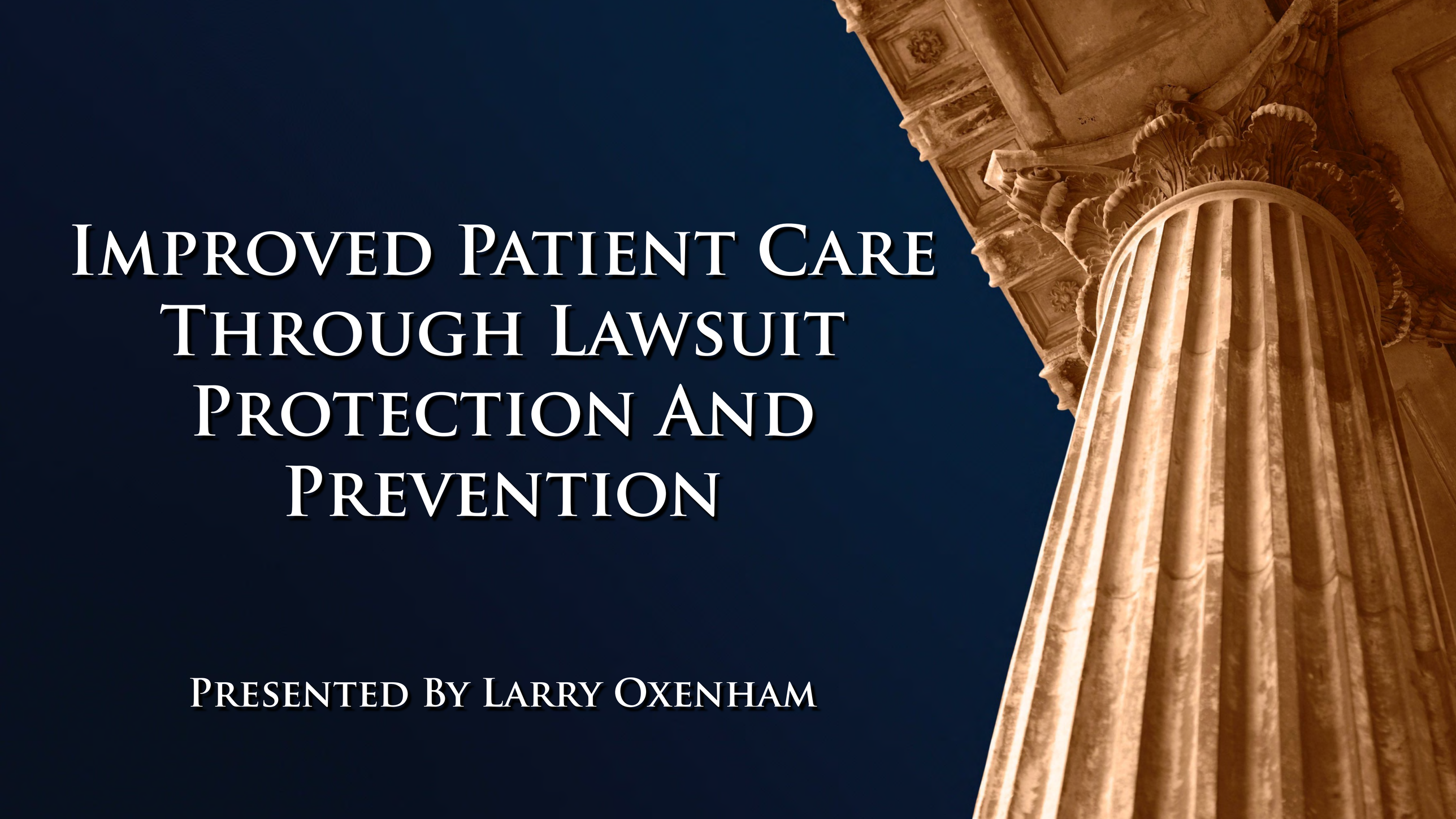
Thursday, December 12, 2024

Improved Patient Care Through Lawsuit Protection And Prevention



Presented By Larry Oxenham

Disclosures

American Society For Asset Protection
Covers Honorarium And Travel Expenses

Your Legal Entities:

Joint Tenancy/Sole Proprietorship
Tenants in Entirety
C Corporation
S Corporation
LLC
Limited Partnership
Will
Living Trust
Charitable Remainder Trust
Buy/Sell

“The biggest challenge facing professionals, business owners and investors is getting their legal documents in order.

“If your legal documents are not in order you can’t be sure what will happen when you go to court, if you pass on, or if you try to sell an asset.”

Keith Magnin, Attorney

Threats to Wealth

Lawsuits

Taxes

Probate &

Estate Taxes

Methods of Ownership

- **C Or S Corporation**
  For Management And Taxation

- **Limited Partnership/ LLC** – Protection

Corporation States

- 4 ‘Asset Protection’ States - Alaska, Nevada, Wyoming, Delaware

- 60% of Fortune 500 companies have a Delaware headquarters

- 90% of US Fortune 100 companies have a Nevada headquarters

- Resident agent - registers for you

- ‘Owns’ at-risk assets

Limited Partnership (FLP)/LLC

Managing Partners: Always 100% Control

Husband And Wife

Limited Partners: Never Any Control

IRS: LP's Do Not Have To Be Human!

LP's: Kids, C/S Corp, You!

Lawsuit with FLP/LLC

- Never A Judgment
- Always A Charging Order

Charging Order

- Never Take Assets - All 50 States
- Can Take All Net Earnings
- Paragraph 2.9:
- "Mp Reserves Right To Withhold All Distributions Of Profit."
- Irs 77-137

IRS 77-137

Creditor Now

Must Pay Income Taxes

Even If No Income Is

Distributed By The

Partnership/Llc!

Getting Entities in Order

- Review by qualified attorney
  - Taxes
  - Marital Status
  - Business
  - Assets Owned
  - Family/Children
  - Lawsuit Protection
  - Long term

*SAMPLE BLUEPRINT

INDIANA RESIDENCE

Provides Lawsuit Protection
Reduces Taxes
Eliminates Probate

Revocable Living Trust

To avoid probate on your personal and business assets, properly link them to a revocable living trust.

Assets Linked to the Trust:

- Interest in Management LLC
- Interest in Primary Home LLC
- Interest in Business LLC
- Interest from Safe Assets FLP
- Personal Vehicles

Safe Assets FLP

Ownership: Living Trust
State to File in: Alaska (Alaska state statutes provide greater lawsuit protection than the statutes in Indiana)
Tax: Partnership

LINKED

Business LLC or Corp

Ownership: Living Trust
State to File in: Indiana
Tax: Corporation (S or C)

LINKED

Primary Home LLC

(Single Member LLC)

Ownership: Living Trust
State to File in: Wyoming (see left)
Tax: Disregarded Entity
No Tax Return

Management LLC

Single Member LLCs are "disregarded" for federal tax filing purposes. This means that no tax returns are required. Any income/loss activity appears on the return of the entity owner, which is a Management, LLC

State to File in: Alaska (Alaska state statutes provide greater lawsuit protection than the statutes in Indiana)
Assets Owned: Interest in each Single Member LLC
Tax: C-Corporation

LINKED

Business Real Estate LLC

(Single Member LLC)

Ownership: Management LLC
State to File in: Indiana
Tax: Disregarded Entity
No Tax Return

LEASING

Investment Property LLC

(Single Member LLC)

Ownership: Management LLC
State to File in: Indiana
Tax: Disregarded Entity
No Tax Return

Business Equipment LLC

(Single Member LLC)

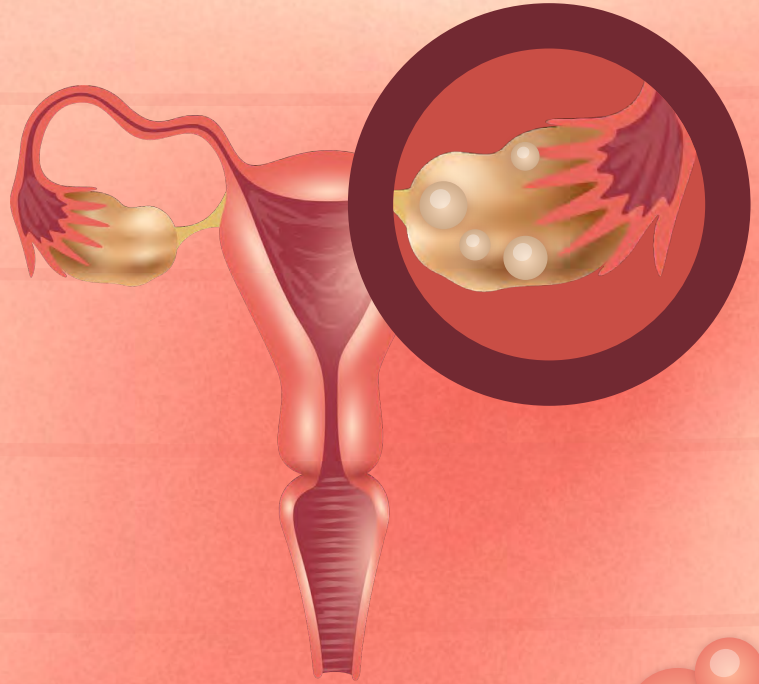
Ownership: Management LLC
State to File in: Indiana
Tax: Disregarded Entity
No Tax Return

LEASING

Thursday, December 12, 2024

UPDATES in POLYCYSTIC OVARY SYNDROME (PCOS) and INSULIN RESISTANCE

Meghan Cox-Pedota DO, FACOOG
Assistant Professor, Loyola Stritch School of Medicine
Residency Program Site Director, MacNeal OB/Gyn
Assistant Clinical Clerkship Director, SSOM OB/Gyn



I have no conflicts
I have no disclosures

Objectives

- Review making the diagnosis of PCOS
- Understand the pathophysiology of PCOS
- Comprehend the role that insulin resistance plays in PCOS
- Discuss the comorbid condition and long term risks of PCOS
- Review current treatment options for PCOS
- Summarize the newer treatment options and ongoing research in the treatment of PCOS

TABLE OF CONTENTS

01

Polycystic Ovarian Syndrome

Back to the Basics

- 6-20% of women
- Ages 15-49y/o
- Endocrine Disturbances
- Anovulation

Common Symptoms

- Oligomenorrhea
- Male pattern hair growth
- Obesity/Difficulty losing weight
- Infertility

Making the Diagnosis
The Rotterdam Criteria

01

Oligomenorrhea

>35 days between cycles

02

Hyperandrogenism

Symptoms or laboratory

03

Polycystic ovaries

Seen on ultrasound
AKA: Polycystic Ovarian Morphology

Making the Diagnosis
Anti-Mullerian Hormone??

- Glycoprotein secreted by granulosa cells
  - Inhibits recruitment of follicles
  - Inhibits aromatase activity
- Can it be used to diagnose PCOS?
  - Oct. 2024 Van der Ham M.D. et al systematic review
    - 82 studies
    - Sensitivity 0.80 and Specificity 0.87
    - Not a reliable marker for PCOS
    - Could be used for Polycystic Ovarian Morphology in Adults

02 Pathophysiology

What we do and don’t know

What Causes PCOS???

We Still Don’t Know

But Here is What We Do Know

- Dysfunction of the Hypothalamic-Pituitary-Ovarian Axis
  - Due to defects in:
    - Steroidogenesis
    - Insulin Resistance
    - Fat Deposition
    - Hyperandrogenism

Fat Deposition + Obesity = Worsened Insulin Resistance

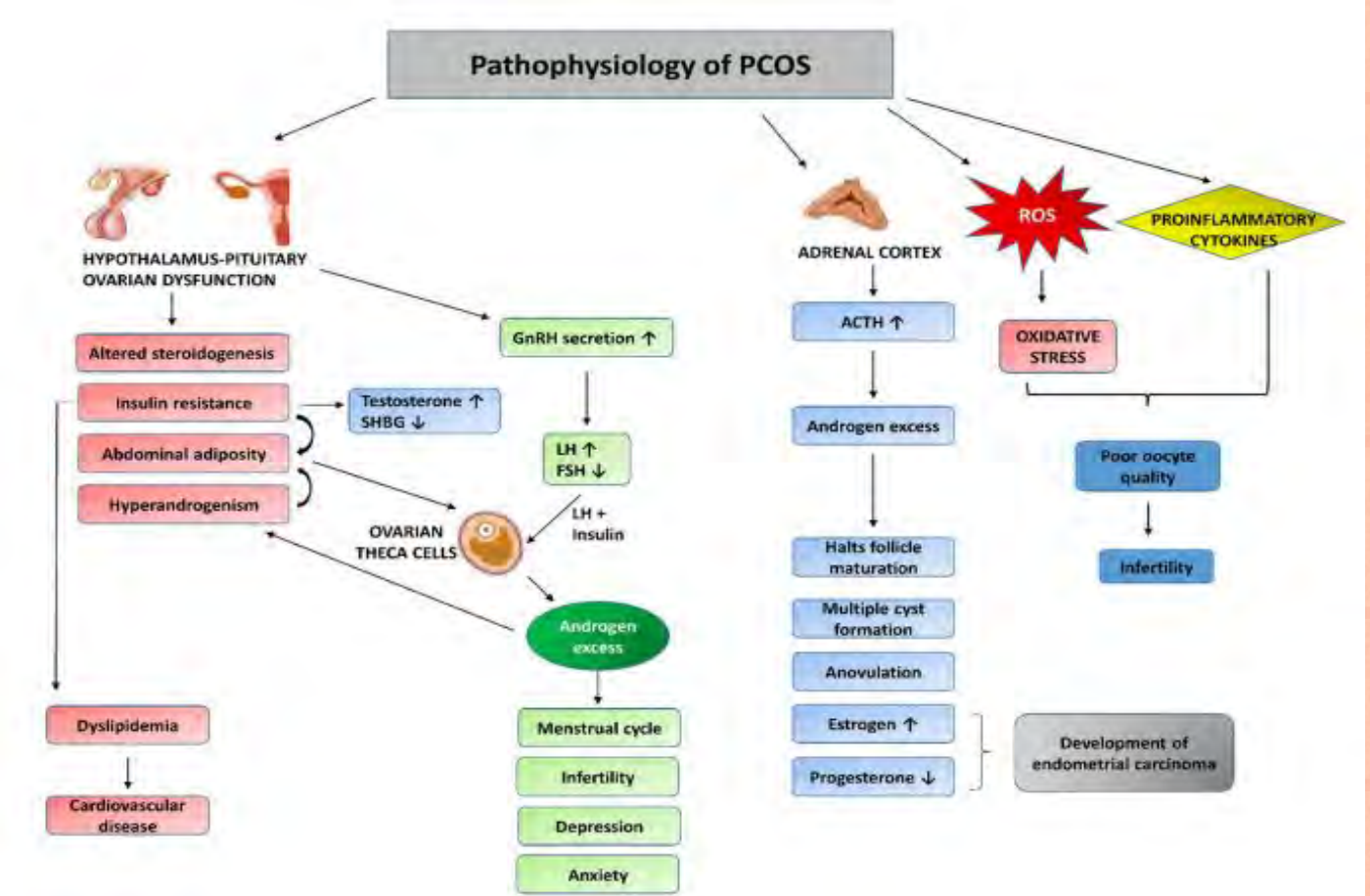
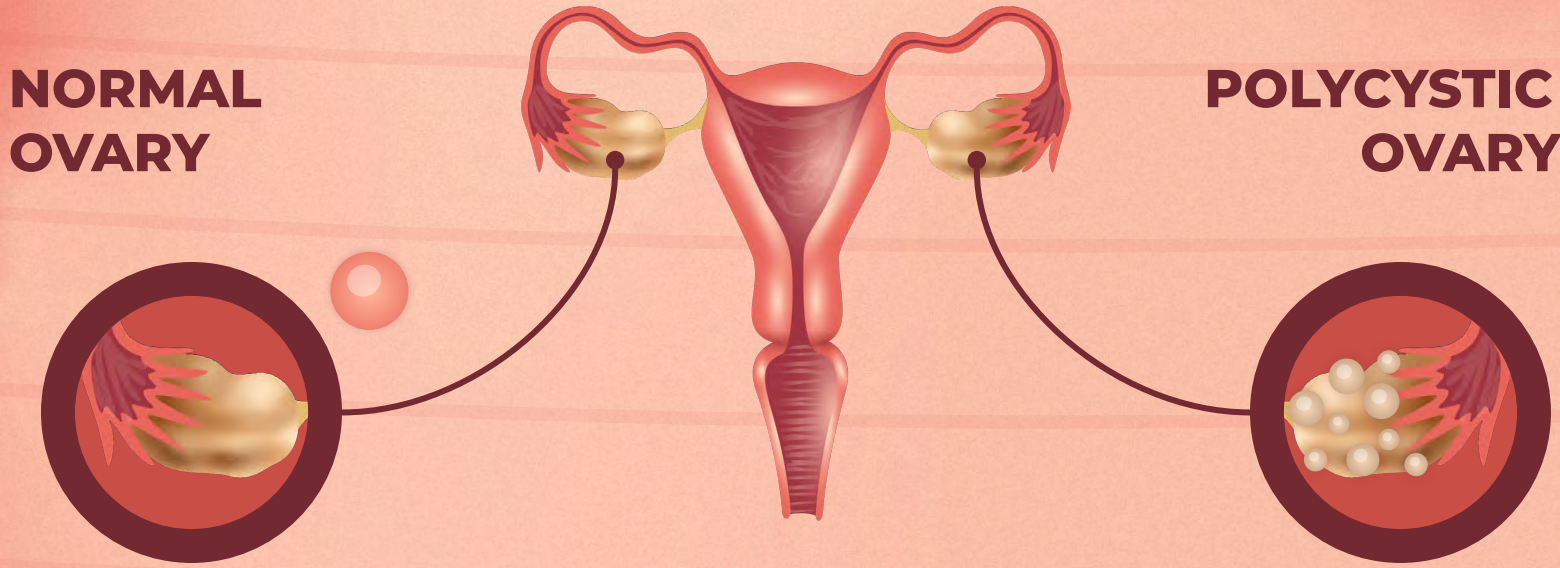


