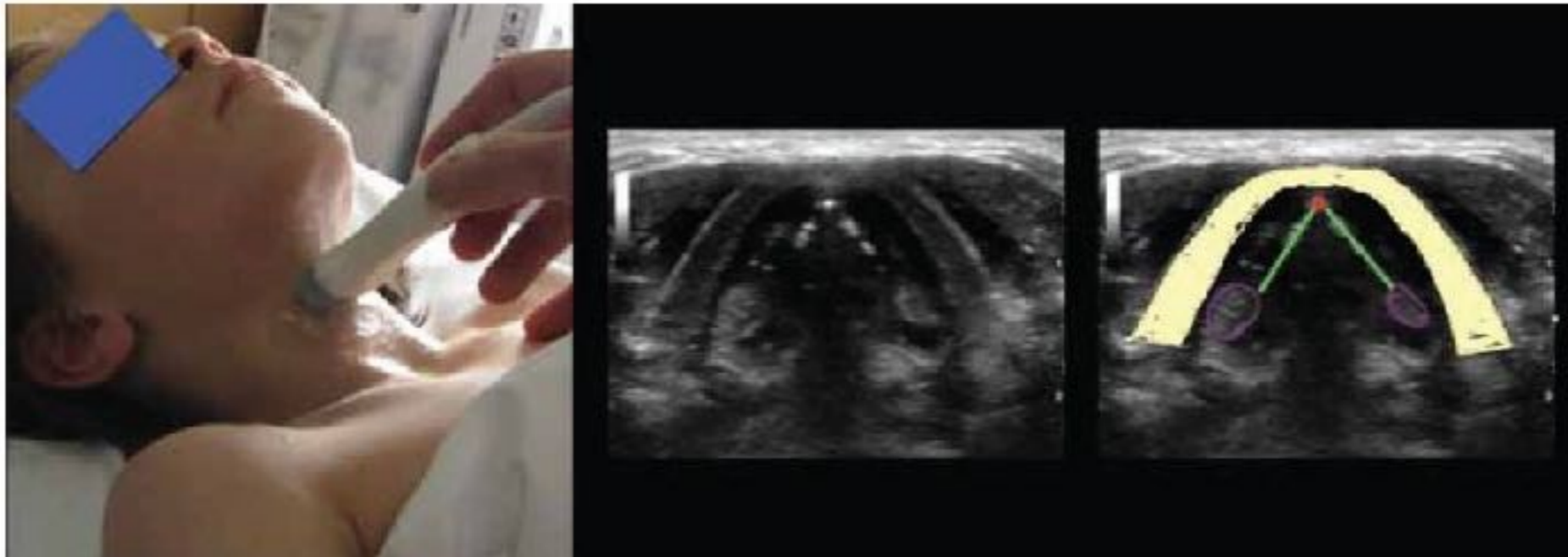
Wendy H.L. Teoh, MBBS, FANZCA

*Department of Women's Anesthesia
KK Women's and Children's Hospital Singapore
Adjunct Assistant Professor, Duke University-NUS
Graduate Medical School, Singapore*



Table 1. Important Airway Structures Visible on Ultrasound

| | | |
|-------------|-----------------------|-----------|
| Mouth | Epiglottis | Trachea |
| Tongue | Larynx | Esophagus |
| Oropharynx | Vocal cords | Stomach |
| Hypopharynx | Cricothyroid membrane | Lungs |
| Hyoid bone | Cricoid cartilage | Pleurae |



