2025 Update

Evidenced Based Practices in Emergency Medicine

A review based on the 2025 COLA articles and exams from AOBEM

Christopher Rancont, DO, FACOEP

Gill, et al. (2024).

Treatments for cough and common cold in children.

The BMJ, e075306–e075306.

What you need to know

- Upper respiratory tract infections are common, self-limiting illnesses that resolve without intervention in up to 10 days
- Treatments for the common cold do not shorten the length of illness but may relieve a child's discomfort by alleviating the effects of the most bothersome symptoms
- Antitussives, antihistamines, decongestants, expectorants, and aspirin are not recommended for use in children under the age of 6
- Safe treatments for bothersome symptoms include saline nasal irrigation, pasteurised honey for cough, and analgesics, but most symptoms require no interventions

Case presentation —3 year lethargic

3 year old brought in to ER after being sick for 3 days, and getting worse

- Started with runny nose, nasal congestion, sore throat, cough and fever.
- Saw a provider yesterday, diagnoses with an ear infection, parents have been going medications as prescribed.
- Today child not eating or drinking, less active, worsening cough, apathetic and lethargic.
- On exam: no eye contact, poor muscle tone, not interactive, pupils dilated, dry tongue and oral mucosa, mouth breathing, thick secretions in nose, and non productive cough.

“Treatments for cough and common cold in children.” BMJ, 2024

—A meta-analysis of meta analyses!

- Looked at 19 systematic review articles examining benefits and harms of cough and cold therapies, and dietary and herbal therapies on cough and cold in children.

What is the most dangerous treatment for coughs and colds in children?

Diphenhydramine!

A surveillance study of 180 paediatric deaths (<12 years) between 2008 and 2016[36] in the US found that 40 (22.2%) were attributed to 50 different cough and common cold therapies—the most frequently implicated agent being diphenhydramine (n=28; 70.0%).

Practice Pattern Implications: Treating cough and colds/viruses in children

Key phrases and recommendations

- Antibiotics are the worst thing you could do, your child needs the opposite of antibiotics, but PROBIOTICS are helpful, and support the immune system
  - Probiotics - significantly fewer days of symptoms and days absent from day care/school
- Best treatment for the cough, and congestion?
  - Fluids to thin out thick and sticky tenacious secretions
  - Nasal saline irrigation
  - Pasteurized honey

Practice Pattern Implications: Treating cough and colds/viruses in children

Key phrases and recommendations

- Antipyretics for fever - ibuprofen or tylenol, but NOT ASPIRIN
- Do not give….
  - Antihistamines (diphenhydramine, allergy medications, etc)
  - Decongestants (phenylephrine, etc.)
  - Antitussives (dextromethorphan, codeine)
  - Expectorants (Guaifenesin)
  - Intranasal corticosteroids
  - Antibiotics

Treating a child with a cough or cold

Red flags

Requiring further medical attention

- Fever in an infant <3 months of age
- Prolonged fever for >3 days
- Dehydration, poor feeding, or fewer wet nappies/diapers (<50%)
- Increased work of breathing, or fast breathing
- Features of Kawasaki disease (eg, red eyes, red lips, rash, extremity changes)
- Petechial rash
- Seizures
- Limp, listless, or lethargic appearance
- Severe headache, confusion, and vomiting
- Parent/caregiver is distressed about the child's symptoms or feel this illness is different from previous illnesses

Rest is the best

Ensure the child rests; suggest relaxation and comfort positioning

Keep them hydrated

Ensure the child drinks adequate fluids and stays hydrated

Manage the discomfort

Manage the child's discomfort, with symptom support or treatments (eg., nasal drops).

Encourage pill swallowing techniques, distraction, and comfort measures

Symptom management

Nasal congestion/ runny nose

Saline nasal irrigation (saline drops/sprays)

A low risk treatment option.

Limited evidence it provides symptom relief over no intervention.