Fig. 3 Pathophysiological mechanism of PCOS, depicting defects in hypothalamic-pituitary-ovarian axis, adrenal cortex, increasing oxidative stress, and pro-inflammatory cytokines

Siddiqui,Sana et. al. "A Brief Insight Into the Etiology, Genetics, and Immunology of Polycystic Ovarian Syndrome." Journal of Assisted Reproduction and Genetics. (2022). .39:2444.

POLYCYSTIC OVARIES and ANOVULATION



What Triggers the Dysfunction?

- Genetic Factors
  - 241 potential genes involved in PCOS
- Epigenetic Factors
  - Maternal obesity, hyperandrogenism, diet
- Environmental Factors
  - Lifestyle, Diet, Inactivity

Comorbid Conditions

Insulin Resistance

30-35% glucose intolerance
8-12% have or develop diabetes

Hyperandrogenism

Infertility

Obesity

50-80% in PCOS

Gynecologic Cancers

Particularly Endometrial Cancer

Cardiovascular Disease

Lower HDL, higher LDL
Elevated calcium scores

03

Current Treatments

- **Medical Goals**
  - Decrease Endometrial Cancer risk
  - Decrease Comorbidities

- **Patient Goals**
  - Bothersome Symptoms
  - Long Term Fertility

CURRENT TREATMENTS

Weightloss/Lifestyle Modifications
Combined Hormonal Contraceptives
Progestins
Metformin
Spironolactone, Flutamide
Cosmetic Hair Removal

Lifestyle Modifications

Ketogenic Diet

Alleviates irregular menses and impaired liver function

Physical exercise

Minimum of 150min/week

Reduced calories with low glycemic index

Decreased metabolic syndrome and total testosterone

Vitamin D and L-carnitine

Mixed results for improvements, no proven benefit

04 EMERING TREATMENT OPTIONS

Anti-Obesity Pharmacological Agents

- Glucagon-like Peptide-1 (GLP-1) Agonists
  - FDA approved for Type 2 Diabetes and Obesity
  - Insulin production, suppression of glucagon, delayed gastric emptying, early satiety, regulation of appetite and food reward

Anti-Obesity Pharmacological Agents

- Jensterle et al. reported greater BMI reduction and visceral adipose tissue area with Liraglutide vs Metformin

- Frossing et al.
  - 72 overweight women with PCOS
  - Liraglutide 1.8mg/day vs placebo
  - Reductions in: Body weight >5%, liver fat by 44%, visceral adipose tissue by 18%, free testosterone by 19%

Anti-Obesity Pharmacological Agents

- De Hollanda Morais et al. systematic review published August 2024
  - 4 RCTs, 176 patients
  - BMI 31-43.9, Age 29.9-35
  - 2 Semglutide 2 Liraglutide
  - Reduction in BMI and waist circumference
  - Lower total testosterone levels by 33%
  - Reduction in serum triglycerides
  - No difference in total cholesterol
  - Main side effects: GI 43/112 patient

Semaglutide Outside of PCOS

- Lincoff M.D. et al. in NEJM
  - Double-blind Randomized Placebo Controlled Study
  - ≥45y/o, CVD, BMI≥27, no diabetes
  - 17,604 patients
  - Once weekly SQ Semaglutide 2.4mg or placebo
  - 34.2 months
  - Decreased: Death from CV causes, nonfatal MI, nonfatal stroke

My patient lost weight and is ovulating!!!

Uh oh! Now she is pregnant!!

Antidiabetic Medications in Pregnancy

- International Pregnancy Safety Study Consortium
  - Pregnancy databases from Nordic countries, US, and Israel
  - Pregestational diabetes 51,826 patients
  - 15,148 were treated with ADM
  - Major Congenital Malformations
    - 3.76% in general population
      - 4.77% with no ADM
      - 5.32% with Metformin (Not significant)
      - 7.83% with insulin (Not significant)
      - 8.23% with GLP-1 Agonists (Not significant)

Antidiabetic Medications in Pregnancy

- International Pregnancy Safety Study Consortium
  - Cardiac Malformations
    - 1.31% in general population
    - 2.25% with no ADM
    - 2.04% with metformin (Not Significant)
    - 4.20% with Insulin (Not Significant)
    - 3.22% with GLP-1 agonists (Not Significant)

Pregnancy Concerns

- Further studies need to be done
- Semaglutide has 7 day half-life
  - Should discontinue 2 months before conception
- Liraglutide has 13-hour half-life
  - Discontinue 1 month before conception

CONCLUSIONS

01 Adequate treatment to decrease comobidities

02 Weight reduction is essential

03 Prevention of Endometrial Cancer!!!

04 If obese: Consider GLP-1 agonist

THANKS

DO YOU HAVE ANY QUESTIONS?

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Thursday, December 12, 2024

Caring for a Medically Underserved Population:

People with Down Syndrome (DS) and Intellectual/Developmental Disabilities (IDD)

Brian Chicoine, MD

Medical Director, Advocate Medical Group Adult Down Syndrome Center

Faculty, Family Medicine Residency, Advocate Lutheran General Hospital

December 13, 2024

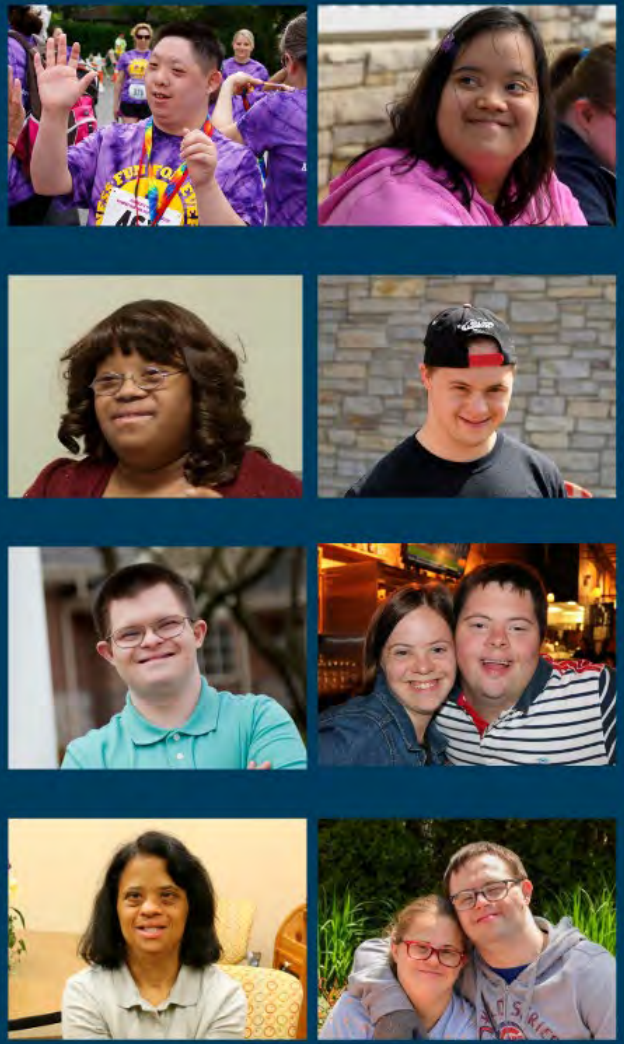
Illinois Osteopathic Medical Society 2024 Winter Scientific Seminar

Conflicts of interest & disclosures

- None


Advocate
Medical
Group
Adult Down
Syndrome Center
1610 Luther Lane

Our mission is to enhance the well-being of people with Down syndrome who are 12 and older by using a team approach to provide comprehensive, holistic, community-based health care services.



History

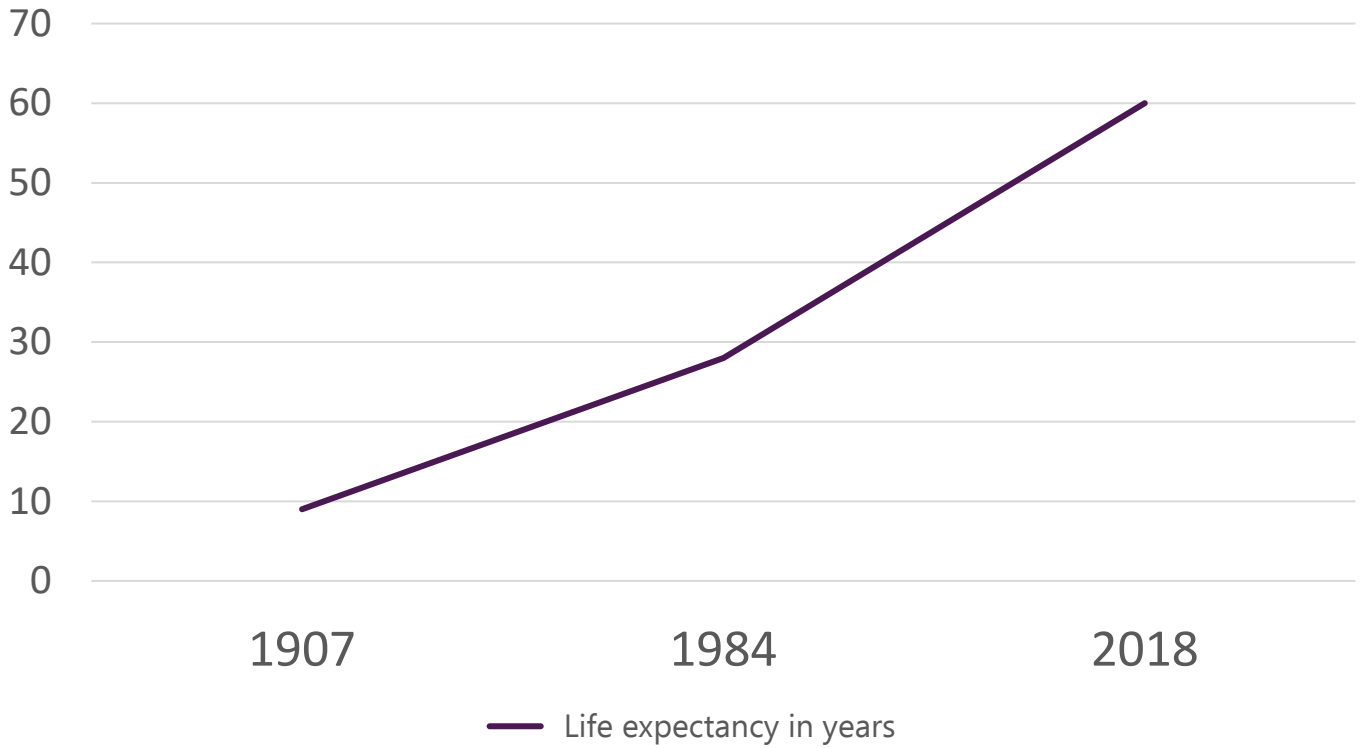
- Opened in 1992
- Started at the urging of the National Association for Down Syndrome (NADS)
- Have served over 6,500 adolescents & adults with DS over 32+ years

Objectives

- Identify barriers that people with DS and IDD face in health care settings
- Describe common characteristics and medical conditions that are important to consider when caring for people with DS and IDD
- Discuss strategies for improving health care of people with DS and IDD

Today, people with Down syndrome are living *longer* and *healthier* than any other time in the past.

Life expectancy in years



Bittles et al. 2004, Coppus et al. 2008, Glasson et al. 2002, Zhu et al. 2013

There are more adults with Down syndrome living now than ever before.