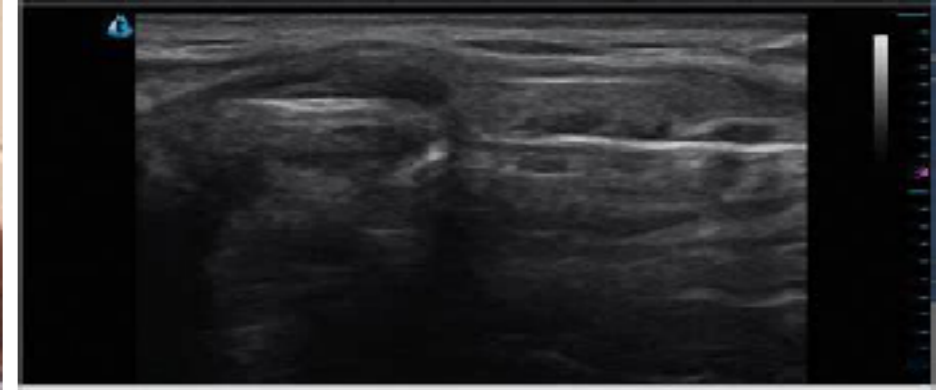
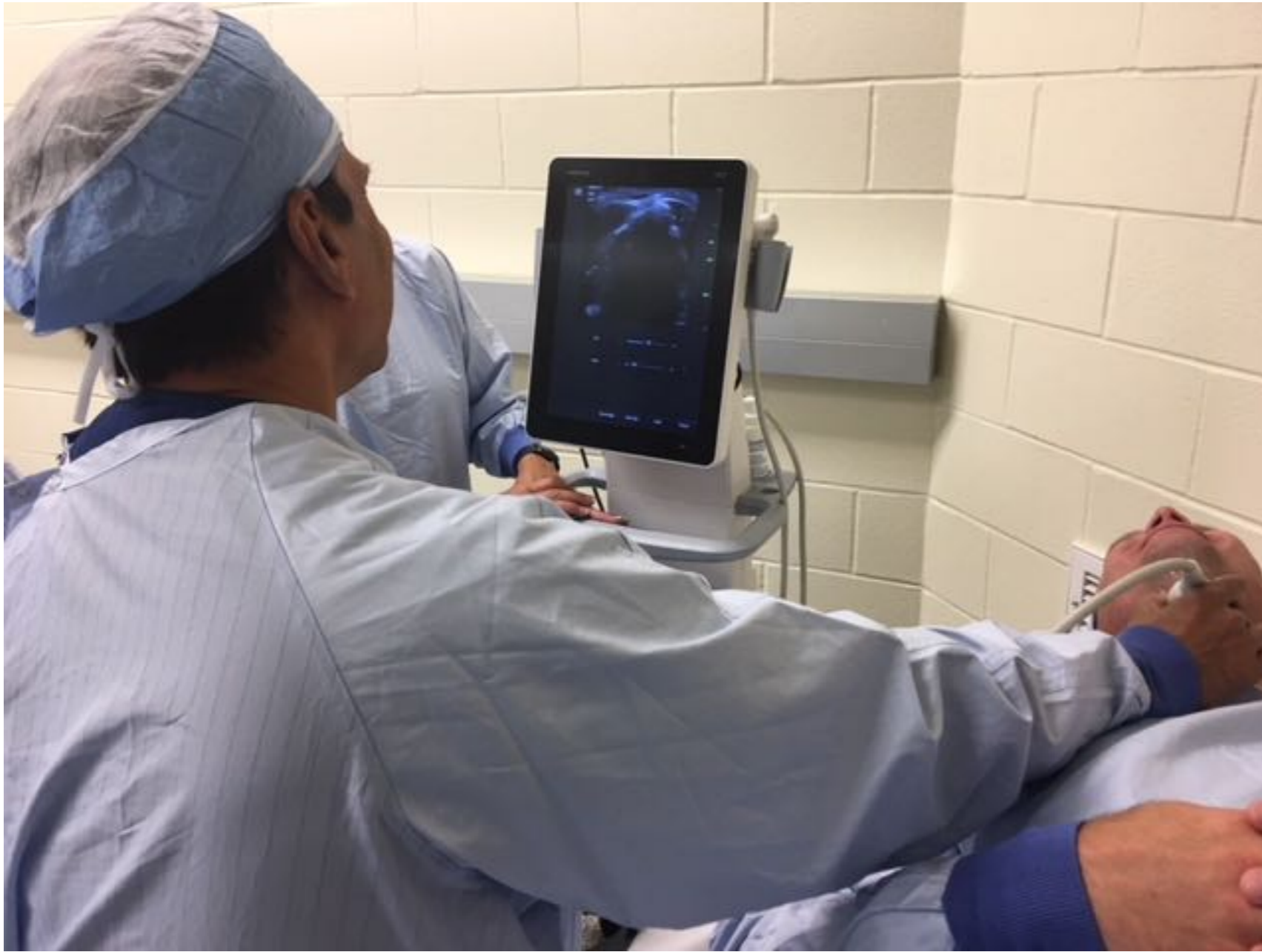
Ultrasonographic identification of the cricothyroid membrane: best evidence, techniques, and clinical impact

M. S. Kristensen^{1,*}, W. H. Teoh² and S. S. Rudolph¹

¹Rigshospitalet, Copenhagen University Hospital, Blegdamsvej, Copenhagen DK-2100, Denmark, and

²Wendy Teoh Pte. Ltd, Private Anaesthesia Practice, Singapore

- Identify the CTM before induction in **ALL** patients
- If inspection and palpation does not suffice, US should be used to locate the CTM



THE UNIVERSITY OF TEXAS
MD Anderson
~~Cancer Center~~

OUTLINE

- conventional airway assessment strategies
- new airway assessment strategies
- **future directions of airway assessment**

Airway Triage

[View More by This Developer](#)

By St Mobile Anaesthesiology Service Holland

This app is only available on the App Store for iOS devices.