Cough/sore throat

Honey (pasteurised)

A low risk treatment option that may reduce cough frequency and severity. Some children may experience nausea.

Children<1 year should not be given honey

Fever

Acetaminophen/paracetamol/ ibuprofen

When used in safe doses, have been shown to alleviate discomfort due to fever, aches, and pains

DO NOT USE ASPIRIN

Over the counter cough and cold syrups are not recommended for children <6 years

Cough and common colds are self-limiting illnesses that resolve without intervention in up to 10 days.
Most treatments will not shorten the length of illness but may relieve a child's discomfort by alleviating bothersome symptoms

Case Continued - 3 year-old lethargic

Saw provider yesterday….

- Prescribed:
    - Amoxicillin
    - Dexamethasone
    - Fluticasone nasal spray
- Parents instructed to give child
    - Benadryl for cough and at night
    - Children’s cough and cold medicine during the day

My Smart Phrase for Peds viral DC Instructions

.virped

- “Give child plenty of fluids to stay well-hydrated, and to thin out and help clear respiratory secretions. Use nasal saline irrigation and bulb syringe as necessary to keep nose clear. Give Tylenol alternating with Motrin every 4 to 6 hours as needed for fever, chills, sore throat, or bodyaches —do not give aspirin. Pasteurized honey can be useful to help with symptoms of cough. Provide fresh fruits and vegetables and yogurts to help the immune system fight off the viral infection and for probiotic support. Return to the emergency department if child is worse or you have any other concerns. Otherwise follow up with pediatrician calling for earliest available appointment for reevaluation.”

A parent is concerned about their 2-year-old child, who has been experiencing nasal congestion and cough for several days. The parent asks if saline nasal sprays or rinses are an effective treatment. What does the literature suggest about saline nasal sprays and rinses?

Select one:

- They provide significant benefit for clinical rhinologic symptoms.
- They should be avoided as they are ineffective.
- They should only be used if prescribed by a doctor.
- They significantly improve respiratory symptoms.

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A 5-year-old child is being evaluated because of a cough and cold symptoms. Based on current recommendations, what is the best advice regarding use of over-the-counter cough and cold medications?

Select one:

- They are generally safe for children older than 12 months old.
- They are not recommended for children younger than 6 years old.
- They should be used for severe cases or those lasting longer than 10 days.
- They should only be used if prescribed by a physician.

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A 7-year-old child with a recent history of an upper respiratory tract infection has a persistent cough and low-grade fevers. The parents inquire about the use of cough suppressants. What is the best recommendation for managing this child's symptoms?

Select one:

- Codeine cough syrup
- Over-the-counter antihistamine
- Over-the-counter cough suppressant medication
- Supportive care with fluids and rest

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- Over-the-counter cough suppressant medication
- Supportive care with fluids and rest ✓

A 3-year-old child has had cough and nasal discharge for the past six days. Vital signs are within normal limits, and the lungs are clear to auscultation. The child's mother is concerned because the symptoms are not improving. Which of the following treatments is most appropriate based on current guidelines?

Select one:

- Advise over-the-counter decongestants.
- Prescribe a broad-spectrum antibiotic such as amoxicillin or azithromycin.
- Recommend honey for cough relief.
- Suggest humidified air therapy at home.

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- Advise over-the-counter decongestants.
- Prescribe a broad-spectrum antibiotic such as amoxicillin or azithromycin.
- Recommend honey for cough relief. ✓
- Suggest humidified air therapy at home.

Warren, et al. (2020)

Antacid Monotherapy Is More Effective in Relieving Epigastric Pain Than in Combination With Lidocaine: A Randomized Double-blind Clinical Trial.