People with DS in the United States

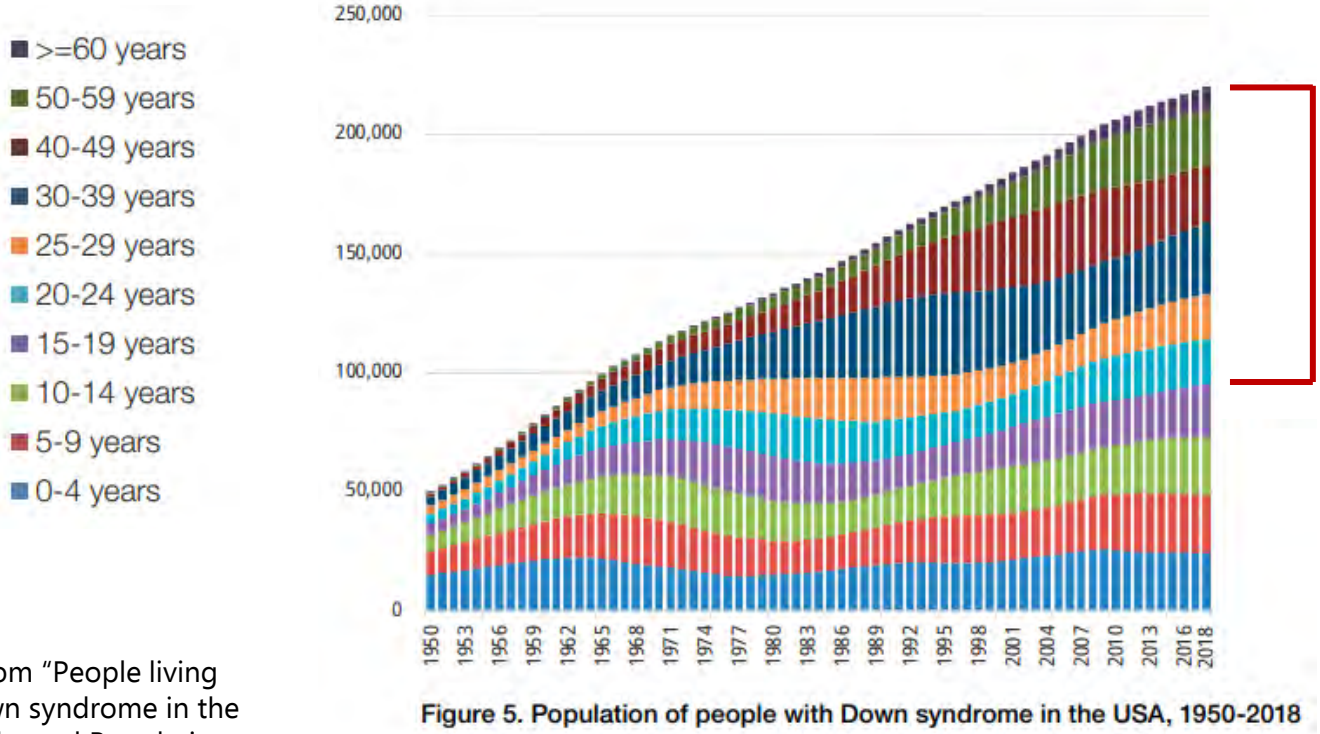


Figure 5. Population of people with Down syndrome in the USA, 1950-2018

Estimated # of people with DS 20 years of age or older

Figure from "People living with Down syndrome in the USA: Births and Populations https://go.downsyndromepopulation.org/usa-factsheet

Why are people with DS and IDD a medically underserved population?

Health care of adults with DS

- It is estimated that only about **5%** of adults with Down syndrome have access to a Down syndrome specialty clinic.

Received: 26 October 2020 | Revised: 26 February 2021 | Accepted: 27 February 2021
DOI: 10.1002/ajmg.a.62169

ORIGINAL ARTICLE

American Journal of medical genetics A WILEY

Specialty clinics for adults with Down syndrome: A clinic survey

Stephanie L. Santoro[1,2] | Ashlee Campbell[1] | Archana Balasubramanian[3] | Kelsey Haugen[1] | Kimberly Schafer[3] | William Mobley[3]

[1]Division of Medical Genetics, Department of Pediatrics, Massachusetts General Hospital, Boston, Massachusetts
[2]Department of Pediatrics, Harvard Medical School, Boston, Massachusetts
[3]Department of Neurosciences, University of California, San Diego, California

Correspondence
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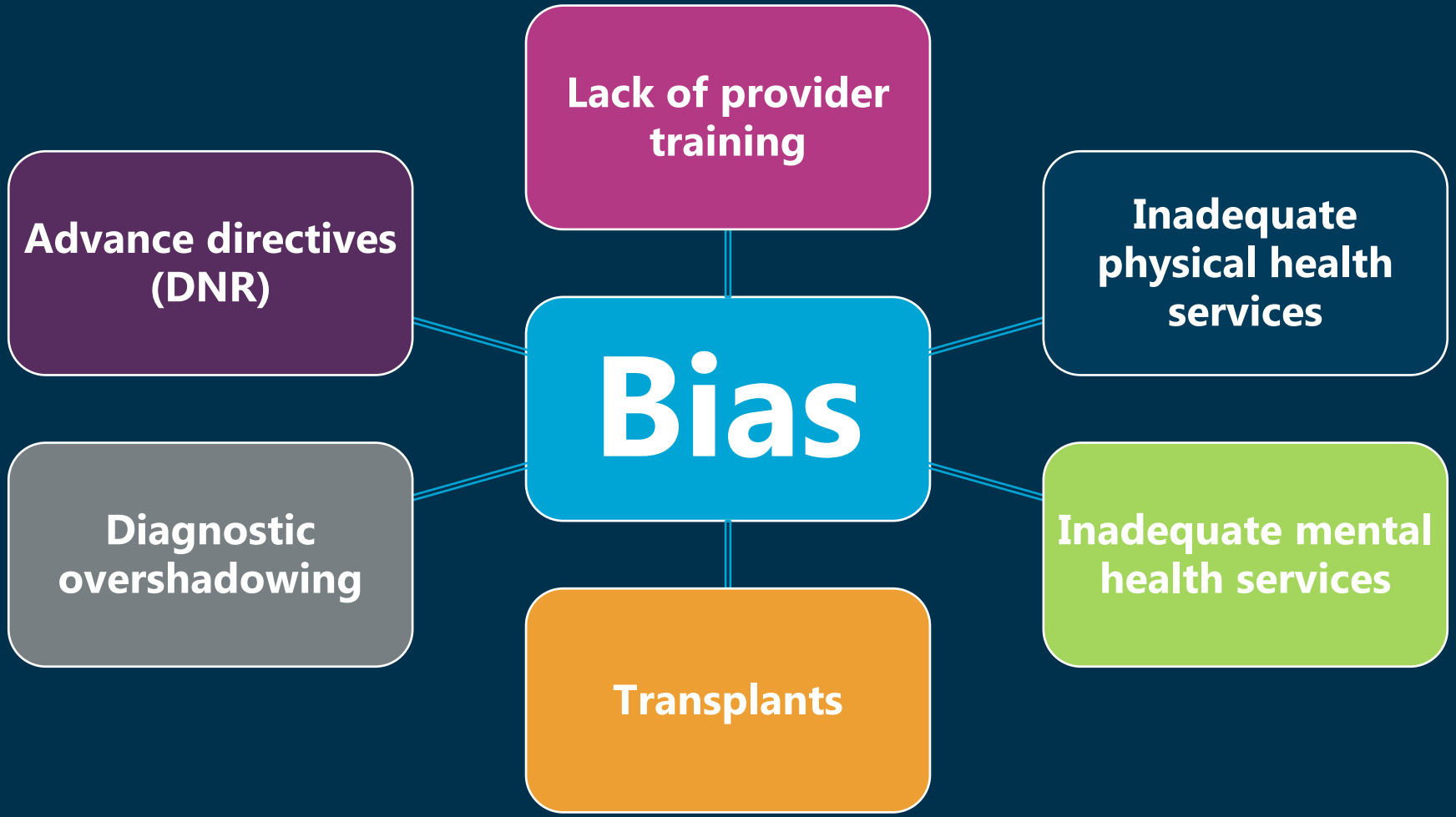
Abstract

Specialty centers improve care for patients with Down syndrome. The cohort of adults with Down syndrome is increasing, but the capacity for specialty centers to meet their medical care needs is unknown. Electronic survey of staff of specialty clinics for adults with Down syndrome was conducted. Review of online clinic listings, and calculation of the number of adults with Down syndrome were performed. Analysis identified the percent of adults with Down syndrome who could have their medical care needs met in a current specialty clinic. Fourteen specialty clinics report providing care for 4038 adults with Down syndrome. Respondents reported gaps in care including: limitations of existing clinics, need for additional clinics, and knowledgeable health professionals in Down syndrome. Survey-respondent clinic capacity would meet needs of 3% of adults with Down syndrome. Twenty-five clinics for adults with Down syndrome were listed online with capacity to care for 6517 adults with Down syndrome meeting the needs of 5% of the population. Additional clinic capacity is needed to meet the needs of adults with Down syndrome. Survey of existing clinics provides guidance to create additional clinics, including: must-have team members, current sources of clinic financial support, and gaps in current clinical care.

KEYWORDS
clinic model, Down syndrome, trisomy 21

American Journal of Medical Genetics Part A
https://doi.org/10.1002/ajmg.a.62169

Santoro et al. 2021


Lack of provider training
Advance directives (DNR)
Inadequate physical health services
Bias
Diagnostic overshadowing
Inadequate mental health services
Transplants

Physician perceptions

82.4%	18.1%	56.5%
• People with significant disability have worse quality of life than nondisabled people	• Strongly agreed that the health care system often treats patients with a disability unfairly	• Strongly agreed that they welcomed patients with disabilities into their practices

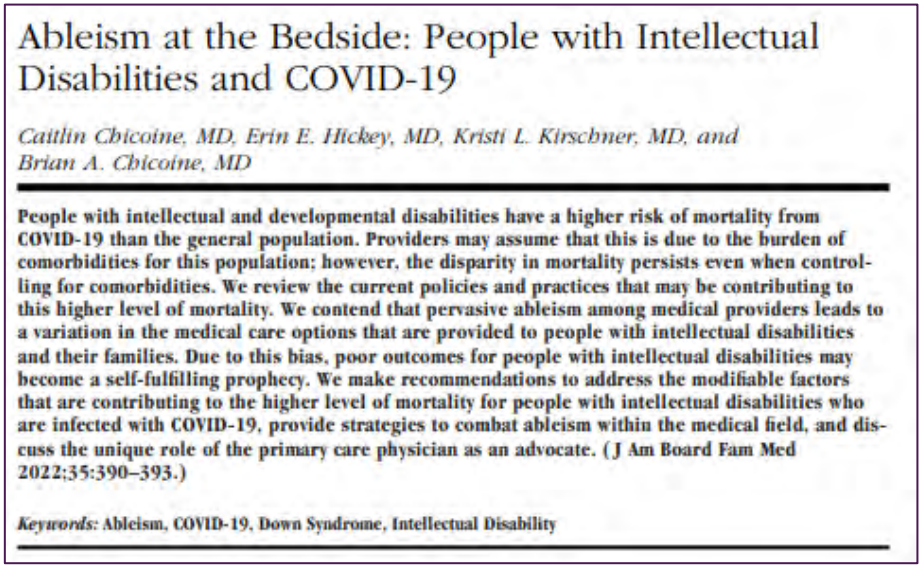
Iezzoni et al. 2021

“I think you need a lot more care, and I am not the doctor for you.”

Lagu et al. 2022

Ableism/disability bias

"The belief that the quality of life or worth of a person with a disability is inherently less than that of a nondisabled person."



Ableism at the Bedside: People with Intellectual Disabilities and COVID-19

Caitlin Chicoine, MD, Erin E. Hickey, MD, Kristi L. Kirschner, MD, and Brian A. Chicoine, MD

People with intellectual and developmental disabilities have a higher risk of mortality from COVID-19 than the general population. Providers may assume that this is due to the burden of comorbidities for this population; however, the disparity in mortality persists even when controlling for comorbidities. We review the current policies and practices that may be contributing to this higher level of mortality. We contend that pervasive ableism among medical providers leads to a variation in the medical care options that are provided to people with intellectual disabilities and their families. Due to this bias, poor outcomes for people with intellectual disabilities may become a self-fulfilling prophecy. We make recommendations to address the modifiable factors that are contributing to the higher level of mortality for people with intellectual disabilities who are infected with COVID-19, provide strategies to combat ableism within the medical field, and discuss the unique role of the primary care physician as an advocate. (J Am Board Fam Med 2022;35:390–393.)

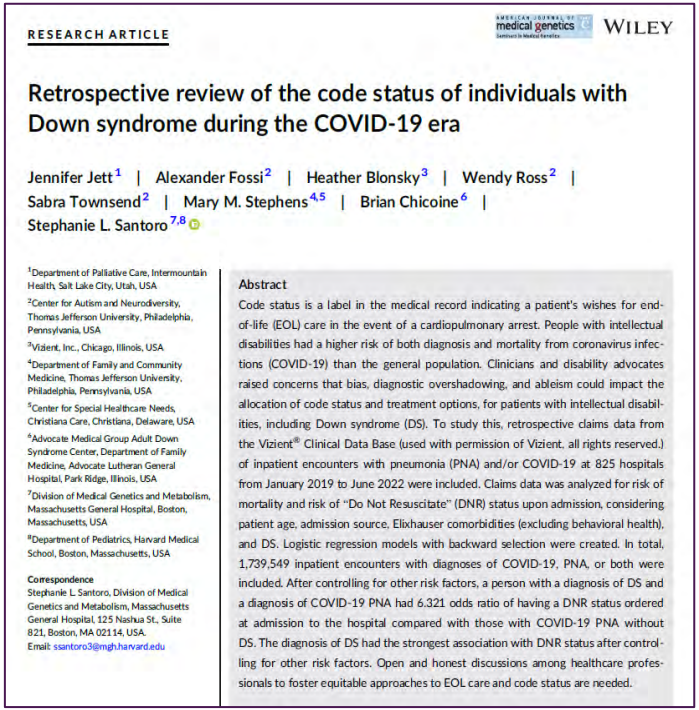
Keywords: **Ableism, COVID-19, Down Syndrome, Intellectual Disability**

Journal of the American Board of Family Medicine
https://doi.org/10.3122/jabfm.2022.02.210371

Chicoine et al. 2022

DNR bias

- Down syndrome and COVID pneumonia
- 6.3 odds ratio of DNR status ordered at admission compared to those with COVID pneumonia without Down syndrome



RESEARCH ARTICLE

American Journal of Medical Genetics Part C WILEY

Retrospective review of the code status of individuals with Down syndrome during the COVID-19 era

Jennifer Jett[1] | Alexander Fossi[2] | Heather Blonsky[3] | Wendy Ross[2] | Sabra Townsend[2] | Mary M. Stephens[4,5] | Brian Chicoine[6] | Stephanie L. Santoro[7,8]

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Abstract

Code status is a label in the medical record indicating a patient's wishes for end-of-life (EOL) care in the event of a cardiopulmonary arrest. People with intellectual disabilities had a higher risk of both diagnosis and mortality from coronavirus infections (COVID-19) than the general population. Clinicians and disability advocates raised concerns that bias, diagnostic overshadowing, and ableism could impact the allocation of code status and treatment options, for patients with intellectual disabilities, including Down syndrome (DS). To study this, retrospective claims data from the Vizient® Clinical Data Base (used with permission of Vizient, all rights reserved.) of inpatient encounters with pneumonia (PNA) and/or COVID-19 at 825 hospitals from January 2019 to June 2022 were included. Claims data was analyzed for risk of mortality and risk of "Do Not Resuscitate" (DNR) status upon admission, considering patient age, admission source, Elixhauser comorbidities (excluding behavioral health), and DS. Logistic regression models with backward selection were created. In total, 1,739,549 inpatient encounters with diagnoses of COVID-19, PNA, or both were included. After controlling for other risk factors, a person with a diagnosis of DS and a diagnosis of COVID-19 PNA had 6.321 odds ratio of having a DNR status ordered at admission to the hospital compared with those with COVID-19 PNA without DS. The diagnosis of DS had the strongest association with DNR status after controlling for other risk factors. Open and honest discussions among healthcare professionals to foster equitable approaches to EOL care and code status are needed.

