



Primary Care RAP October 2020 Written Summary

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Intro: The Lone Node

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Pearls:

- Most unexplained lymphadenopathy is benign and self-limited, with only about 1% related to malignancy.
- History and physical exam will give you clues to potential sources. Unless there are red flags or high risk features, it is ok to wait a month before further work-up.
- Ultrasound with FNA is your diagnostic modality of choice.

- Reader question: What do you do about a lone, random, asymptomatic lymph node?
 - * See May 2020 Peds episode to hear more about pediatric lymphadenopathy *
 - Basics:
 - Lymph nodes and vessels are present throughout the body
 - Filter foreign particles like viral particles to cancer cells
 - Epidemiology:
 - Most of the time its benign and self-limited
 - Only about 1% of unexplained lymphadenopathy is related to malignancy
 - Age matters:
 - > 40, 4% related to malignancy
 - < 40, 0.4% related to malignancy
 - Most common sites:
 - Cervical nodes in the head and neck, axillary and inguinal nodes
 - History:
 - Cancer B symptoms - fever, night sweats, unintentional weight loss, bruising
 - Infection - fever, sore throat, malaise, URI symptoms
 - HIV - high risk sexual behavior or injection drug use
 - Autoimmune - fever, rash, muscle weakness / pain
 - Duration
 - Greater than 12 months without changes is reassuring
 - Physical:

- Ensure it truly is one node and not generalized lymphadenopathy
- Example of how location and surrounding findings can be informative:
 - Preauricular nodes - abrasions on scalp or trauma to scalp
 - Submandibular and cervical nodes - URI, mononucleosis, dental issues
 - Ominous nodes - drain the GI, GU and pulm so assume malignancy until proven otherwise
 - left supraclavicular = Virchow's Node = GI malignancy
 - Infraclavicular = non-Hodgkin's lymphoma
 - Axillary nodes - skin infections or trauma, ingrown hairs, breast pathology
 - Inguinal nodes - STI's, genital sarcomas, mononucleosis
- Size:
 - No specific size has been shown to be indicative of malignancy
 - Shotty lymphadenopathy: multiple small nodes meant to feel like buckshot under the skin that is usually reaction to viral infection
- Consistency:
 - If tender likely means inflammation
 - Painless, hard, immobile more suspicious for malignancy
 - Matting or clustering of nodes is more indicative of cancer
- **Diagnostics:**
 - If low risk (less than 40, no systemic symptoms, no other regions involved, not longer than 4 weeks), ok to wait 4 weeks and monitor
 - If no resolution or higher risk features, then consider fine needle aspiration with ultrasound
 - FNA has very high sensitivity around 85-95%, specificity 98-100%
 - CT contrast is also useful for lymph nodes of head and neck
- **Treatment:**
 - Don't treat empirically with antibiotics or steroids

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NEONATAL HYPERBILIRUBINEMIA

Lakecia Pitts, MD, Matthew Zeitler, MD

Pearls:

- **Hyperbilirubinemia and jaundice is very common and the leading cause of hospital admission for newborns.**
- **If untreated, it can lead to permanent neurologic damage.**
- **Visual inspection is not reliable.**

- **Epidemiology:**
 - Very common affecting 84% of newborns in the US
 - Leading cause of hospital admission for newborn
 - Severe hyperbilirubinemia is rare (<2% of cases)
- **Pathophysiology:**
 - Red blood cells get broken down into bilirubin
 - Unconjugated bilirubin crosses the blood-brain barrier leading to Bilirubin-induced Neurologic Dysfunction (BIND). Reversible if treated but if not can lead to kernicterus and permanent development delay + disability
 - Three main causes:
 - Production
 - Elimination
 - Increased absorption in the liver + gut (enterohepatic circulation)
 - Most common reasons:
 - 1. Breast Milk Jaundice - increased enterohepatic circulation
 - Pearl: starts day 3-7 and peaks around day 14
 - 2. Physiologic - immature bilirubin pathway
 - Pearl: peaks on days 3-5
 - 3. Breastfeeding failure - decreased clearance, increased absorption
 - Pearl: peaks on days 3-4 before breast milk is in and weight is down 8-10%
 - Less common:
 - Increased production
 - Hemolysis
 - Pearl: think about if jaundice in first 24 hours
 - Sepsis
 - Decreased clearance
 - Intestinal obstruction
- **Exam:**
 - Head to toe inspection