Academic Emergency Medicine, *27*(9), 905–909

Antacid Monotherapy Is More Effective in Relieving Epigastric Pain Than in Combination With Lidocaine: A Randomized Double-blind Clinical Trial

Study Design 1:1:1

- Pts randomized to receive either:
  - Lidocaine with antacid
  - Lidocaine alone
  - Antacid along
- N=89, with 30, 31, and 28 in each arm

Antacid Monotherapy Is More Effective in Relieving Epigastric Pain Than in Combination With Lidocaine: A Randomized Double-blind Clinical Trial

Study Design 1:1:1

- Arm 1 (viscous): received 10 mL of oral lidocaine 2% viscous gel plus 10 mL of antacid (traditional antacid/lidocaine mixture).
- Arm 2 (solution): received 10 mL of lidocaine 2% solution plus 10 mL of antacid.
- Arm 3 (antacid): received 20 mL of antacid alone.

Antacid Monotherapy Is More Effective in Relieving Epigastric Pain Than in Combination With Lidocaine: A Randomized Double-blind Clinical Trial

Results

	Viscous	Solution	Antacid
Initial VAS pain score	64	65	69
Change in pain score t=30 min	9	17	20
Change in pain score t=60 min	21	28	32

Antacid Monotherapy Is More Effective in Relieving Epigastric Pain Than in Combination With Lidocaine: A Randomized Double-blind Clinical Trial

Conclusion

- A 20-ml dose of antacid alone is no different in analgesic efficacy than a 20-ml mixture of antacid and lidocaine (viscous solution).
- Antacid mono therapy was more palatable and acceptable to patients
- A change in practice is therefore recommended to cease adding lidocaine to antacid for management of dyspepsia and epigastric pain in the ED.

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A 50-year-old man comes to the emergency department because of a 2-hour history of acute epigastric burning pain. Which treatment approach would likely provide the most effective relief for his symptoms 30 minutes post-treatment?

Select one:

- Antacid combined with lidocaine
- Antacid monotherapy
- Lidocaine alone
- Oral non-steroidal anti-inflammatory agents

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A 42-year-old woman with a history of gastroesophageal reflux disease comes to the emergency department because of severe epigastric pain. She currently takes omeprazole (Prilosec) but reports that the pain has worsened over the past several weeks. According to this study (Warren et al., 2020), which statement is most accurate related to pain relief at 60 minutes?

Select one:

- Aluminum hydroxide/magnesium hydroxide/simethicone (Mylanta) alone will provide the greatest relief.
- Sucralfate (Carafate) should be utilized as proton-pump inhibitor therapy has been unsuccessful.
- The combination of antacids and lidocaine is more effective than either medication alone.
- The results of this study do not apply to this patient as she was taking a proton-pump inhibitor prior to presentation.

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Which of the following is most accurate when considering longer-term peptic ulcer treatment?

Select one:

- Histamine-2 receptor antagonists generally heal ulcers faster than proton pump inhibitors.
- Sucralfate does not inhibit absorption of medications, making it a safer option than proton pump inhibitors.
- Sucralfate protects peptic ulcers from acid exposure, allowing healing to occur, but does not relieve pain as well as histamine-2 receptor antagonists or proton pump inhibitors.
- Treatment of *Helicobacter pylori* does not decrease the recurrence rate of peptic ulcers.

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- Treatment of *Helicobacter pylori* does not decrease the recurrence rate of peptic ulcers.

Pistore, et al (2022).

A Retrospective Evaluation of Phenobarbital versus Benzodiazepines for Treatment of Alcohol Withdrawal in a Regional Canadian Emergency Department.

Alcohol V102, August 2022, pages 59-65.

A Retrospective Evaluation of Phenobarbital versus Benzodiazepines for Treatment of Alcohol Withdrawal in a Regional Canadian Emergency Department.

- Retrospective study with 184 presentations of acute alcohol withdrawal.
- 30.4% were treated with phenobarbital and the rest with benzodiazepines
- Study design to look at:
  - LOS in the ED
  - Admission Rate

A Retrospective Evaluation of Phenobarbital versus Benzodiazepines for Treatment of Alcohol Withdrawal in a Regional Canadian Emergency Department.