American Journal of Medical Genetics Part C
https://doi.org/10.1002/ajmg.c.32080

Jett et al. 2023

Dignity of risk

- Respect for an individual's right to:
  - Make their own decisions
  - Participate in a broad range of desired activities
  - Expose themselves to potential consequences or learning opportunities

Unrestricted freedom

No freedom


Unrestricted freedom
Education
No freedom

CONSIDERING DIGNITY OF RISK IN THE CARE OF PEOPLE WITH INTELLECTUAL DISABILITIES

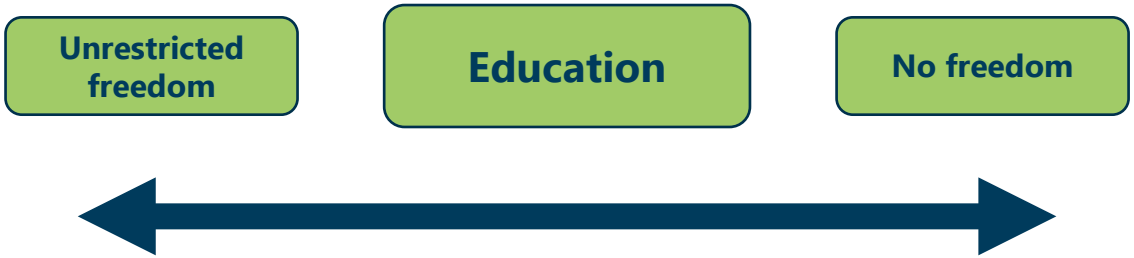
a clinical perspective

BRIAN CHICOINE* AND KRISTI L. KIRSCHNER†

ABSTRACT The dignity of risk implies respect for individuals' right to make their own decisions, to participate in a broad range of desired activities, even if those activities have risk, and to expose themselves to potential consequences or learning opportunities. Historically, a more paternalistic approach, done as a benevolent assurance of safety, has been taken with individuals with intellectual disabilities. While optimizing safety, this approach can limit opportunity and, more importantly, limit the dignity of the individual. However, the concern for safety and the sense of responsibility to keep individuals with intellectual disabilities from harm is solidly entrenched and is not without some merit. "Supported decision-making" can offer an alternative to guardianship for some individuals, providing structured processes to enhance full participation. Strategies to involve individuals with intellectual disabilities in their own decision-making and to optimize the safety of those decisions include expanding the discussion of the concept of dignity of risk with family members and care providers of individuals with intellectual disabilities before they turn 18 years old; providing social-skills training and other educational opportunities that promote the likelihood of success in activities and decision-making; and maintaining guardrails when needed to prevent serious harms.

*Medical Director, Advocate Medical Group Adult Down Syndrome Center; Department of Family Medicine, Advocate Lutheran General Hospital, Park Ridge, IL.
†Departments of Medical Education, Neurology and Rehabilitation, and Academic Internal Medicine, University of Illinois Chicago College of Medicine; Department of Disability and Human Development, University of Illinois Chicago College of Allied Health Sciences.
Correspondence: Brian Chicoine, MD, Adult Down Syndrome Center, 1610 Luther Lane, Park Ridge, IL 60068.
Email: Brian.Chicoine@aah.org.

Perspectives in Biology and Medicine, volume 65, number 2 (spring 2022): 189–198.



Perspectives in Biology and Medicine
https://doi.org/10.1353/pbm.2022.0014

“It’s just the Down syndrome.”

Diagnostic overshadowing

- To cause something to seem less important
- "The attribution of symptoms to an existing diagnosis rather than a potential co-morbid condition" (Rader & McGaffigan 2022)

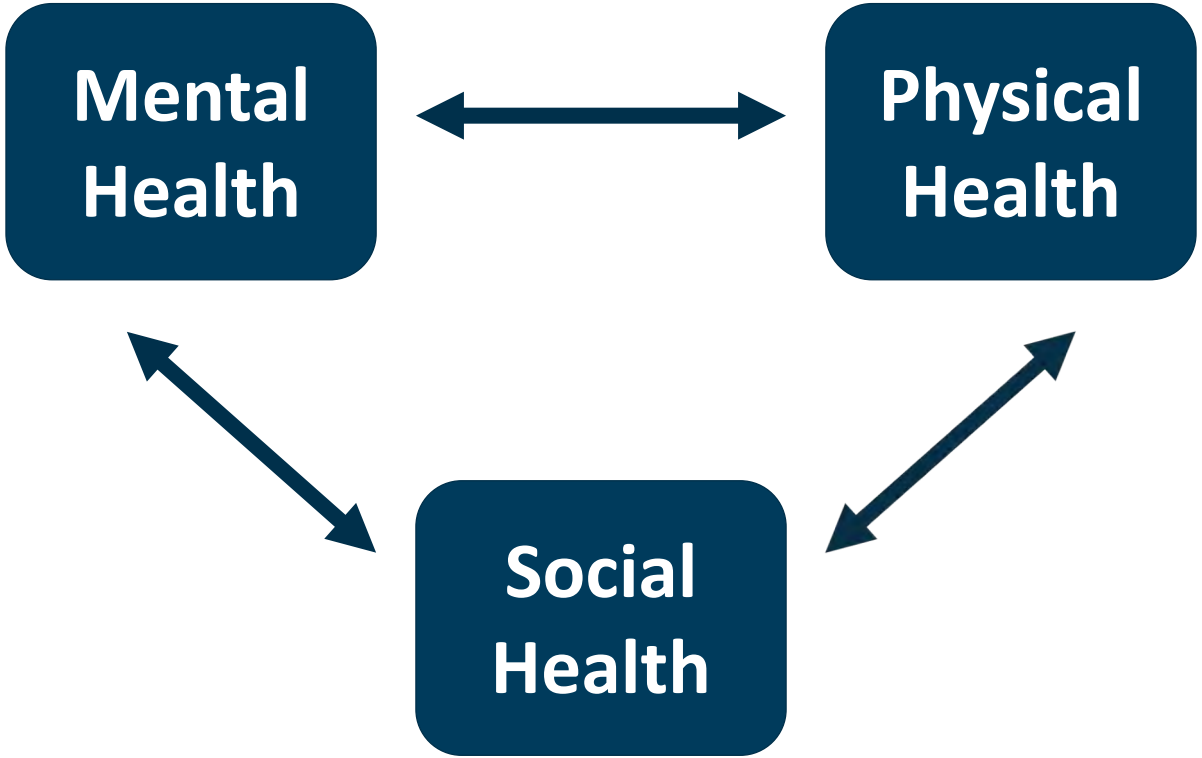
- Co-occurring conditions
  - Misdiagnosis
  - Underdiagnosis
  - Overdiagnosis

Hallyburton 2022, Lazris et al. 2023, Molloy et al. 2021

Considerations when caring for people with DS and IDD

Common characteristics

- Self-talk
- The “Groove”
- Strong visual memory
- Concrete thinking
- Empathy radar


Mental Health
Physical Health
Social Health

Common conditions in DS

Celiac disease	Sleep apnea	Thyroid disorders	OCD	Mood disorders
Pneumonia	Swallowing dysfunction	Catatonia	Seizures	Obesity
	Atlantoaxial instability	Testicular cancer	Alzheimer's disease	

Conditions that are less common in DS

- Breast cancer
- Colon cancer
- Hypertension
- Atherosclerosis
- Substance use disorders

Decline in skills or change in behavior

- Common symptoms
- Causes
  - Autism
  - Down syndrome regression disorder
  - Alzheimer's disease
  - Other (medical conditions, adjustment to life events, etc.)

Medical conditions

- Medication side effects
- Sleep apnea
- Vitamin deficiencies
- Endocrine disorders
  - Hypothyroidism or hyperthyroidism
  - Adrenal insufficiency
  - Diabetes mellitus
  - Puberty-related
  - Menopause
- Cervical myelopathy (subluxation, spinal stenosis)
- Seizures
- Chronic pain
  - Dental
  - Sinus
  - Menstrual
  - Gastrointestinal

Medical conditions

- Neuropsychiatric disorders
  - Catatonia
  - Mood disorder
  - Obsessive-compulsive disorder
  - Psychotic disorder
  - Complex tic disorder
  - Post-traumatic stress disorder
  - Parkinsonism, dystonia
- Cardiovascular disease
  - Uncorrected congenital heart disease with pulmonary hypertension, congestive heart failure
  - Eisenmenger's syndrome
  - Stroke: thrombotic or hemorrhagic
- Gastrointestinal conditions
  - Celiac disease
  - GERD (heart burn)

Medical conditions

- Infectious disease
  - Pneumonia
  - Sepsis
  - Lyme's disease
- Toxic-metabolic
  - Numerous etiologies
- Renal and urological disease
  - Urinary tract infections
  - Urinary retention
  - Kidney function impairment
- Autoimmune conditions
- Sensory
  - Eye
    - Glaucoma
    - Retinal detachment
    - Cataracts
    - Keratoconus
  - Ear
    - Hypoacusis or hyperacusis
    - Tinnitus
    - Vertigo

Adjustment to life events

- Loss of family, friends, pets
- School graduation
- Work setting changes
- Staff/teacher changes
- Physical relocation
- Response to hospitalization or medical condition
- COVID-19 pandemic
- Stress in the family

Down syndrome regression disorder

- First described in 1946 by Rollin – “catatonic psychoses”
- Has been called many names
- Continues to be studied and discussed
- “Assessment and Diagnosis of Down Syndrome Regression Disorder: International Expert Consensus”
  - Article published in July 2022
  - 27 panelists
  - Reached consensus on name, diagnostic work up, and diagnostic criteria

Santoro et al. 2022

DSRD diagnostic criteria

- Sudden and rapid decline
  - Altered mental state or behavioral dysregulation
  - Cognitive decline
  - Developmental regression with or without new autistic features
  - New focal neurologic deficits on examination and/or seizures
  - Insomnia or circadian rhythm disruption
  - Language deficits
  - Movement disorder* (excluding tics)
  - Psychiatric symptoms
- Exclusion of other causes

Santoro et al. 2022

DSRD diagnosis & treatment

- Diagnostic work-up
  - History and physical
  - Neuroimaging (CT, MRI, PET scans)
  - Blood work
  - Lumbar puncture
  - EEG
  - Urine studies
  - Neuropsychological testing
  - Other
- Treatment
  - Medications
  - ECT
  - Immunotherapies

Santoro et al. 2022

How is DSRD different?

- DSRD tends to be more severe and pervasive
- Must include movement disorders (excluding tics)
- The cause can be the same in some instances

Santoro et al. 2022

Alzheimer's disease

- By age 40, nearly all people with Down syndrome have the brain pathology of Alzheimer's disease.
  - Amyloid precursor protein (APP)
  - Chronic inflammation?
  - Metabolic abnormalities?

Mann 1988, Hartley et al. 2015, Zis & Strydom 2018, Lai et al. 2021, Tournissac et al. 2021

Alzheimer's disease

- By age 40, nearly all people with Down syndrome have the brain pathology of Alzheimer's disease.
  - Amyloid precursor protein (APP)
  - Chronic inflammation?
  - Metabolic abnormalities?
- HOWEVER, symptoms of Alzheimer's disease are uncommon before age 40.

Mann 1988, Hartley et al. 2014, Zis & Strydom 2018, Lai et al. 2021, Tournissac et al. 2021, Tsou et al. 2020

Alzheimer's disease

- Prevalence of clinical Alzheimer's disease
  - Estimates vary
  - 55% in those ages 50-59
  - Greater than 75% in those ages 60 and older
- Average age at diagnosis
  - 54 to 55 years old
- Average age at death
  - 59 to 60 years old

McCarron et al. 2017, Sinai et al. 2018, Fortea et al. 2020, Rubenstein et al. 2024

Alzheimer's disease treatments

- Cholinesterase inhibitors
- NMDA receptor antagonist
- Amyloid-beta therapies

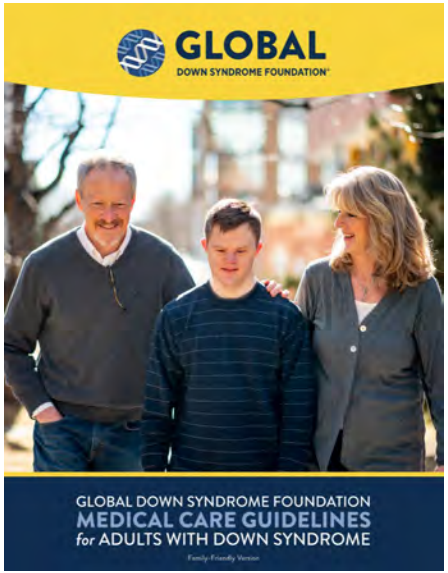
Hillerstrom et al. 2024, Hendrix et al. 2021, Livingstone 2015,

AD vs. DSRD

- Alzheimer's disease
  - Age of onset > 40 years old
  - No proven effective treatment as of 11/24 for DS-AD
- Down syndrome regression disorder
  - Age of onset = teens, early 20s
  - Treatments available
- Not all decline in skills in those age ranges is either Alzheimer's disease or Down syndrome regression disorder

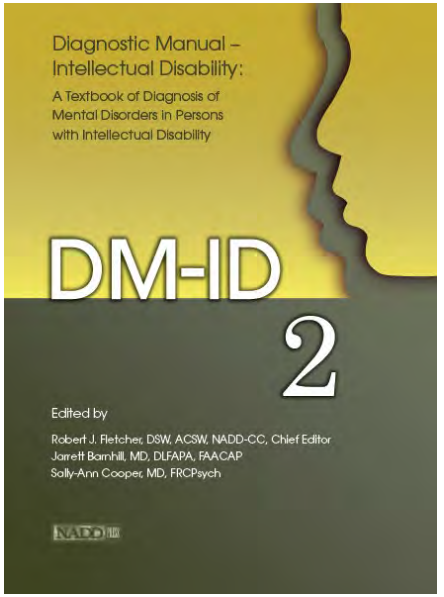
Medical care guidelines and recommendations

- Health Supervision for Children and Adolescents with Down Syndrome
  - https://publications.aap.org/pediatrics/article/149/5/e2022057010/186778/Health-Supervision-for-Children-and-Adolescents
- GLOBAL Medical Care Guidelines for Adults with Down Syndrome
  - https://www.globaldownsyndrome.org/medical-care-guidelines-for-adults/



Medical care guidelines and recommendations

- *Diagnostic Manual-Intellectual Disability: A Textbook of Diagnosis of Mental Disorders in Persons with Intellectual Disability, 2nd edition* (DM-ID-2)
  - National Association for the Dually Diagnosed (NADD)
    - https://thenadd.org/products/dm-id-2/



Improving health care of people with DS and IDD

People with Down syndrome can and should be active participants in promoting their health.