- Jaundice starts at head and goes to toes
 - Eyes: Check sclera for icterus
 - Skin:
 - Blanch skin to get a sense of the underlying skin tone
 - In children of color, it may be harder to assess jaundice
 - Neuro:
 - Hypertonicity is hallmark of severe hyperbilirubinemia
 - High-pitched cry
- **Diagnostics:**
 - Transcutaneous bili is good unless:
 - 1. Bili > 15
 - 2. < 35 weeks
 - 3. Received phototherapy because it blanches the skin
 - If phototherapy needed also check:
 - CBC
 - Peripheral smear
 - Reticulocyte count
 - Direct bili
 - Coombs
- **Universal screening:**
 - AAP says you can do universal screening with transcutaneous, serum bili or screen based on risk factors
 - USPSTF and AAFP say insufficient evidence that screening impacts outcomes
 - Institutions will vary on their policies around checking bilirubin levels; however, those with risk factors (trauma during delivery, concern for sepsis, preterm or late preterm, ABO incompatibility) will generally have some protocol for checking newborns prior to discharge
- **Treatment:**
 - Check out www.bilitool.org to help determine both when to check a bilirubin level and when to initiate therapy
 - Hydration:
 - Support mothers to feed every 2-3 hours, supplement with formula if needed and even IV fluids as last resort but **“breast is best”**
 - Phototherapy - institution-specific options for hospital-based v. home-based treatment
 - Triple therapy
 - Quadruple therapy
 - Bili blanket (one light) that can be used at home
 - Safe, effective, rare complications but may extend hospital stay
 - Exchange transfusion:
 - Reserved for very high levels
 - Done in ICU

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CANCER SURVIVORSHIP

Cathy Handy Marshall MD, MPH, Neda Frayha MD

Pearls:

- **National Comprehensive Cancer Network and American Society of Clinical Oncologists are a good resource for primary care providers that have survivorship care plans for a variety of cancers.**
- **Why important?**
 - Number of cancer survivors is 15 million and growing
 - Survivors are living longer because treatment is getting better
 - Immunotherapy has effects years down line after treatment
- **Considerations for cancer survivors:**
 - 1. Are they at increased risk of cancer coming back?
 - Varies widely by cancer
 - Hormone positive breast cancer has increased risk of recurrence post-menopause

- Diffuse large B-cell lymphoma recurrence drops dramatically after 5 years
 - 2. Are they at risk of a second cancer?
 - The exposure that led to the first cancer can put them at increased risk for another cancer (ie: smoking that lead to throat cancer also puts them at risk for lung cancer)
 - 3. Are there late effects of treatment?
 - Childhood survivors of cancer are at increased risk of cardiovascular disease and age prematurely as a result of treatment
 - 4. Are they at increased risk of other cancers due to genetics?
 - With more genetic testing coming online, we are learning more about certain risk it poses for other cancer types
- **Resources:**
 - American Society of Clinical Oncologists
 - National Comprehensive Cancer Network
 - Both have documents and templates for survivorship plans that oncologists fill out to aid the primary care doctor
- **Diseases to worry about in cancer survivors:**
 - CV disease is the number one cause of death in cancer patients
 - Immune-related disease can be triggered by immunotherapy long after treatment. For example, DM1 can develop with these drugs.
 - Neuropathic pain and fatigue may be long-term effects of cytotoxic drugs
 - Fertility is an issue that can come up with childhood survivors of cancer
- **Other preventative measures:**
 - Vaccines
 - Exercise
 - Healthy eating
 - Obesity is set to overtake tobacco as the leading preventable cause of cancer