 This app is designed for both iPhone and iPad

\$2.99

Category: [Medical](#)

Released: Dec 15, 2017

Version: 2.8

Size: 11.3 MB

Language: English

Seller: Stichting Mobile

Anaesthesiology Service Holland

© SMASH

[You must be at least 17 years old to download this app.](#)

Frequent/Intense

Medical/Treatment Information

Compatibility: Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.

Description

The Airway Triage App can be used by all health care professionals in any clinical situation in which airway management is needed.

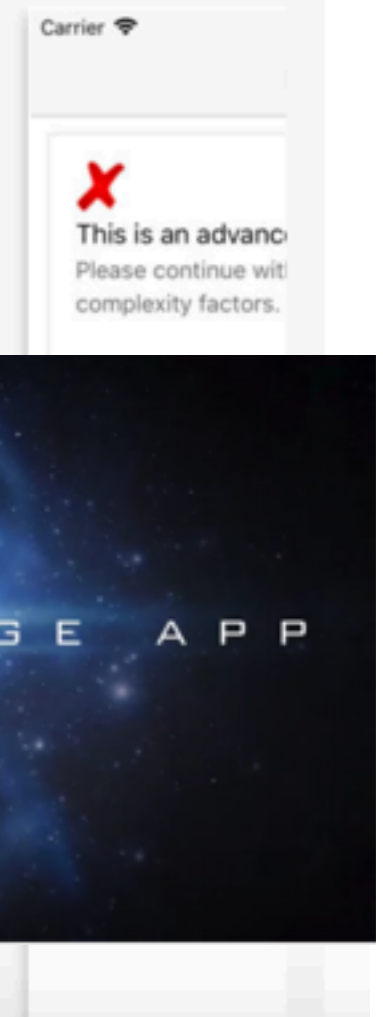
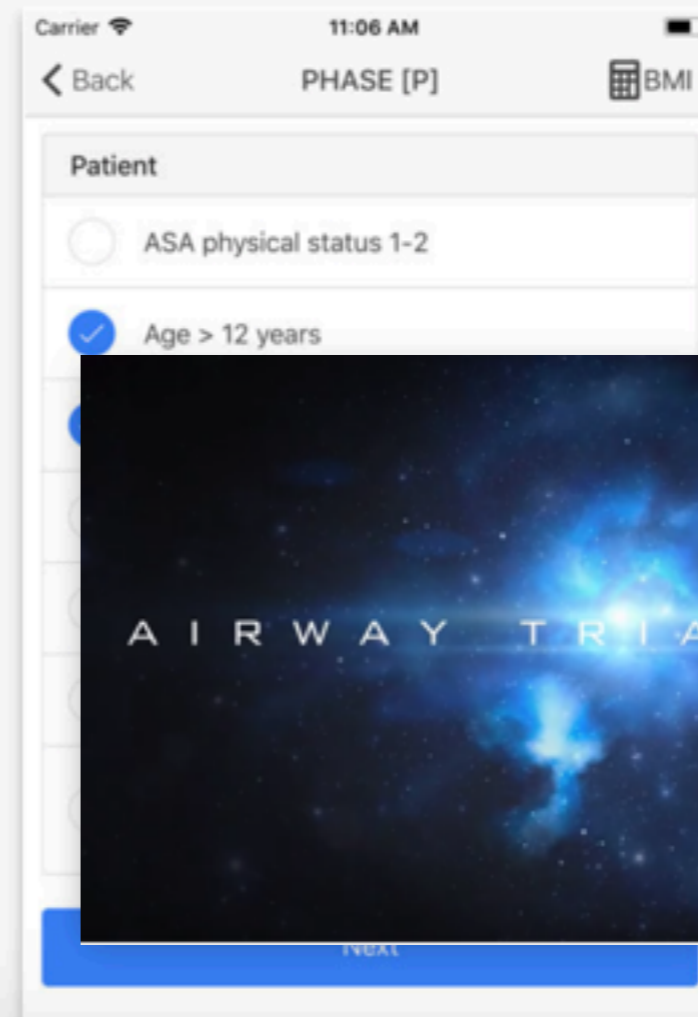
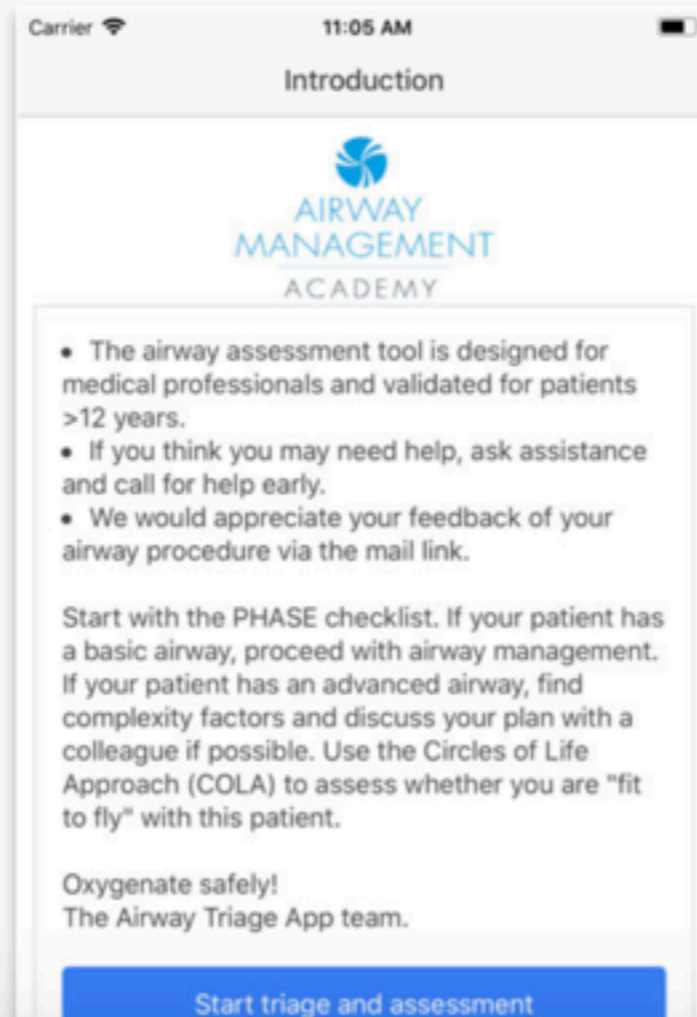
With the easy to use PHASE and HELP-ET checklists the airway of your patient can be triaged within minutes into