With instead of for

- Include people with DS and IDD in their care
- Strategies
  - Talk the person with DS or IDD
  - Visuals, videos, modeling
  - Be concrete

Adult Down Syndrome Center Resources
https://adscresources.advocatehealth.com/resources

Improving local care

- Education
- Resources
  - Down Syndrome Medical Interest Group – USA
    - https://www.dsmig-usa.org/
    - Membership
    - Learning Library
    - Project ECHO

Improving local care

- Resources
  - National Task Group on Intellectual Disabilities and Dementia Practices
    - https://www.the-ntg.org/
  - American Academy of Developmental Medicine and Dentistry
    - https://www.aadmd.org/

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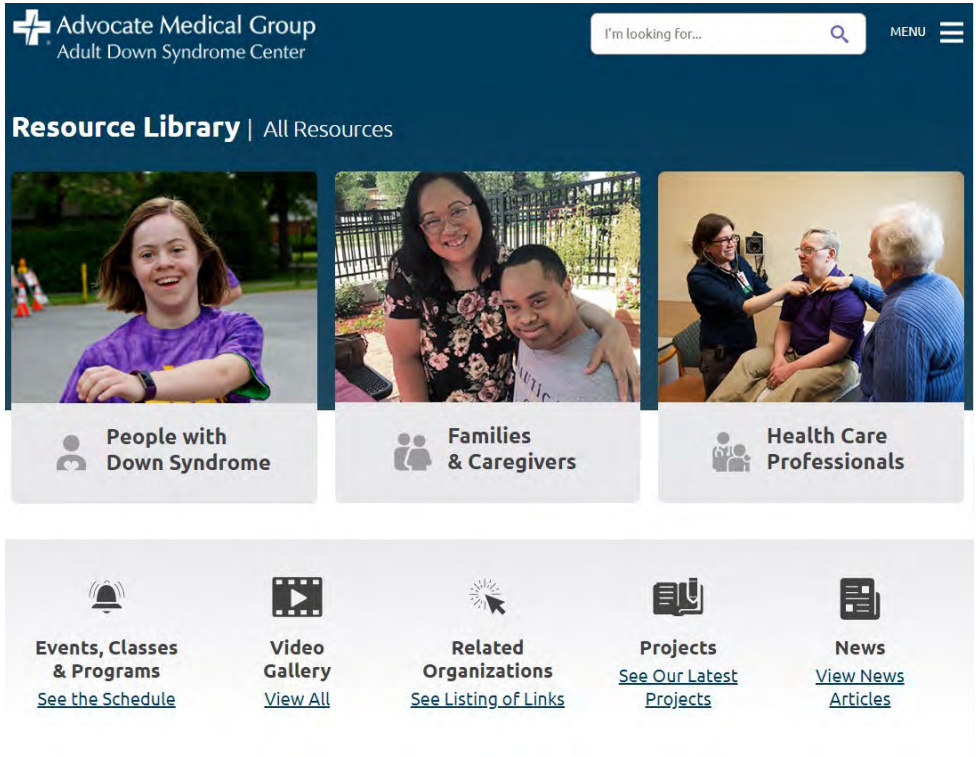
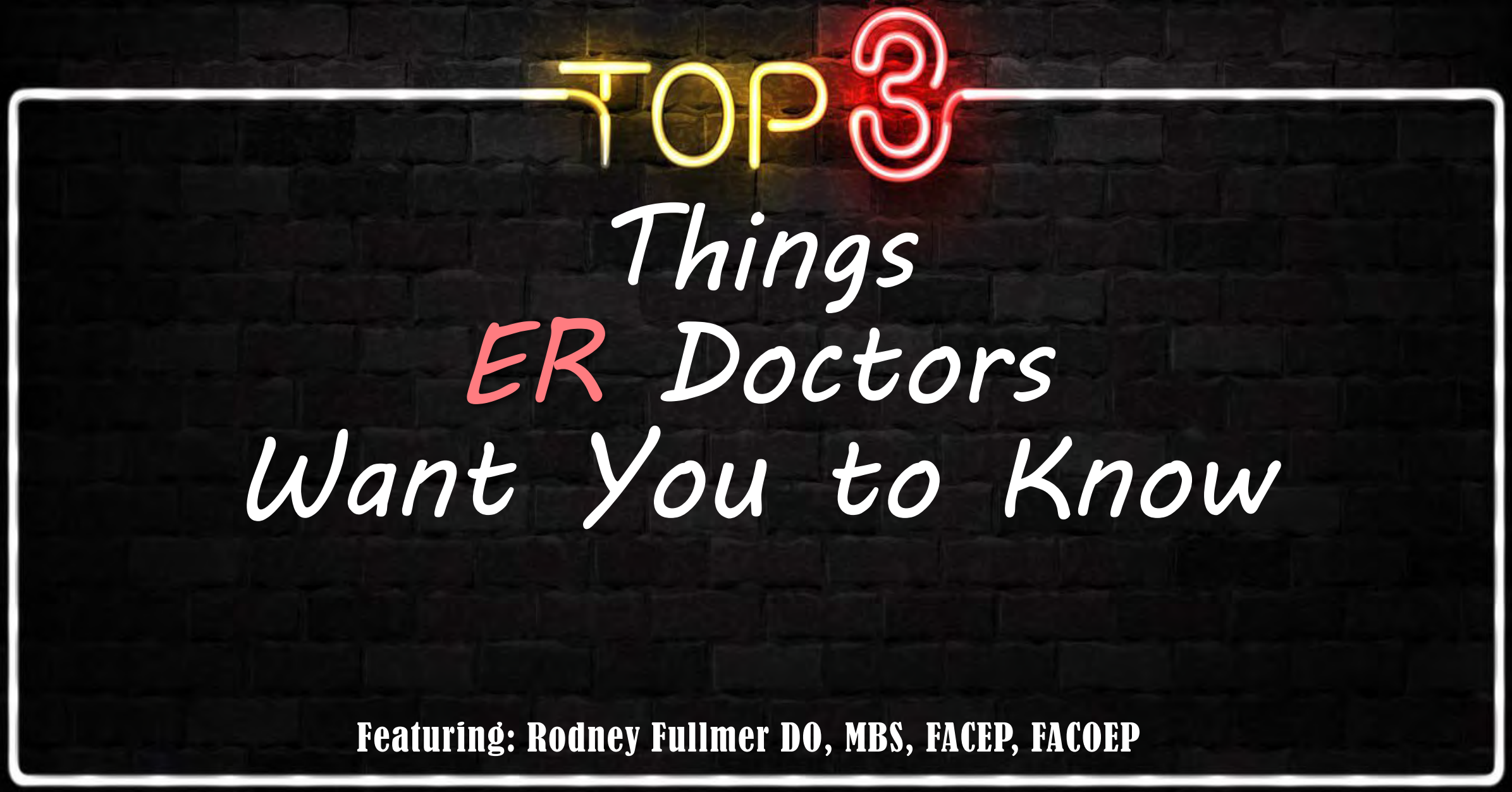
Resource Library



https://adscresources.advocatehealth.com/

Thursday, December 12, 2024


TOP 3
Things
ER Doctors
Want You to Know
Featuring: Rodney Fullmer DO, MBS, FACEP, FACOEP

Disclosures

- I have no relevant financial relationships with the manufacturer(s) of any commercial product(s)and/or provider(s) of commercial services discussed in this CME activity.

- I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.

Objectives

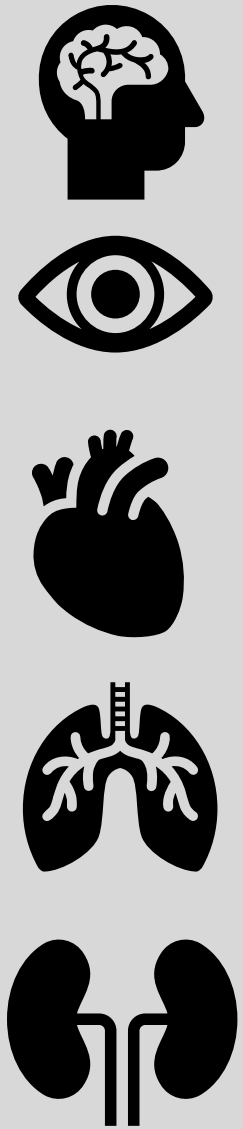
- Current recommendations, management and treatment of Asymptomatic Hypertension in the outpatient setting
- Current recommendations, management and treatment of Deep Venous Thrombosis and low risk Pulmonary embolism in the outpatient setting
- Develop skills to improve overall quality of care and delivery of care with the emergency department and outpatient setting

Fact #1

Severe Asymptomatic Hypertension does NOT need to come to the ER for management or treatment.

By Definition…

- Severe Asymptomatic Hypertension or Hypertensive urgency
- 180 mm Hg or more systolic
- 110 mm Hg or more diastolic
- Without symptoms of acute target organ injury



> A recent trial of an outpatient population referred to the emergency department for severe asymptomatic hypertension showed that only 5% of tests ordered had abnormal results, and 2% of patients had evidence of target organ injury. Less than 1% of patients had a major adverse cardiovascular event within six months.

Gauer R. American Family Physician. 2017;95(8):492-500.

Review > Hypertension. 2018 Jun;71(6):e13-e115. doi: 10.1161/HY

Epub 2017 Nov 13.

2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APh MA/PCNA Guideline for the Preventi Evaluation, and M in Adults: A Repo Cardiology/Amer on Clinical Practi

Paul K Whelton, Robert M Carey, Cheryl Dennison Himmelfarb, So Daniel W Jones, Eric J MacLaughl

> Am Fam Physician. 2017 Apr 15;9

Severe Asymptoma Treatment

Robert Gauer [1]

Affiliations + expand

PMID: 28409616

Free article

Abstract

Hypertension affects one-third of Americans cardiovascular disease, stroke, renal disease, as severely elevated blood pressure (180 mn

> Am Fam Physician. 2023 Oct;108(

Hypertension in Ac Management

S Lindsey Clarke [1]

Affiliations + expand

PMID: 37843942

Review > Hypertension. 2024 Aug;81(8):e94-e106. doi: 10.1161/HYP.0000000000000238.

Epub 2024 May 28.

The Management of Elevated Blood Pressure in the Acute Care Setting: A Scientific Statement From the American Heart Association

Adam P Bress, Timothy S Anderson, John M Flack, Lama Ghazi, Michael E Hall, Cheryl L Laffer, Carolyn H Still, Sandra J Taler, Kori S Zachrison, Tara I Chang; American Heart Association Council on Hypertension; Council on Cardiovascular and Stroke Nursing; and Council on Clinical Cardiology

PMID: 38804130 DOI: 10.1161/HYP.0000000000000238

Free article

Review > Rev Med Suisse. 2021 Sep 15;17(750):1549-1555.

Ab

Ove

man

[Severe asymptomatic hypertension and hypertensive emergency : From the ambulatory car to the emergency room]

[Article in French]

Maxime Berney [1], Fadi Fakhouri [1], Grégoire Wuerzner [1]

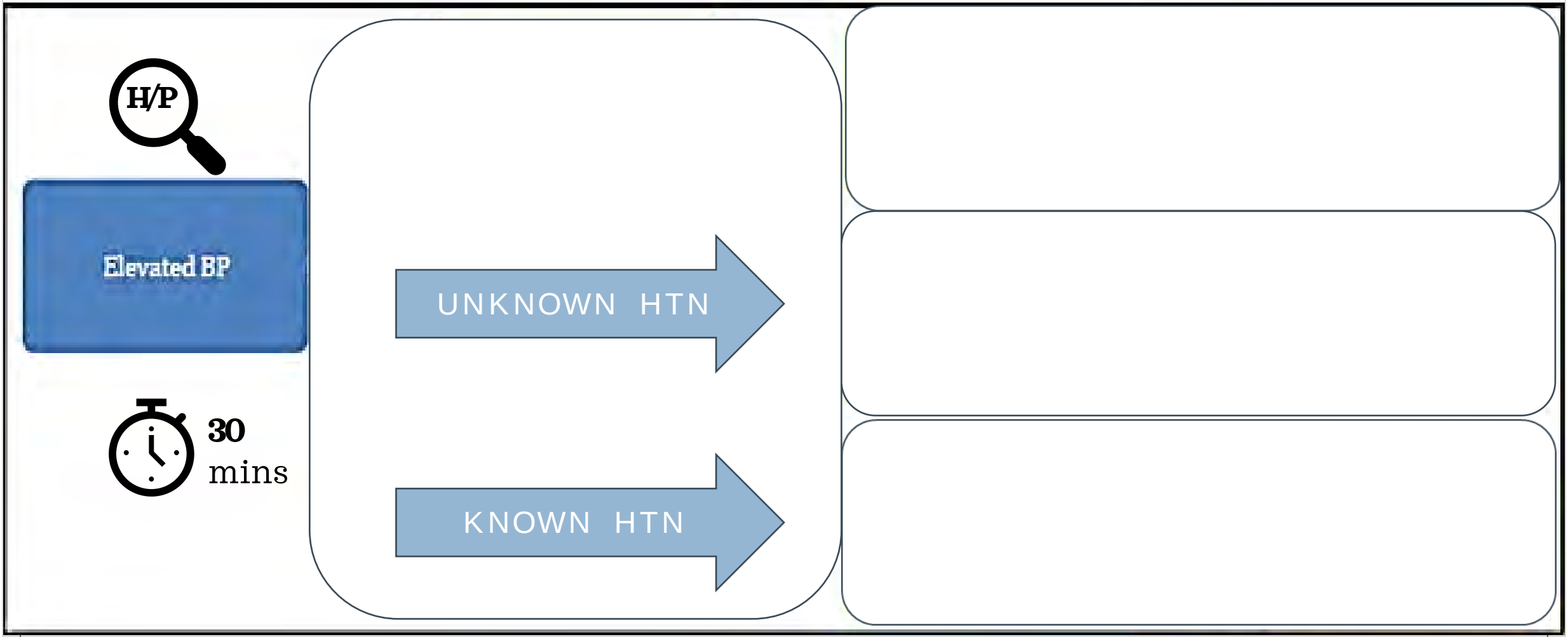
Affiliations + expand

PMID: 34528417

Abstract in English, French

High blood pressure levels are frequently encountered in medical practice, whether in an outpatien or inpatient setting. It is imperative to quickly differentiate severe hypertension associated with tar

ED Management



Survey of Emergency Physician Approaches to Management of Asymptomatic Hypertension. J Clin Hypertens (Greenwich). 2017

Table 4. Medication Preferences for Severe Asymptomatic Hypertension Based on Known Preexisting Factors

Condition	*Preferred medication class*
Angina pectoris	Beta blockers, calcium channel blockers
Aortic aneurysm	Beta blockers
Asian or black race	Diuretics, calcium channel blockers
Atrial fibrillation	Beta blockers, calcium channel blockers (nondihydropyridine)
Cerebrovascular accident	All classes
Chronic obstructive pulmonary disease	All classes except beta blockers
Congestive heart failure	Diuretics, beta blockers, ACE inhibitors, ARBs, mineralocorticoid receptor antagonists
Diabetes mellitus	ACE inhibitors, ARBs
Left ventricular hypertrophy	ACE inhibitors, ARBs, calcium channel blockers
Myocardial infarction	Beta blockers, ACE inhibitors, ARBs
Peripheral vascular disease	ACE inhibitors, calcium channel blockers
Stable chronic kidney disease	ACE inhibitors, ARBs

ACE = angiotensin-converting enzyme; ARB = angiotensin receptor blocker.