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TIDBSI: LOW-DOSE CT SCREENING

Justin McCarthy, MD; Paul D Simmons, MD

Pearls:

- **Low-dose CT screening has pro's and con's that may warrant a more extended informed consent discussion with patients.**
- **95% of findings on low-dose CT are false positives.**
- **Background:**
 - Lung cancer is the leading cause of cancer-related death in the US, accounting for 28% of all cancer deaths
 - Biggest risk factor is smoking
 - Poor prognosis: 5-year survival rate for advanced cancer is 15-17%
 - If caught early (stage 1), there is better prognosis for resection of the diseased lung approaching 50% 5-year survival
- **Guidelines:**
 - USPSTF guidelines in 2013 recommended low dose CT for screening but only 2-3% of those 8 million American eligible received it
 - **Recommendation:** Annual screening for lung cancer with low dose CT in adults aged 55-80 that have a 30-pack year smoking history and are currently smoking or quit within the past 15 years. Should discontinue once they have quit for 15 years or have another life-limiting condition
 - Supported by the ALA, ATS, ACS, ACCP and ACR but not AAFP
- **National Lung Screening Trial (NLST):**
 - Important trial for basis of current recommendations
 - Followed cohort of smokers (53,000) who were randomized to either 3 annual low dose CT scans or usual care (annual chest x-ray)
 - Relative reduction in mortality in the low dose CT group by 20%
 - After following for 5 years, they saw absolute risk reduction in mortality of 0.3%
- **Nelson Trial:**
 - Netherlands

- 15,000 people, 84% male
- Followed for 10 years with periodic low dose CT at 0, 1, 3 and 5.5 years
- Relative risk reduction 24% men, 33% women
- Absolute risk reduction (2.5 to 3.3 deaths per 1000 patient years)
- Subgroup analysis of 13,000 people that looked at volume-based evaluation of nodules on CT showed same relative risk reduction but lower false positive rate
- **Pros of screening:**
 - If caught early, prognosis improves
 - Relative risk reduction (lower absolute risk reduction)
 - Other than the radiation exposure, risk is low
- **Cons of screening:**
 - Radiation exposure
 - False negatives
 - False positives (1 in 78)
 - 95% of all positives are not cancers
 - Number needed to harm around 19
 - Overdetection: one USPST model estimates 10-12% of cancers would not have been detected except on autopsy

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DELIRIUM: PARTS 1 & 2

Jenny Littrivis MD, Neda Frayha MD

Pearls:

- Delirium is an acute confusional state that has an underlying medical etiology that can be assessed through the CAM method.
- Prevention of delirium by 40% can happen through focus on 6 factors:
 - 1. Visual impairment
 - 2. Hearing impairment
 - 3. Sleep deprivation
 - 4. Dehydration
 - 5. Immobilization
 - 6. Cognitive impairment
- **Definition:**
 - Delirium = acute confusional state that fluctuates over the course of a day due to an underlying medical condition (ie: infection, metabolic abnormalities, medications, kidney injury, lack of sleep)
 - Subsets:
 - 25% hyperactive
 - 75% mixed or hypoactive
- **Consequences:**
 - Functional impairment
 - Institutionalization
 - Cognitive impairment / dementia
 - Meta analysis from 2010 showed individuals with delirium had increased risk of dementia at 4 year follow-up (62% vs. 8%)
 - Mortality
 - Studies continue to show delirium is an independent marker of mortality
 - The longer the delirium the higher the risk of death
- **Epidemiology:**
 - Up to 1/3 of people over 70 admitted to general medicine service experience delirium
 - Exceed 75% for those admitted to ICU and 85% at end of life
 - Hypoactive subtype has poorer prognosis
- **Predisposing factors:**
 - Advanced age
 - Preexisting dementia
 - Sensory deficits
 - Functional impairment