[Airway Triage Support](#) ▶

[...More](#)

Screenshots

iPhone | iPad





- Easy to use and CE approved
- Two checklists - PHASE and HELPET
- Triage airways into basic or advanced
- Find complexity factors and plan
- Circles of life approach to determine if help needed

• **BOX 10.1** Preoperative Integration of the Components of the Airway Management Decision Process

Laryngoscopy

- If direct laryngoscopy or video-assisted laryngoscopy is expected to be difficult, the practitioner may consider proceeding with anesthetic induction if ventilation by facemask or supraglottic airway (SGA) is evaluated to be straightforward.

Ventilation

- If ventilation is expected to be difficult, the practitioner may decide that the potential for difficult tracheal intubation AND difficult ventilation dictate alternative approaches including awake intubation or awake surgical airway.
- If ventilation is expected to be straightforward, the operator should consider the risk of aspiration of gastric contents.

Risk of Aspiration of Gastric Contents

- A patient who has been evaluated to have an airway that can be rapidly managed by tracheal intubation and is at risk of gastric contents aspiration may be managed with rapid sequence induction and intubation.
- A patient who is evaluated to possibly be difficult to manage with tracheal intubation and is at risk of gastric contents aspiration should not be managed with mask or SGA ventilation as an alternative.⁴ Alternative approaches including awake intubation or awake surgical airway should be considered.

Tolerance of Apnea

- In the patient who may be difficult to intubate but perceived as straightforward to safely manage/rescue with a facemask or SGA, the risk of failure of rescue must be considered. If the patient is evaluated to be intolerant of apnea, the practitioner may choose to avoid a pathway that depends on ventilation success. Alternative approaches including awake intubation or awake surgical airway.