Adapted with permission from Mancia G, Fagard R, Narkiewicz K, et al. 2013 ESH/ESC guidelines for the management of arterial hypertension: the Task Force for the Management of Arterial Hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC). Eur Heart J. *2013;34(28):2190.*

Gauer R. American Family Physician. 2017;95(8):492-500.

Outpatient Management

1. Screen for End Organ Damage
2. Check BP Cuff placement
3. Wait 30 minutes before recheck
4. Check Compliance with Medications
5. Consider starting/ increasing/adding HTN Medication Therapy

Fact #2

DEEP VENOUS THROMBOSIS (DVT) OR LOW-RISK PULMONARY EMBOLISM (PE)

DO NOT NEED TO COME TO THE ED FOR TREATMENT

blood advances

Blood Adv. 2020 Oct 2;4(19):4693–4738. doi: 10.1182/bloodadvances.2020001830

American Society of Hematology 2020 guidelines for management of venous thromboembolism: treatment of deep vein thrombosis and pulmonary embolism

Thomas L Ortel [1,✉], Ignacio Neumann [2], Walter Ageno [3], Rebecca Beyth [4,5], Nathan P Clark [6], Adam Cuker [7], Barbara A Hutten [8], Michael R Jaff [9], Veena Manja [10,11], Sam Schulman [12,13], Caitlin Thurston [14], Suresh Vedantham [15], Peter Verhamme [16], Daniel M Witt [17], Ivan D Florez [18,19], Ariel Izcovich [20], Robby Nieuwlaat [19], Stephanie Ross [19], Holger J Schünemann [19,21], Wojtek Wiercioch [19], Yuan Zhang [19], Yuqing Zhang [19]

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PMCID: PMC7556153 PMID: 33007077

Low Risk DVT

- Below the knee
- No signs of Phlegmasia Alba and Cerulea Dolens
- No known active cancer
- No signs of hemodymanic instability
- Access and likely adherence to outpatient therapy
- No signficant comorbidities

Low R

- Low risk
- No right h
- Stable vit
- Use Simpl (PESI)

Simplified PESI (Pulmonary Embolism Severity Index)

Predicts 30-day outcome of patients with PE, with fewer criteria than the original PESI.

When to Use | Pearls/Pitfalls | Why Use

Age, years	≤80 0	>80 +1
History of cancer	No 0	Yes +1
History of chronic cardiopulmonary disease	No 0	Yes +1
Heart rate, bpm	<110 0	≥110 +1
Systolic BP, mmHg	≥100 0	<100 +1
O_2 saturation	≥90% 0	<90% +1

Low risk

1.1% risk of death in the "Low" risk group (0 points), with 1.5% having recurrent thromboembolism or non-fatal bleeding

Scoring

VTE-BLEED Score

Assesses risk of bleeding while on anticoagulation.

INSTRUCTIONS

Use this tool to estimate the risk of major or clinically relevant bleeding after day 30 of anticoagulation administration for acute VTE. The original study enrolled patients who were taking either warfarin or dabigatran.

When to Use

Active cancer	No 0	Yes +2
Male patient with uncontrolled hypertension	No 0	Yes +1
Anemia	No 0	Yes +1.5
History of bleeding	No 0	Yes +1.5
Renal dysfunction (creatinine clearance 30-60 mL/min)	No 0	Yes +1.5
Age ≥60 years	No 0	Yes +1.5

0 points VTE-BLEED Score

Low Bleeding risk

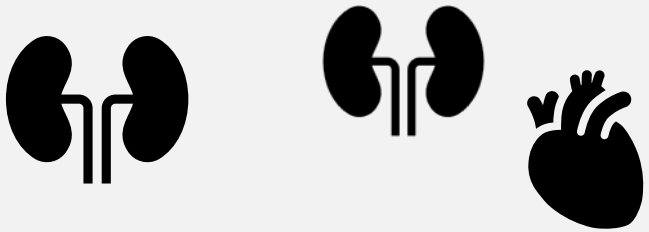
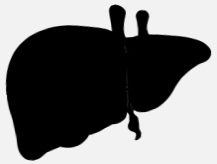
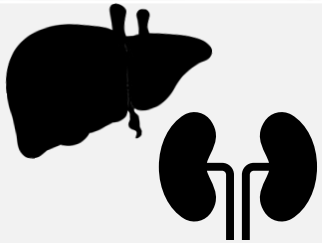
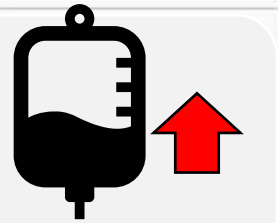
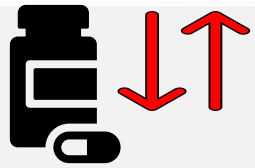
PERC

nent:

Pharmacy for thought…

Anticoagulation Options

Medication	Warfarin (Coumadin)	Rivaroxaban (Xarelto)	Apixaban (Eliquis)	Dabigatran (Pradaxa)
Standard Dosing	■ Enoxaparin 1mg/kg q12h x 4-5 days ■ Warfarin ▫ Starting dose of 5mg/day ▫ Give 7d supply with first dose in ED	■ 15mg PO BID x 21 days ▫ Then 20mg PO daily (duration depending on risk factors)	■ 10mg PO BID x 7 days ▫ Then 5mg PO BID daily (duration depending on risk factors)	■ Enoxaparin 1mg/kg q12h x 4-5 days ■ Pradaxa 150mg BID [11]
Renal Dosing	■ Unfractionated Heparin 80 units/kg bolus ▫ Then 18 units/kg/hour ▫ Check PTT after 6hr; adjust infusion to maintain PTT at 1.5-2.5x control ■ Warfarin as above	■ Check creatinine on all patients prior to initiation ■ CrCl <30 avoid use	■ No dosage adjustments necessary for renal impairment ▫ However, CrCl <25 mL/minute were excluded from clinical trials	■ CrCl<50 avoid use

Name	LMWH SC	Dabigatran	Rivaroxaban	Apixaban	Coumadin
Initial Dose	▪ Enoxaparin 1mg/kg SC q12h ▪ Dalteparin 200 IU/kg SC q24h, max 18,000 IU	▪ Parenteral anticoagulation for 5-10 days; then 150mg twice daily	▪ 15mg twice daily for 3 weeks, then 20mg once daily	▪ 10mg twice daily for 1 week, then 5mg twice daily	
Benefits	▪ 1st line for most hemodynamically stable patients ▪ Preferred in those with cancer, liver disease, coagulopathy, pregnancy				▪ Preferred in renal disease, history of poor compliance, or history of GI bleed
Contraindications					
Comments					

You know your patient best!

Fact #3

COMMUNICATION IS KEY

Can we be colleagues?

Tips for Success

1. Call the ED
2. Have pertinent info (History, Dx, MRN)
3. Send EPIC Chat or other MSG
4. Limit the promises you make to the patient

RECAP…

- Asymptomatic Hypertension needs outpatient TLC
- Low risk DVT and PE can be treated as a outpatient with DOACs
- Communication with your friendly ER doctor is key to patient safety and satisfaction
- You know your patient's best!

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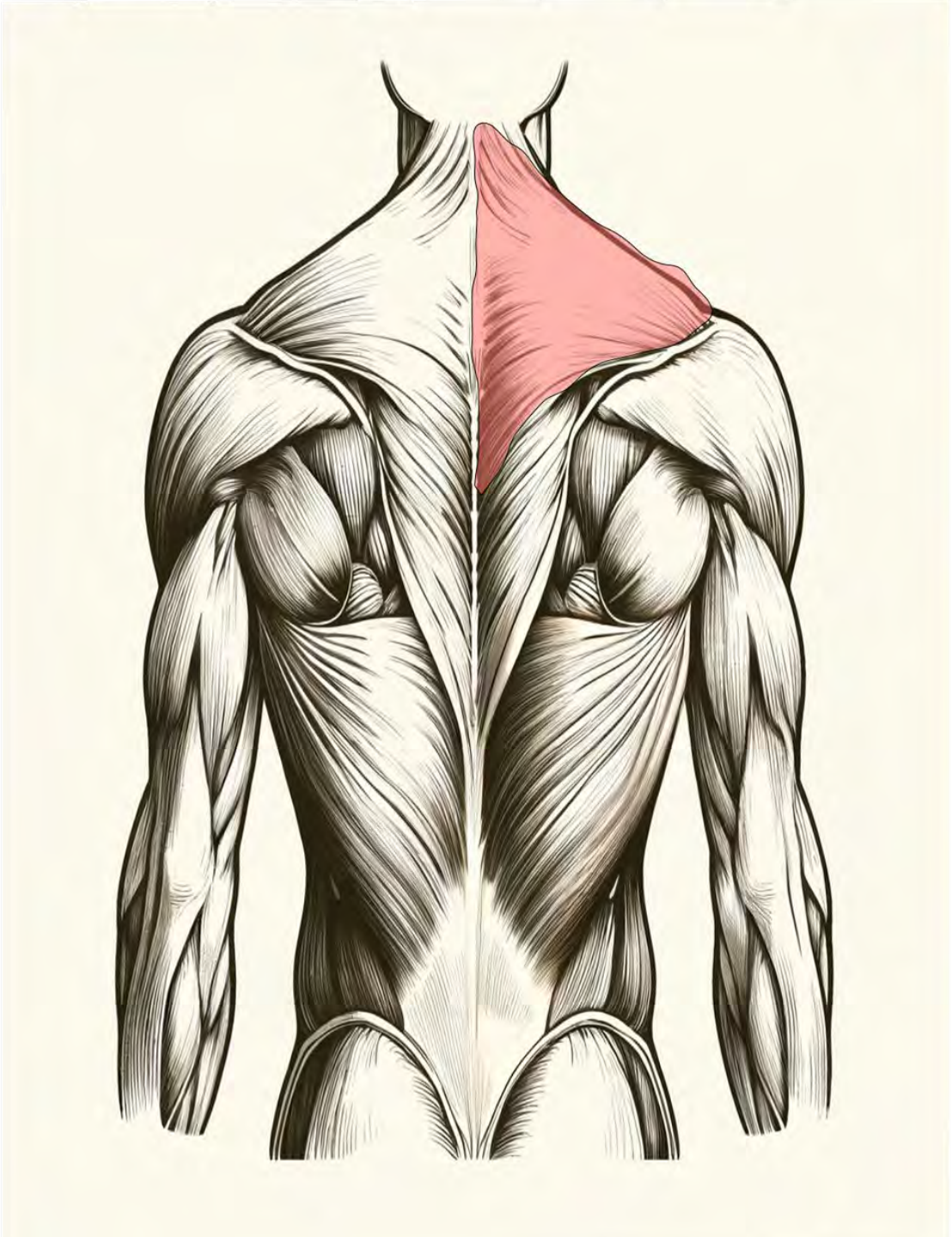
Thursday, December 12, 2024



OMT in the ED

a practical approach in a busy practice

Rodney Fullmer DO, MBS, FACEP, FACOEP

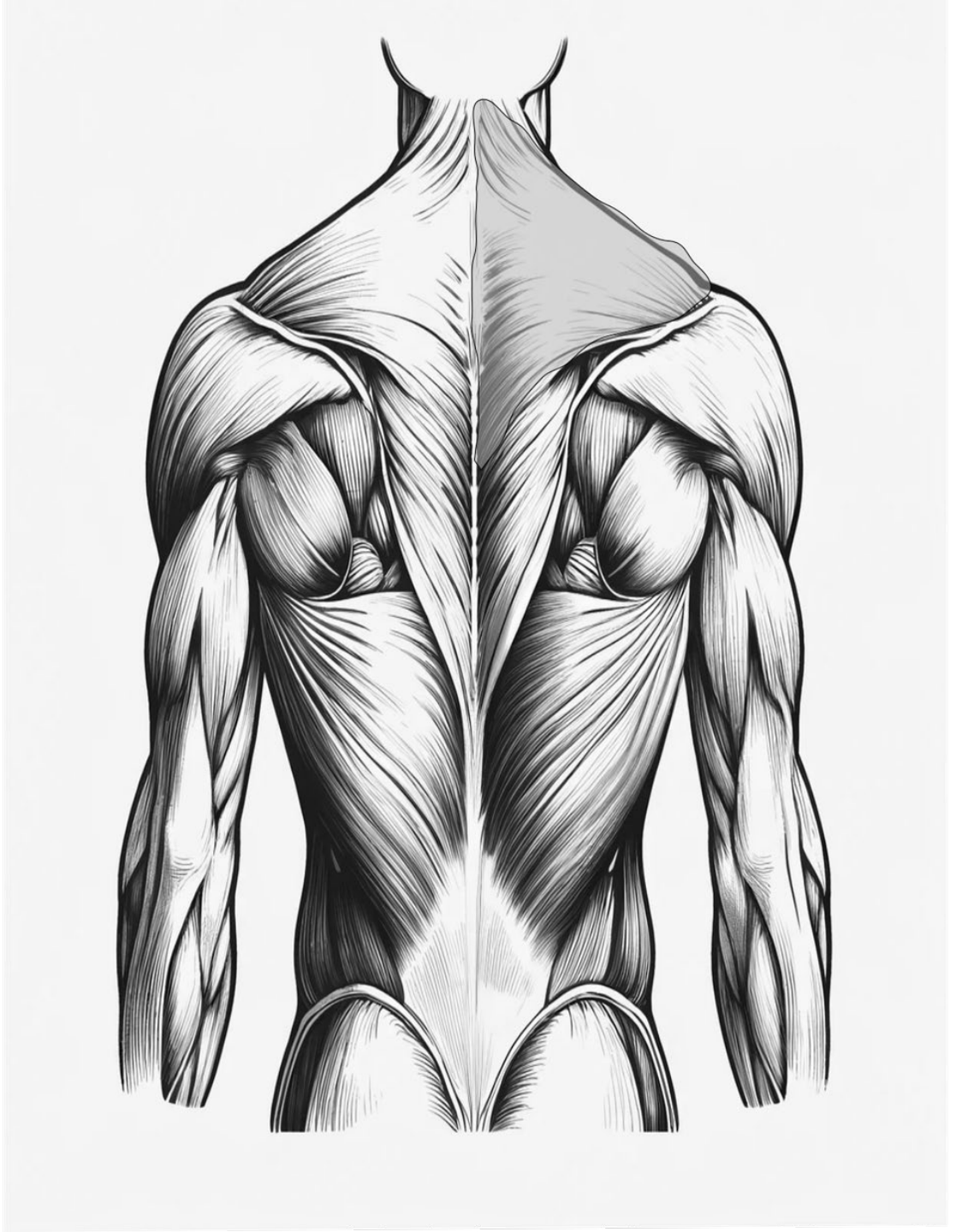
Disclosures

- **I have no relevant financial relationships with the manufacturer(s) of any commercial product(s)and/or provider(s) of commercial services discussed in this CME activity.**