- Multimorbidity
- **Assessment:**
 - Confusion Assessment Method (CAM) - need 1 AND 2 + 3 or 4
 - 1. Acute onset and fluctuating course (based on history)
 - 2. Inattention (count backwards from 20, spell 'world' backwards)
 - 3. Disorganized thinking (ask orientation questions - 'where are you?', 'why are you here?')
 - 4. Altered level of consciousness
 - History is the main tool for assessment:
 - Symptoms of infection
 - Medication changes
 - Physical exam
 - **Pearl:** No imaging necessary unless new focal deficits
 - Basic labs - CBC, CMP +/- blood cultures, CXR

3-Minute Diagnostic Interview for Delirium Using the Confusion Assessment Method (3D-CAM)* Adapted from Marcantonio. <i>N Engl J Med</i> 2017				
Type of Assessment	Feature 1: Acute Change in Mental Status with a Fluctuating Course**	Feature 2: Inattention	Feature 3: Disorganized Thinking	Feature 4: Altered Level of Consciousness
Patient responses: any positive symptom report, incorrect response, lack of response, or nonsense response indicates that the feature is present	Ask whether patient has experienced the following in the past day: -Being confused -Thinking that he or she is not in the hospital -Seeing things that are not really there	Ask patient to do the following: -Digit span (3 digits) backward -Digit span (4 digits) backward -Days of the week backward -Months of the year backward	Ask patient to state the following: -The current year -The day of the week -The type of place (hospital)	None
Interviewer observations: any "yes" indicates that the feature is present	Were there fluctuations in the level of consciousness? Fluctuations in attention? Fluctuations in speech or thinking?	Did the patient have trouble keeping track of the interview? Was the patient easily distractible?	Was the patient's flow of ideas unclear or illogical? Conversation rambling or tangential? Speech unusually limited or sparse?	Was the patient sleepy?*** Stuporous or comatose? Hypervigilant?
<p>*The CAM algorithm requires the presence of features 1 and 2 and either 3 or 4 to diagnose delirium. Adapted from Marcantonio et al.</p> <p>**A supplemental assessment of feature 1 is to be performed only if feature 2 and either feature 3 or 4 is present but feature 1 is not present; on the first 3D-CAM assessment, any evidence of an acute change in mental status from the medical record or from a family member or from a healthcare provider indicates that feature 1 is present; on the second or later assessment, any new incorrect answer or positive symptom or observation since the previous 3D-CAM assessments indicates that feature 1 is present.</p> <p>***The patient must actually fall asleep during the interview.</p>				

- **Management:**
 - Non-pharmacologic interventions are first-line:
 - Orienting measures
 - Bed near window helps with circadian rhythm and sleep
 - Let them know your name, why they are in the hospital, time and place
 - Tend to sensory impairments (ie: glasses, hearing aids)
 - Movement out of bed to prevent bed sores, deconditioning. Constipation
 - Avoid catheters
 - Avoid physical restraints
 - Family member at bedside
 - Medications to avoid:
 - Anticholinergics (see Beer's list)
 - Pharmacologic: there are no FDA-approved meds for delirium
 - Table 5 in Marcantonio et al's *N Engl J Med* article from 2017 shows different pharmacologic options for agitated delirium
 - Antipsychotic - start low and go slow (haloperidol 0.25mg, risperidone 0.25mg)
 - Careful of QT prolongation, sedation, extrapyramidal symptoms
 - Increase in mortality associated with it
 - Pearl: Do not use benzodiazepines. It can prolong delirium and should be reserved for use if the delirium is caused by alcohol or benzo withdrawal
- **Prevention:**
 - Seminal study in 1999 by Sharon Inouye showed 6 modifiers could reduce incidence of delirium by 40%
 - 1. Visual impairment
 - 2. Hearing impairment
 - 3. Sleep deprivation
 - 4. Dehydration
 - 5. Immobilization
 - 6. Cognitive impairment

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Warts

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Pearls:

- Warts are caused by HPV and therefore caution should be used by patient and provider to not further spread the virus with treatment.
- Certain types of skin cancer and precancerous lesions can resemble warts.
- Avoid cryotherapy on the face as this can cause scarring.
- Frequent and large numbers of warts can be an indicator of undiagnosed immune deficiency.