T

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V

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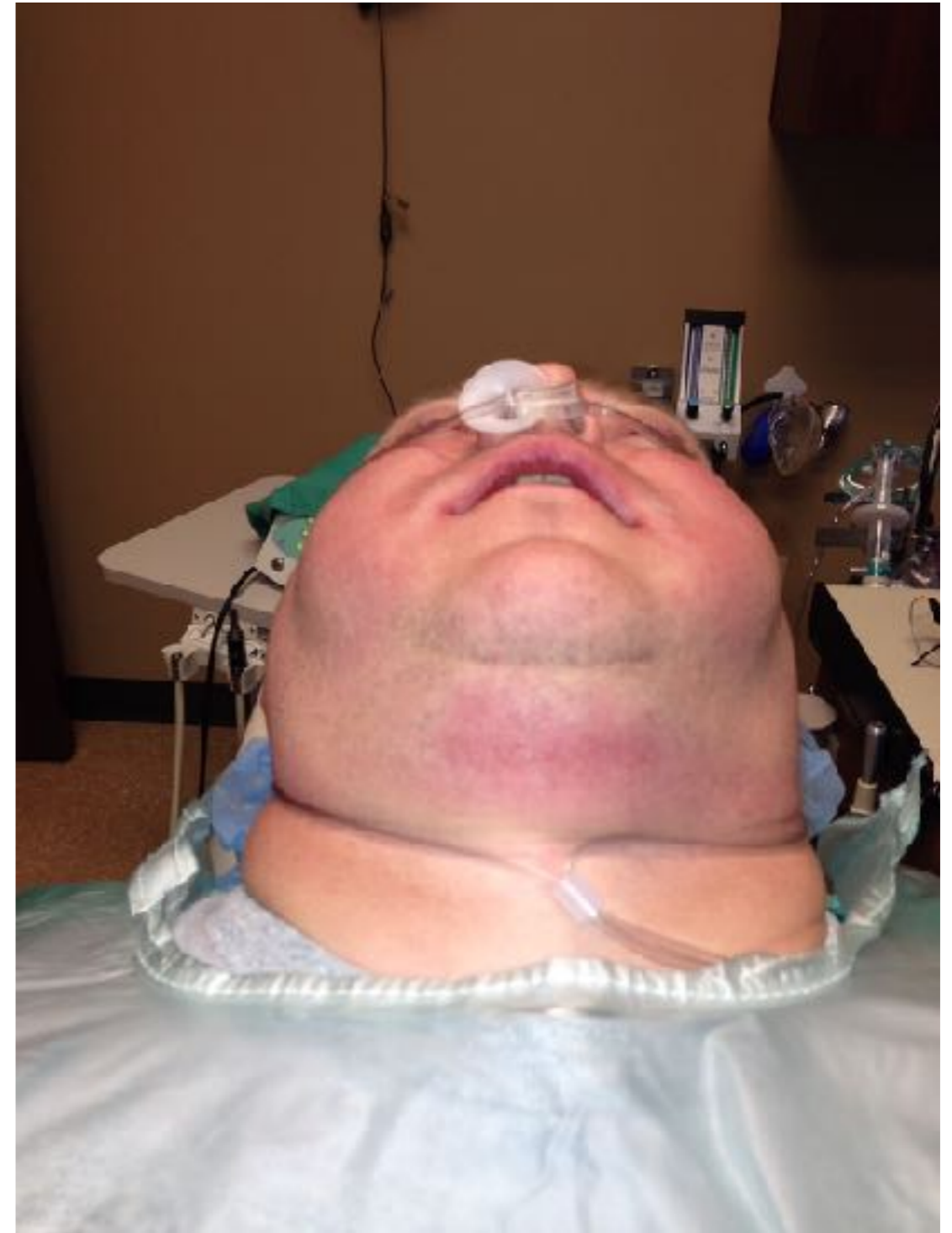
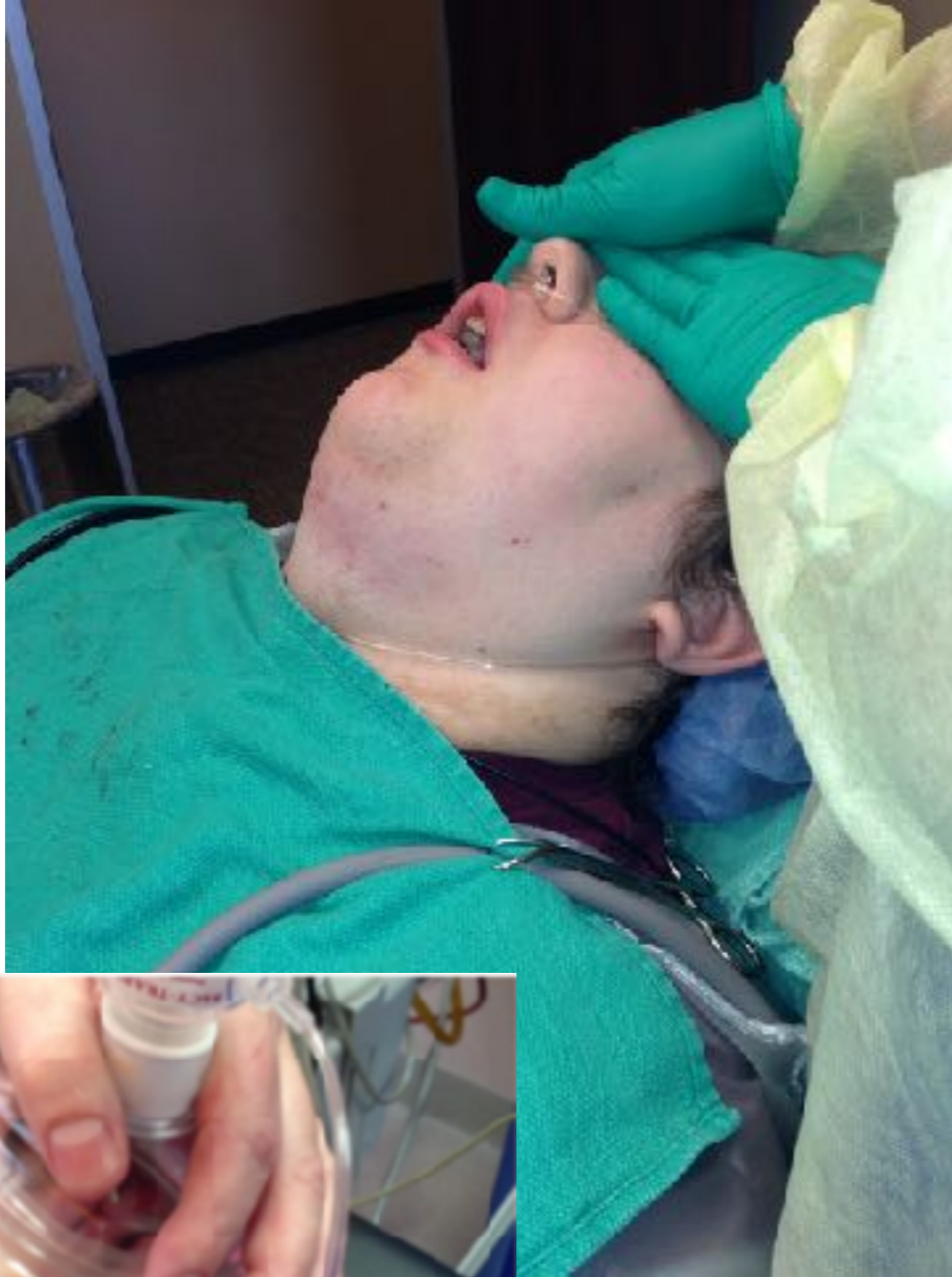
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- desaturation index