- **I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.**

Objectives

1. **Be able to distinguish which patient presentations in the ED would benefit for OMT**
2. **Be able to identify TART and treat these patients**
3. **Understand the contraindications of doing OMT in the ED**

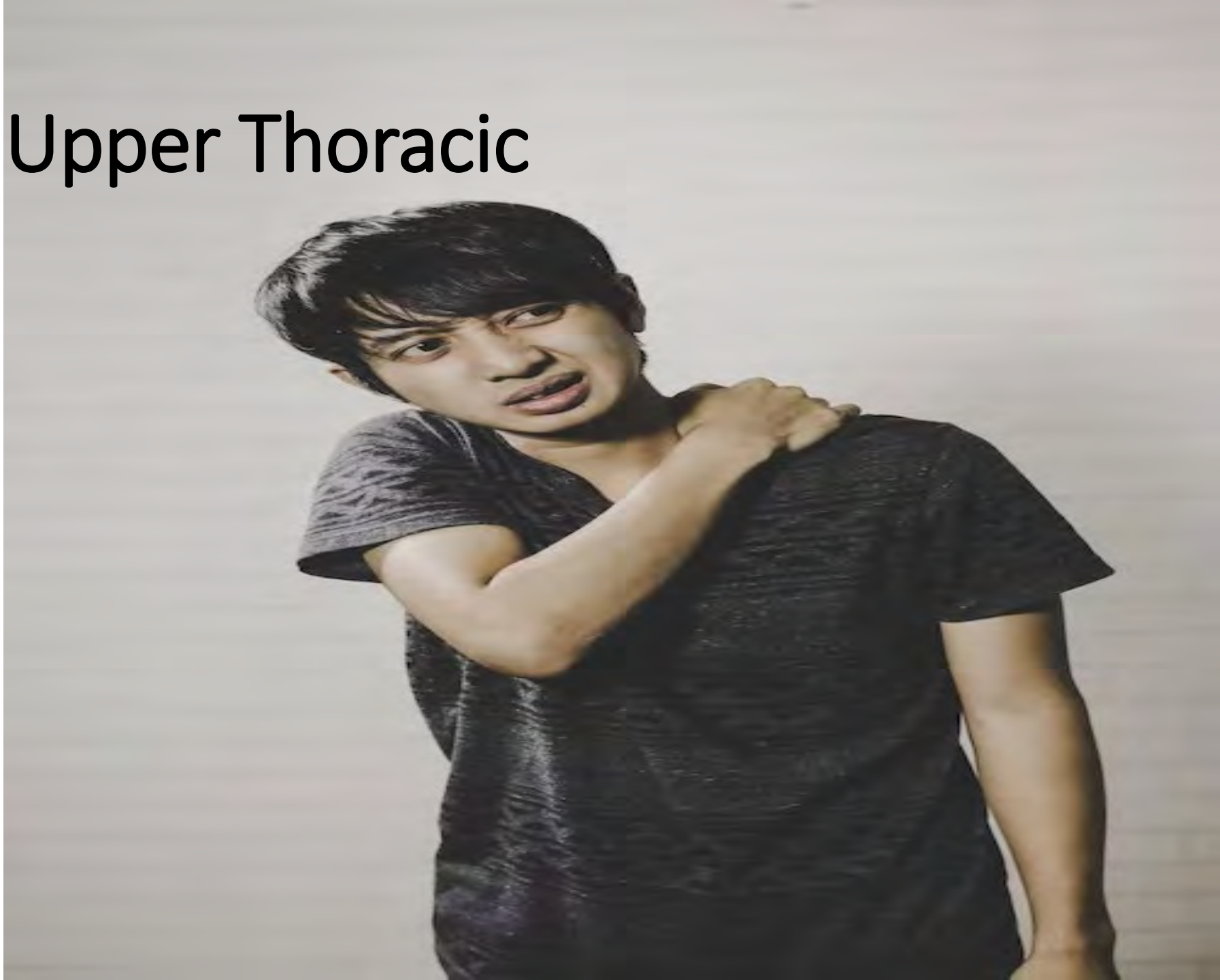


Use your tools

Sinus treatments

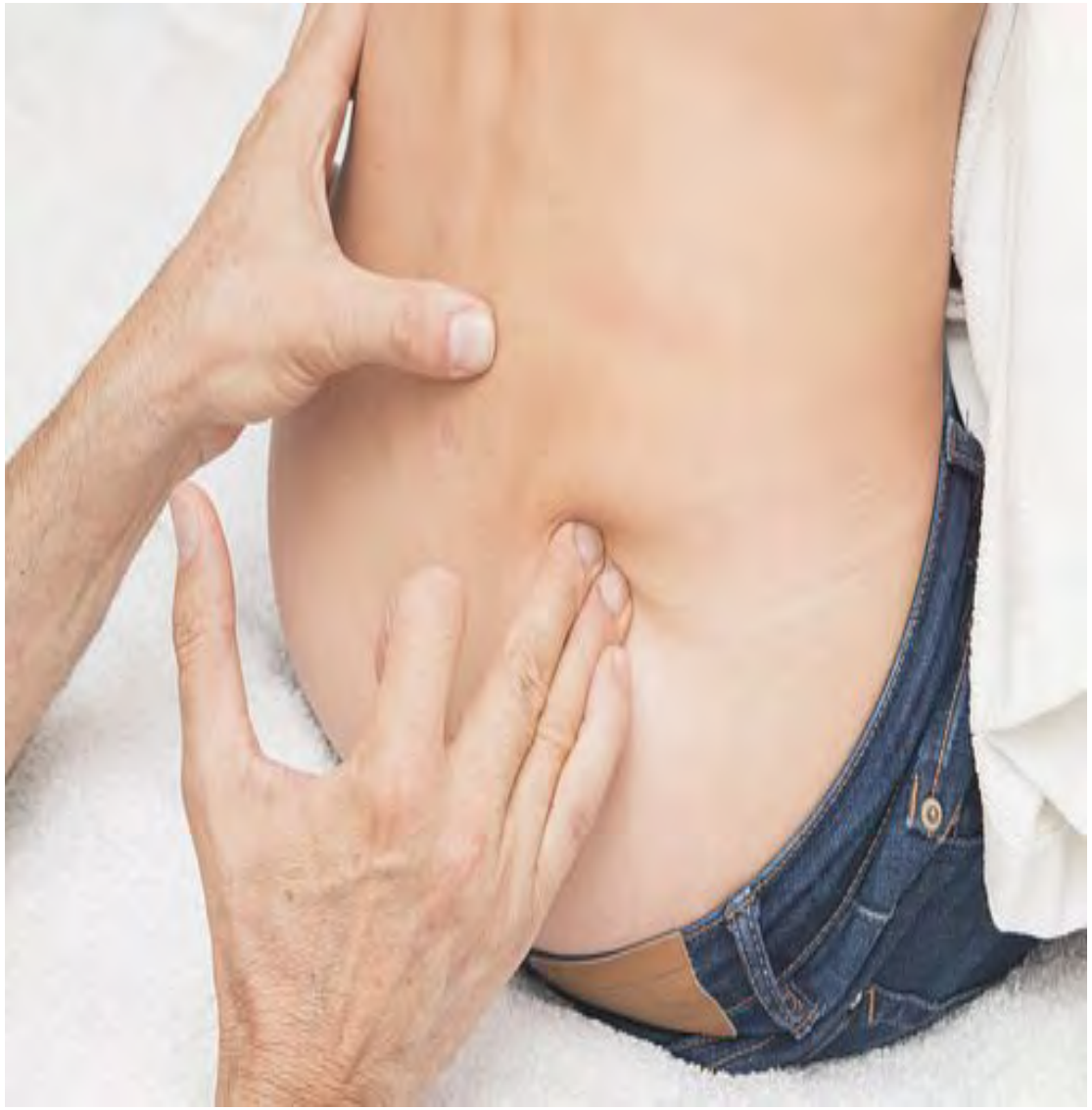
Cervical and Upper Thoracic

- Muscle energy
- Counterstain



Thoracic and trunk

- MFR/Soft tissue
- Muscle energy



Lumbar/pelvis

- Piriformis- counter strain
- Psoas – muscle energy

Constipation

RECAP

Thursday, December 12, 2024

COVID 19 AND AUTOIMMUNE DISEASE

J. Thomas Berry DO
Arnold Arthritis and Rheumatology

DISCLOSURES

I have no conflict

Involved with studies with Eli Lilly and AQTUAL

LEARNING OBJECTIVES

Review association between COVID 19 infection and autoimmune diseases

Examine early presentations of autoimmune disease common in primary care clinic

HIGH RISK OF AUTOIMMUNE DISEASES AFTER COVID-19

- SARS-CoV-2 infection leads to a spectrum of symptoms
- Substantial inflammatory response with pro-inflammatory cytokines and chemokines
- Increased rates new-onset autoimmune and inflammatory diseases

Jin, Y. et al. Virology, epidemiology, pathogenesis, and control of COVID-19. *Viruses* 12, 372 (2020).

AUTOIMMUNE CONDITIONS AND DISEASE

Autoimmune and inflammatory pathologies are linked to other infectious diseases

TWO LARGE STUDIES REVIEW THIS

Chang et al. Risk of autoimmune diseases in patients with COVID-19: A retrospective cohort study.

Tesch, F. et al. Incident autoimmune diseases in association with a SARS-CoV-2 infection: a matched cohort study.

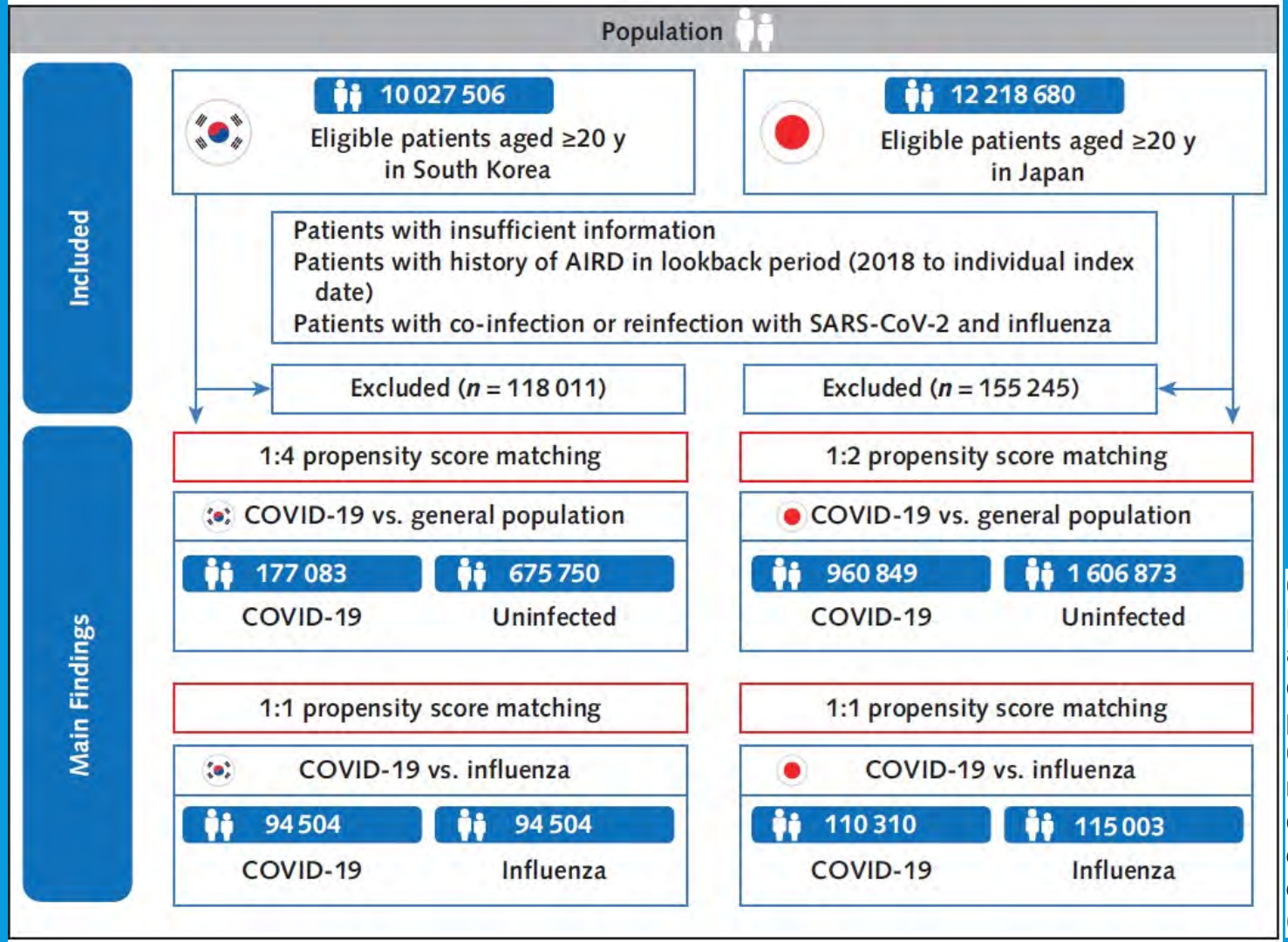
CHANG STUDY

5.9 million adults from 48 global health care organizations.

Two cohorts: COVID-19 and non-COVID-19 from 1 January 2020 to 31 December 2021

Influenza control group

Only unvaccinated individuals.



Chang, R. et al. Risk of autoimmune diseases in patients with COVID-19: A retrospective cohort study. *eClinicalMedicine* 56, 101783 (2023).

Chang, R. et al. Risk of autoimmune diseases in patients with COVID-19: A retrospective cohort study. *eClinicalMedicine* 56, 101783 (2023).

What is the the risk for incident autoimmune inflammatory rheumatic disease (AIRD) after COVID-19?