Basics

- Warts are viral skin infections caused by HPV (human papillomavirus) which cause hyperproliferation of keratinocytes.
- There are >200 types of HPV. Those that cause cervical, anal, and penile cancers are different strains than those that cause warts.
- Warts are very common and affect ~15% of the population.

Types of Warts

- **Verruca vulgaris**, or the common wart, can occur on any keratinized epithelium (ie: skin).
- **Verruca plana**, or flat warts, are less obvious and commonly occur on the face or legs and are spread by shaving.
- **Plantar warts** occur on the foot and can be painful and grow inward making treatment difficult.
 - Can be differentiated from corns by black specks representing the blood vessels supplying them.
 - **Differentiating corns/calluses from plantar warts can be facilitated by paring them down with a scalpel. This is just removal of dead skin and does not require anesthetic.**
- **Filiform warts** are so named because they have finger-like projections and look like skin tags.

Other Differential Diagnosis Considerations

- **Molluscum contagiosum** is caused by the pox virus and has a central dimple/umbilication.
- **Syringoma** are benign tumors of the sweat ducts and can be confused for flat warts.
 - Most commonly seen around the eyes and eyelids
- **Actinic Keratosis, Seborrheic Keratosis, & Squamous Cell Cancer**
 - Many of these can resemble warts and may require a biopsy to differentiate.

Transmission

- Transmission is generally from direct contact, however the virus can also be acquired from fomites. This is most evident in plantar warts from public pools and locker room floors.

Management

- Most warts in immunocompetent patients will resolve within several years.
- The first line treatment is **salicylic acid**, but it requires multiple treatments for the wart to resolve.
 - After each treatment, the macerated skin should be abraded away with a tool such as pumice or a nail file.
 - A small nail clipper can also be used to trim the wart.
 - **These tools should only be used for wart treatment to avoid spreading HPV to other parts of the body.**

Dr. Brittney DeClerck's Patient Guide to Salicylic Acid Use:

- Day #1: Wash the area with warm water to soften the skin. Then apply a small amount of salicylic acid, and then cover with an occlusive dressing (ie: duct tape or Moleskin) for 24 hours.
- Day #2: Remove dressing and macerated skin. Reapply salicylic acid and dressing. Repeat until wart is gone (generally 1-6 weeks).

- **Liquid nitrogen** is effective but painful, limiting its utility on children.
 - Generally, several repeat treatments may be necessary. Patients should be referred back to their PCP or dermatologist for follow-up in ~2 weeks.
 - Aim for turning the wart and 1-2 mm of surrounding tissue white.
 - Freeze for ~12 seconds and then allow 30 seconds of thawing to prevent scarring.
 - Reapply 2-3x per session.
 - **Avoid using liquid nitrogen on the face due to possibility of scarring.**
- Dermatologists have various other treatments they use for resistant warts such as cantharidin, trichloroacetic acid, laser, and immune system stimulation with imiquimod, cimetidine, Candidal antigen injections.
- **Flat Warts should generally be managed by a dermatologist because they are harder to remove and often cover a wider surface area.**
- HPV vaccination may slightly reduce risk and severity of cutaneous warts, but data are not yet clear.

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Carbon Monoxide Toxicity

Cyrus Rangan, MD, Ilene Claudius MD, and Parul Bhatia, MD

- **Carbon Monoxide (CO) is considered a silent killer; it is colorless and odorless and therefore prevention is key.**
 - Risk factors include: unconventional means to heat the home (kerosene heaters, leaving the stove open), running a gas generator in the home for electricity, being near a gas powered motor boat for an extended period of time (especially when the boat is idling) as these methods lead to the incomplete combustion of materials in which CO is produced instead of carbon dioxide.