Sony Net. Gridin, Ltd. (MAN-2012-108)

Task View Document Window Help

PowerNotes

| Date | Note | Author | Title |
|------------------|-----------------------------|---------------------|--------------------|
| 5/5/2010 15:45 | Anesthesia Pre-Op Note * | Ross, FA, Alie | Anesthesia Pre-Op |
| 4/24/2010 11:00 | Anesthesia Pre-Op Note * | Smith, MD, Annie | Nally's Anesthesia |
| 1/7/2010 23:01 | Anesthesia Pre-Op Note * | Parkerson, MD, Anne | Anesthesia Pre-Op |
| 1/7/2010 22:51 | Preoperative H&P: General * | Morris, MD, Leo | Pre-Op Clearance |
| 10/26/2009 17:25 | Anesthesia Pre-Op Note * | Smith, MD, Annie | Anesthesia Pre-Op |

Nally's Anesthesia Pre-Op Note *

Physical Examination

Pain assessment

Self-reported pain

General: Alert-orientation

Airway


Mallampati description: Soft palate, uvula, pillars.

Mouth: Tongue within normal limits. Dentures (No upper/Lower NL, lower dentures).

Teeth (Upper: Eight normal/Chipped). Pearly (Enamel points). Gums (With normal limits).

Throat (With normal limits). Yeh normal limits. Joints (With normal limits). Lungs (With normal limits). Vocal cords (With normal limits).

Neck: Supple. Trachea (Midline).



Cracked teeth/jaw

HLNI: None/cephalic.

Respiratory: Lungs are clear to auscultation. Respirations are unlabored.

Cardiovascular: Normal rate. Regular rhythm. No murmur. No gallop.

Gastrointestinal: Full.

Integumentary: Warm.

Neurologic: Aar. Oriented. Normal consciousness. Normal motor function. No focal deficits.

Review / Management

Condition: Stable

Plan

American Society of Anesthesiologists (ASA) physical status classification: Class I.

Anesthesia: Preoperative Plan

Anesthesia: General. Anesthesia risks, benefits, and alternatives were discussed with the patient (and/or family). Risks discussed: nausea, vomiting, headache, sore throat, dental injury, serious complications. Full and careful understanding. Family/Guardian present. Informed consent was given. Consent was signed by the patient.