Korea 2020–2021

1:4 propensity score matching

COVID-19 vs. general population

177 083	675 750
COVID-19	Uninfected

1:1 propensity score matching

COVID-19 vs. influenza

94 504	94 504
COVID-19	Influenza

Japan 2020–2021

1:2 propensity score matching

COVID-19 vs. general population

960 849	1 606 873
COVID-19	Uninfected

1:1 propensity score matching

COVID-19 vs. influenza

115 003	110 310
COVID-19	Influenza

Adjusted Hazard Ratio (95% CI)

	COVID-19 vs. General Population	COVID-19 vs. Influenza
South Korea	1.25 (1.18–1.31)	1.30 (1.02–1.59)
Japan	1.79 (1.77–1.82)	1.14 (1.10–1.17)

Annals of Internal Medicine

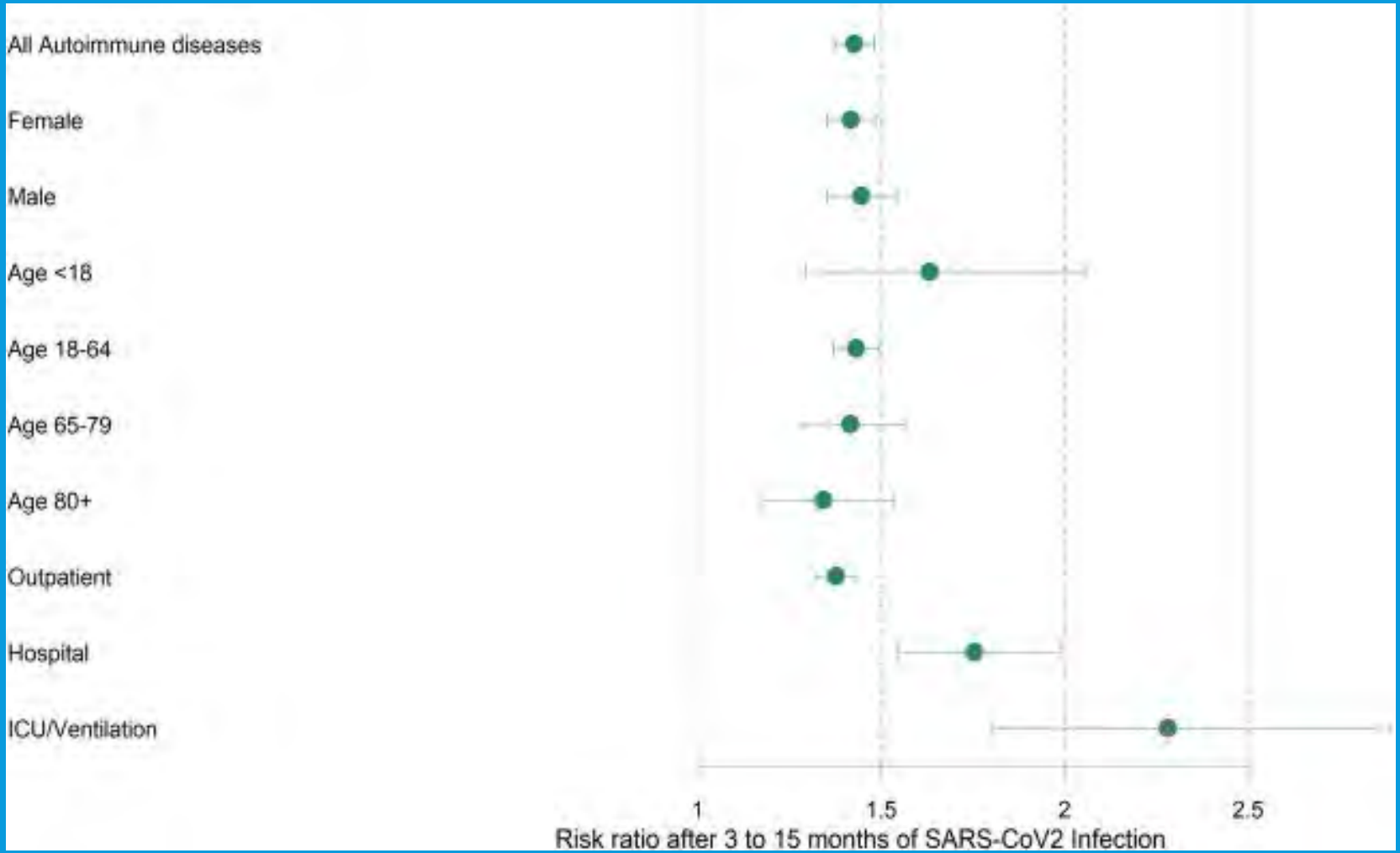
Kim MS, Lee H, Lee SW, et al. Long-term autoimmune inflammatory rheumatic outcomes of COVID-19: A binational cohort study. Ann Intern Med. 5 March 2024. [Epub ahead of print]. doi:10.7326/M23-1831
http://acpjournals.org/doi/10.7326/M23-1831

TESCH ET. AL

640,701 vaccination-naive individuals with COVID-19 during 2020

42.6% higher likelihood of acquiring an autoimmune condition 3–15 months after infection compared with a non-COVID-19 cohort

Tesch F, Ehm F, Vivirito A, Wende D, Batram M, Loser F, Menzer S, Jacob J, Roessler M, Seifert M, Kind B, König C, Schulte C, Buschmann T, Hertle D, Ballesteros P, Baßler S, Bertele B, Bitterer T, Riederer C, Sobik F, Reitzle L, Scheidt-Nave C, Schmitt J. Incident autoimmune diseases in association with SARS-CoV-2 infection: a matched cohort study. Clin Rheumatol. 2023 Oct;42(10):2905-2914. doi: 10.1007/s10067-023-06670-0. Epub 2023 Jun 19. Erratum in: Clin Rheumatol. 2023 Oct;42(10):2919-2920. doi: 10.1007/s10067-023-06692-8. PMID: 37335408; PMCID: PMC10497688.


All Autoimmune diseases
Female
Male
Age <18
Age 18-64
Age 65-79
Age 80+
Outpatient
Hospital
ICU/Ventilation
1
1.5
2
2.5
Risk ratio after 3 to 15 months of SARS-CoV2 Infection

RELATED TO IMMUNE DYSREGULATION?

- Molecular mimicry
- Bystander activation of immune cells
- Release of autoantigens from tissue damaged by the virus

1 NEW DISEASE

Multisystem inflammatory syndrome in children MIS-C, the new-onset autoimmune diseases reported to follow COVID-19.

-Similar to Kawasaki

No new autoimmune diseases otherwise

POTENTIAL PROTECTION FROM VACCINES

Hong Kong study

A retrospective cohort study was done between 1 April 2020 and 15 November 2022

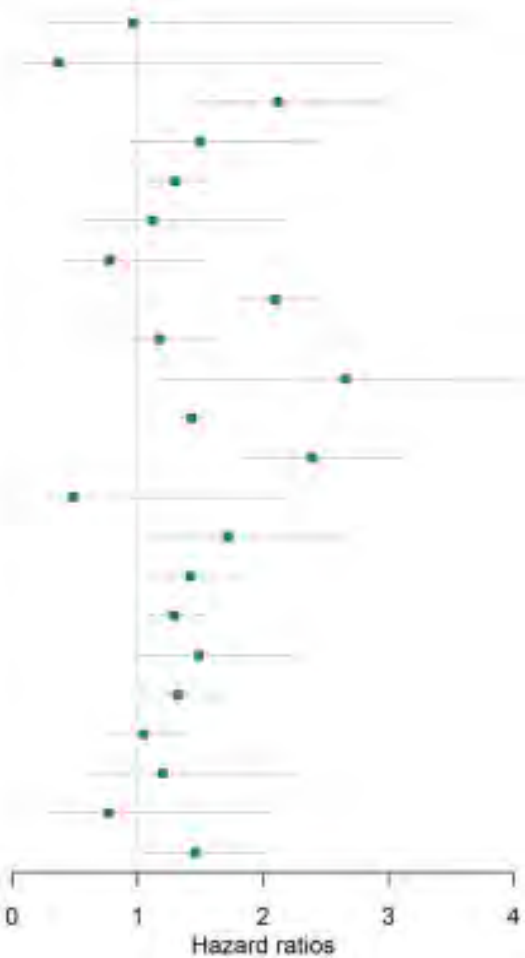
COVID-19 vaccinated population was compared against COVID-19 unvaccinated population to examine the protective effect of COVID-19 vaccination on new autoimmune diseases

Increased risk of developing various autoimmune disease could be attenuated by COVID-19 vaccination.

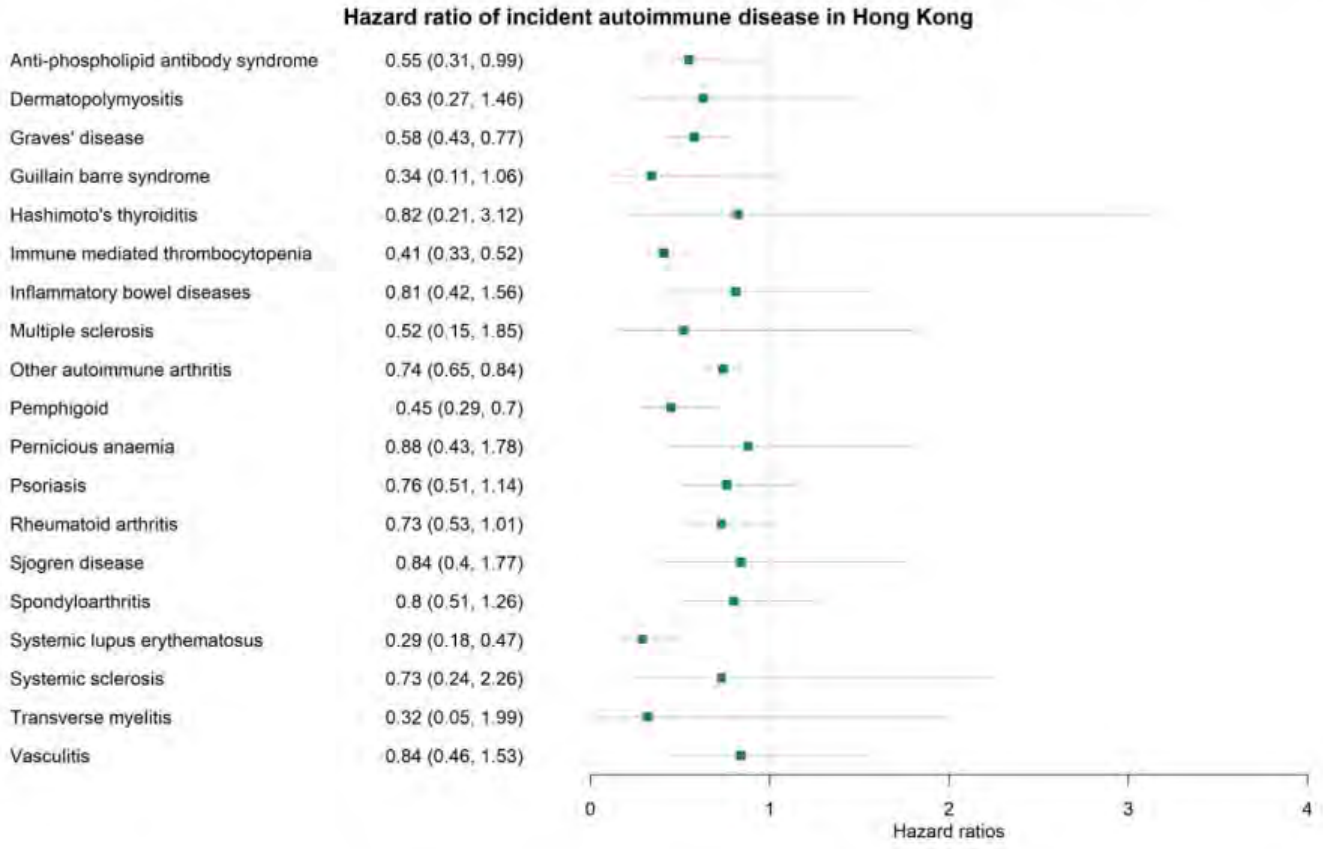
Risk of autoimmune diseases following COVID-19 and the potential protective effect from vaccination: a population-based cohort study. Peng, Kuan et al. eClinicalMedicine, Volume 63, 102154

Hazard ratio of incident autoimmune disease in Hong Kong

Disease	Number (Non-COVID)	Number (COVID)	Hazard Ratio
Acute disseminated encephalomyelitis	10	3	0.96 (0.26, 3.61)
Alopecia areata	8	1	0.37 (0.05, 2.96)
Anti-phospholipid antibody syndrome	76	50	2.12 (1.47, 3.05)
Dermatopolymyositis	54	24	1.5 (0.92, 2.45)
Graves' disease	482	204	1.3 (1.1, 1.54)
Guillain barre syndrome	37	12	1.12 (0.58, 2.19)
Hashimoto's thyroiditis	45	11	0.78 (0.4, 1.54)
Immune mediated thrombocytopenia	512	308	2.1 (1.82, 2.43)
Inflammatory bowel diseases	125	48	1.17 (0.83, 1.64)
Multiple sclerosis	13	11	2.66 (1.17, 6.05)
Other autoimmune arthritis	2416	1028	1.43 (1.33, 1.54)
Pemphigoid	152	95	2.39 (1.83, 3.11)
Pemphigus vulgaris	15	2	0.49 (0.11, 2.19)
Pernicious anaemia	69	33	1.72 (1.12, 2.64)
Psoriasis	258	114	1.42 (1.13, 1.78)
Rheumatoid arthritis	473	180	1.29 (1.09, 1.54)
Sjogren disease	76	33	1.49 (0.98, 2.27)
Spondyloarthritis	222	91	1.32 (1.03, 1.69)
Systemic lupus erythematosus	217	67	1.05 (0.79, 1.39)
Systemic sclerosis	35	14	1.2 (0.64, 2.25)
Transverse myelitis	20	5	0.77 (0.28, 2.09)
Vasculitis	118	51	1.46 (1.04, 2.04)



Supplementary Figure 5 Protective effect of COVID-19 vaccine among COVID-19 patients (≥2 doses versus 0-1 dose) *



*COVID-19 vaccinated (2/3/4 dose) population versus COVID-19 unvaccinated (0/1 dose) population, adjusting for age, sex, Charlson comorbidity index

EARLY MANIFESTATIONS OF RHEUMATIC DISEASE

33 y/o F presents with worsening joint pain across the 2-5 PIP joints bilaterally. Had a COVID 19 infection 3 months prior.

-Sed rate 4

-CRP 1.1

-ANA + 1:160 speckled pattern

-RF, CCP negative. ENA panel is negative. c3/c4 within normal limits

-CMP/ CBC unremarkable

ANOTHER SAMPLE CASE

28 y/o F presents with low back pain. She had a COVID 19 infection 4 months ago. She reports AM stiffness and pain in her low back pain for the past 3 months. Pain localized in the neck and the SI joints. NSAIDs help her pain, but she generally avoids medication.

-HLA B27 negative

-hsCRP 3.5 (normal 0-3)

-sed rate 17

-CMP/CBC WNL

-RF/ CCP/ ANA negative

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