- CO monitors are advisable.
- Mild CO poisoning symptoms include headaches and lightheadedness. Generally, children have more severe symptoms even when exposed to the same levels as adults. More severe symptoms include coma.
 - When asking about potential exposures, it is reasonable to ask the following questions:
 - If there are pets in the home, how they are acting?
 - How do you feel when you leave the home?
- CO is measured in the blood using a carboxyhemoglobin level (COhb). This level can be affected by the amount of O₂ in a person's blood and the time of exposure to the time of testing and therefore it is not a perfect test. CO can also attach to iron containing groups in the body and can affect end organs as well.
 - Therefore, if a patient is symptomatic and you suspect CO poisoning, it is better to complete the assessment prior to sending the patient home.
 - If the home is the potential exposure, calling the gas company is prudent.
- 100% O₂ is the therapy for elevated CO levels and can be stopped when the COhb is at a normal level and the patient is asymptomatic.
 - Using hyperbaric therapy is controversial. If a patient has been severely poisoned with a very high COhb level (60-70%) and/or the patient has a special circumstance (i.e. pregnancy), it can be considered.
- The real risk of a natural gas leak that you **can** smell is not toxic but rather a higher risk of explosion. The fuel for natural gas is methane (colorless, odorless, nontoxic) but the smell is actually a sulfur based compound that is added to the natural gas.
 - When this is smelled, the correct action is to leave the home and call the gas company and the fire department.

MAILBAG: SMORGASBORD

Aisha Lofters MD, Neda Frayha MD

Resources:

1. Choosing Wisely for Uncomplicated Overactive Bladder Workup. American Urogynecologic Society. Released May 5, 2015. Accessed July 10, 2020. <https://www.choosingwisely.org/clinician-lists/augs-uncomplicated-overactive-bladder-work-up/>
2. Infant Risk hotline: (806) 352-2519

Paper Chase #1 - Association of Statin Use With All-Cause and Cardiovascular Mortality in US Veterans 75 Years and Older

Tom Robertson MD, Steve Biederman MD

Orkaby AR, Driver JA, Ho YL, et al. Association of Statin Use With All-Cause and Cardiovascular Mortality in US Veterans 75 Years and Older. *JAMA*. 2020;324(1):68-78. doi:10.1001/jama.2020.7848

Pearls:

- **New statin use was significantly associated with a lower risk of mortality in US veterans > 75 years of age.**
- **Objective:** To assess mortality benefit of statins for primary prevention in US veterans over age 75
- **Method:** Retrospective cohort study of veterans >75 yrs old without ASCVD followed for 6.8 years
 - Primary outcome: all-cause mortality and CV mortality
- **Results:**
 - 300,000 veterans
 - 17.5% were started on statin during the study period. More likely to have comorbidities like hypertension, diabetes, hyperlipidemia
 - Those on statin had lower all-cause mortality (HR 0.75) and CV mortality (HR 0.8)
 - Highest mortality benefit seen in first two years of starting statin
- **Bottomline:** New statin use was significantly associated with a lower risk of mortality in US veterans > 75 years of age

Paper Chase #2 - Triple Inhaled Therapy at Two Glucocorticoid Doses in Moderate-to-Very-Severe COPD

Tom Robertson MD, Steve Biederman MD

Rabe KF, Martinez FJ, Ferguson GT, et al. Triple Inhaled Therapy at Two Glucocorticoid Doses in Moderate-to-Very-Severe COPD. *N Engl J Med*. 2020;383(1):35-48. doi:10.1056/NEJMoa1916046

Pearls:

- **Triple therapy at either dose resulted in a lower rate of COPD exacerbations.**
- **Objective:** Evaluate safety and efficacy of triple therapy at two dose levels of inhaled glucocorticoid in patients with moderate-to-very-severe COPD
- **Method:** randomized double-blind parallel-group trial in 26 countries (4 different groups of randomization) with differing doses of ICS, LABA and LAMA compared to dual-therapy. Followed for one year.
 - Adults with severe COPD
 - Primary endpoint annual rate of COPD exacerbations
- **Results:**
 - 8500 patients enrolled