Demographics

DR ID: CR 11

Gender: Female

MRSA: No

Area Type: General Endotracheal

Weight: 55.000 kg

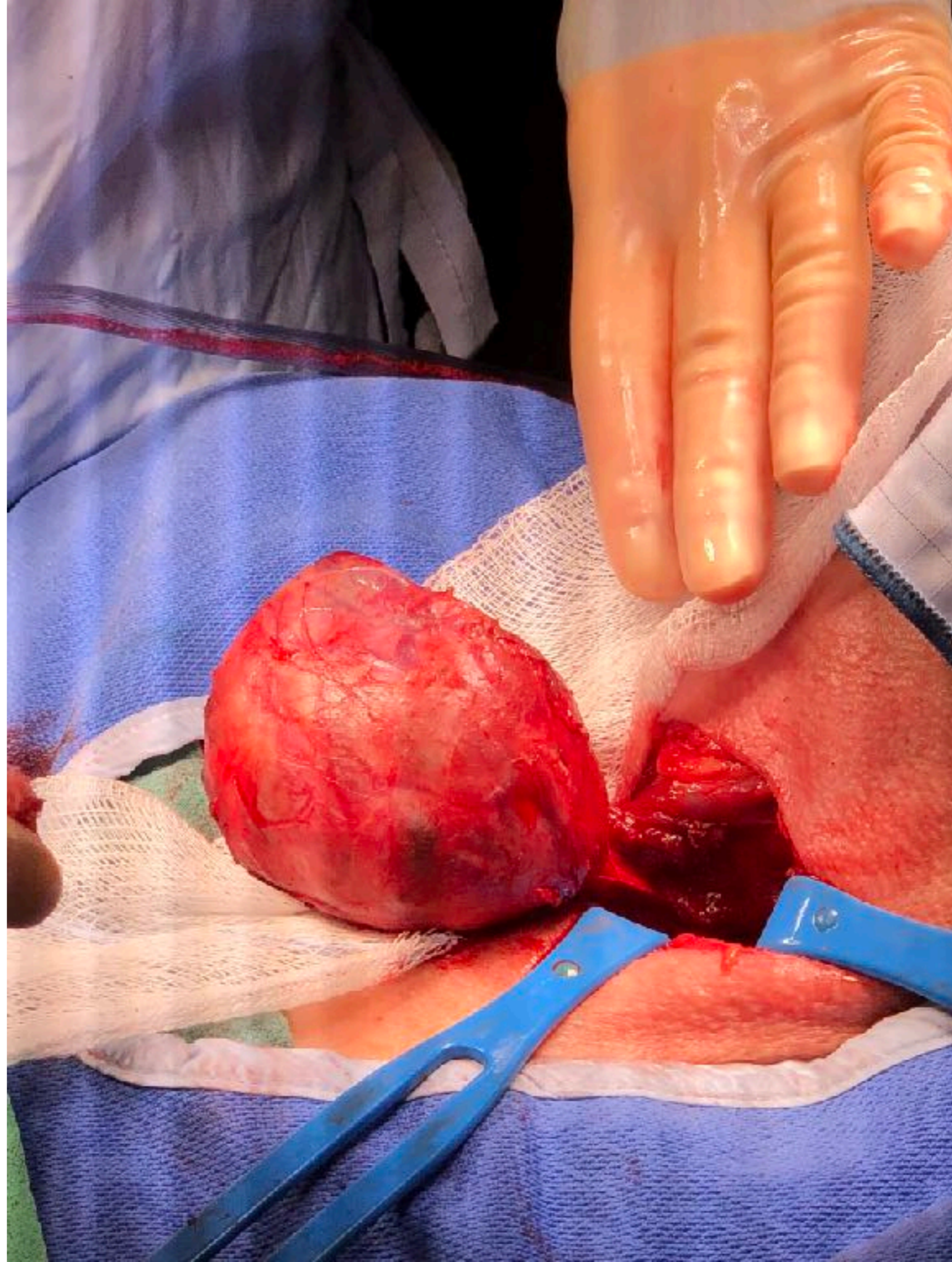
13:00 13:15 13:30 13:45 14:00 14:15 8:25'2010

Ability to Open PowerNotes Directly from the Demographic Bar

en, Julie

Close

Ready Anesthesia Mar 17 General 150 min. 08 15PF5 (4)F51H0 9:28 8/25/2010 1 9:50



Code Status: **Prior**
Allergies: **No Known Allergies**
FYI: **None**
Isolation, Organism: **None, None**