- Rates of exacerbation were similar between two triple therapy groups, both lower than dual therapy
- Worse was LAMA/LABA
- More pneumonia and oropharyngeal candidiasis in ICS group (3.5%) v. LAMA/LABA (2.3%). No other difference in fracture, diabetes or cataracts
- **Bottomline:** Triple therapy at either dose resulted in lower rate of COPD exacerbations

Paper Chase #3 - Association Between Oral Corticosteroid Bursts and Severe Adverse Events: A Nationwide Population-Based Cohort Study

Tom Robertson MD, Steve Biederman MD

Yao TC, Huang YW, Chang SM, Tsai SY, Wu AC, Tsai HJ. Association Between Oral Corticosteroid Bursts and Severe Adverse Events: A Nationwide Population-Based Cohort Study [published online ahead of print, 2020 Jul 7]. *Ann Intern Med.* 2020;10.7326/M20-0432. doi:10.7326/M20-0432

Pearls:

- **Serious adverse events are associated with short bursts of steroids and are most common within the first month.**
- **Objective:** To examine the association between short course or oral steroids and serious adverse events
- **Method:** Retrospective case series using a national database in Taiwan looking at serious adverse events after a short course of steroids (< 14 days). Adverse events were GI bleed, sepsis and heart failure
- **Results:**
 - GI bleed was most common
 - Events were more common within first 30 days
- **Bottomline:** Serious adverse events are associated with short bursts of steroids and are most common within the first month.

Paper Chase #4 - L-thyroxine Therapy for Older Adults with Subclinical Hypothyroidism and Hypothyroid Symptoms: Secondary Analysis of a Randomized Trial

Tom Robertson MD, Steve Biederman MD

de Montmollin M, Feller M, Beglinger S, et al. L-Thyroxine Therapy for Older Adults With Subclinical Hypothyroidism and Hypothyroid Symptoms: Secondary Analysis of a Randomized Trial. *Ann Intern Med.* 2020;172(11):709-716. doi:10.7326/M19-3193

Pearls:

- **In older adults with subclinical hypothyroidism and high symptom burden at baseline, levothyroxine did not improve hypothyroid symptoms or tiredness compared with placebo.**
- **Objective:** To determine whether L-thyroxine improves hypothyroid symptoms and tiredness among older adults with subclinical hypothyroidism and greater symptom burden
- **Background:** Subclinical hypothyroidism is elevated TSH, normal free T4, found in 20% of older adults
 - American Academy of Clinical Endocrinologists recommends treating if TSH > 10 but mixed if not
- **Method:** secondary analysis of the TRUST trial (NEJM 2017, largely RCT of subclinical hypothyroidism) to see if treatment improved symptoms in older adults
- **Results:**
 - 132 patients
 - After one year there was no difference in symptom or quality of life scores
- **Bottomline:** In older adults with subclinical hypothyroidism and high symptom burden at baseline, levothyroxine did not improve hypothyroid symptoms or tiredness compared with placebo

Paper Chase #5 - Should We Diagnose and Treat Distal Deep Vein Thrombosis?

Tom Robertson MD, Steve Biederman MD

Robert-Ebadi H, Righini M. Should we diagnose and treat distal deep vein thrombosis?. *Hematology Am Soc Hematol Educ Program.* 2017;2017(1):231-236. doi:10.1182/asheducation-2017.1.231

Pearls:

- **Anticoagulation prevents recurrent VTE in patients with distal DVT**
- **Objective:** To review the literature regarding treatment of isolated distal DVT
- **Background:**
 - DVT below the knee, distal to the popliteal vein which represents 30-50% of lower extremity DVTs
- **Method:** Cochrane meta-analysis of eight randomized control trials of treatment versus not for distal DVT
- **Results:**
 - Included 1200 patients
 - Those who received anticoagulation had significantly lower rates of recurrence or worsening VTE (3.3% v. 9%)
 - No significant effect on rates of PE
 - Major bleeding was the same between groups but non-major bleeding was higher in anticoagulation group (7% v. 2%)
- **Bottomline:** Anticoagulation prevents recurrent VTE in patients with distal DVT