Current Loc: **None**
Height: **188.5 cm (5' 6.34")**
Last Weight: **72.5 kg (159 lb 13.3 oz)**
BSA: **None**

Last BMI and %ile: **None**
PCP Gen: **Nancy Perrier, MD**
Research: **None**
Pref Lang, Need Interp: **English, No**

Out of Hospital DNR?: **None**
Implants: **None**
Blood Type: **O POS**
Patient Class: **Extended Recovery**

Attend Prov: **None**
Log #: **802129**
Loc: **None**

Chart Review

IConsent

SnapShot Encounters Anesthesia Records Surgeries Notes Labs Imaging Micro Procedures Signed Consents Meds **Media** Letters Episodes

Chart Review

Refresh (1:14 PM) Route Review Selected Synopsis Preview Thumbnail View ViewPlay More OnBase Patient Viewer Medical Photography RadOnc Treatment Plans More

Results Review

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Summary

OnBase Patie

Orders

Preprocedure

Intraprocedure

Postprocedure

MDA Viewers

Follow-up

Notes

| Date/Time | Document Type | Description | Enc Date | File Attached to |
|------------------|------------------------|-------------------------------|------------|--------------------|
| 05/16/2018 00:00 | Pathology Report... | Surgical Case S-18-033409 | 05/16/2018 | 05/16/2018 PATHC |
| 05/15/2018 08:42 | After Visit Summary | IP After Visit Summary | 05/14/2018 | 05/14/2018 Hospit |
| 05/15/2018 | After Visit Summary | | 05/14/2018 | 05/14/2018 Hospit |
| 05/15/2018 00:00 | Correspondence O... | | 05/15/2018 | 05/15/2018 Corres |
| 05/14/2018 00:00 | Anesthesia Consent | General Anesthesia | 05/14/2018 | 05/14/2018 Hospit |
| 05/14/2018 00:00 | Cardiac Monitor R... | Documentation of Cardiac M... | 05/14/2018 | 05/14/2018 Hospit |
| 05/11/2018 00:00 | Pre-Op Patient As... | Pre-OP Patient Assessment | 05/08/2018 | 05/08/2018 Follow |
| 05/08/2018 00:00 | Blood Consent | Blood Transfusion Consent | 05/08/2018 | 05/08/2018 Follow |
| 05/08/2018 00:00 | Procedure Consent | Total Thyroidectomy | 05/08/2018 | 05/08/2018 Follow |
| 05/02/2018 15:36 | BCBS Coordinatio... | BCBS Coordination of Benefits | | Ricks, John P [072 |
| 04/30/2018 12:11 | After Visit Summary | AVS- Outpatient | 04/30/2018 | 04/30/2018 AAC A |
| 04/30/2018 00:00 | ECG Procedure R... | ECG Procedure Documentat... | 04/30/2018 | 04/30/2018 EKG, 1 |
| 04/12/2018 07:08 | Insurance Coverag... | Insurance Coverage Summary | | Ricks, John P [072 |
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| 04/12/2018 00:00 | Notice of Privacy P... | eSigned | | Ricks, John P [072 |
| 04/12/2018 00:00 | Authorization for D... | eSigned | | Ricks, John P [072 |
| 04/12/2018 00:00 | Collection of Tissu... | eSigned | | Ricks, John P [072 |
| 04/12/2018 00:00 | Documentation of I... | eSigned | | Ricks, John P [072 |

Media Information



TAKE HOME MESSAGES

- **failure to assess and identify difficulty** in airway management and the failure to incorporate these findings into a management strategy can contribute to a poor outcome
- a **perfect airway assessment tool** does not exist and unanticipated difficulty will still occur
- using **multiple tests** to predict difficulty in airway management is a better predictor than any single test used in isolation

TAKE HOME MESSAGES

- airway assessment forms the first part of any **airway management strategy**, leading to planning of drugs, equipment, and techniques to be used
- assessing for a difficult airway at **extubation** is equally important
- as practitioners, we must rise to the occasion and perform **best practice**; there can no longer be a disconnect in what we know and what we do; we need to be the **strong link** in the chain



Safest Assumption

Every Airway is Potentially a Difficult or Failed Airway

Be Prepared!

THANK YOU

GRACIAS
ARIGATO
SHUKURIA

DANKSCHEEN
TASHAKKUR ATU
YAGHANYELAY
SUKSAMA
TRACQ
BĪYAN
SHUKRIA

JUSPAKAR
GOZAHADITA
EPCHADITD
REKUNSPUNANVA
MAKKE
GRAZIE
MEHRBANI
PALDES
BOLZİN
MERCI