- Phenobarbital versus benzodiazepines
  - Longer half life (80-120 hrs) v versus lorazepam and diazepam (14 and 43 hrs respectively)
    - Reduced dosing frequency
    - Permits self-tapering
  - Rapid onset enables both prevention and treatment of AWS

A Retrospective Evaluation of Phenobarbital versus Benzodiazepines for Treatment of Alcohol Withdrawal in a Regional Canadian Emergency Department.

- Pharmacodynamics
  - prolonged GABA (A) receptor binding inhibiting neurotransmission
  - Also inhibits excitatory glutamate receptors
- Potentially superior to benzodiazepines

A Retrospective Evaluation of Phenobarbital versus Benzodiazepines for Treatment of Alcohol Withdrawal in a Regional Canadian Emergency Department.

- Results:
  - Median LOS in ER for both groups was 4.4h and 4.4h
  - Admission rate
    - Phenobarbital 9.4%
    - Benzodiazepines 17.1%

Phenobarbital

A RETROSPECTIVE EVALUATION OF PHENOBARBITAL VERSUS BENZODIAZEPINES FOR TREATMENT OF ALCOHOL WITHDRAWAL IN A REGIONAL CANADIAN EMERGENCY DEPARTMENT

New separate treatment pathways utilizing phenobarbital and diazepam

June 2019 to January 2021:
184 treated emergency visits

Retrospective comparison:
- Emergency length of stay
- Hospitalization

PHENOBARBITAL vs DIAZEPAM

- Median stay 4.4 hours for both
- Hospitalized: 9.4% versus 17.1% (p=0.20)
- With confounder adjustment, admission odds 71% lower with phenobarbital (p=0.03)

CONCLUSION

Phenobarbital treatment in the emergency department may decrease the need for hospitalization but does not impact length of emergency department visit.

A 33-year-old man with a history of depression comes to the emergency department (ED) in an intoxicated state and is expressing suicidal ideation. His initial blood alcohol level is 436 mg/dL; he has been in the ED for 12 hours awaiting clinical sobriety and psychiatric evaluation. CIWA-Ar score is 18. Given his elevated risk of alcohol withdrawal symptoms while waiting for psychiatric evaluation, what would be the best medication to minimize his symptoms?

Select one:

- Dexmedetomidine (Precedex) 2 mcg/kg bolus
- Haloperidol (Haldol) 20 mg intramuscularly
- Ketamine (Ketalar) 4 mg/kg intravenously
- Phenobarbital (Sezaby) 10 mg/kg intravenously

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- Phenobarbital (Sezaby) 10 mg/kg intravenously ✓

In patients with chronic alcoholism, there is a decrease in GABA inhibitory receptors and an upregulation of excitatory glutamate receptors. With abrupt cessation of alcohol, these changes lead to withdrawal symptoms. Which of the following statements about phenobarbital is most accurate?

Select one:

- Phenobarbital acts on the glutamate as well as the GABA receptor.
- Phenobarbital exclusively affects the chloride channel in the postsynaptic membrane of nerves.
- Phenobarbital is less effective in patients with longstanding alcohol use disorder who have excess GABA.
- Phenobarbital requires endogenous glutamate to be effective.

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A 45-year-old woman comes to the emergency department due to nausea, vomiting, and visual hallucinations. She has a history of bipolar disorder, hypertension, and alcohol use disorder. She typically consumes 750 mL of vodka daily but has abstained for 36 hours due to vomiting. She is tremulous, tachycardic, and oriented to person and place. CIWA-Ar score is 24. What clinical outcome is expected by choosing phenobarbital over benzodiazepines for this patient?

Select one:

- Decreased need for thiamine replacement
- Decreased utilization of mechanical ventilation
- Increased likelihood of ICU admission
- Increased need for physical restraints

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A 25-year-old man comes to the emergency department seeking help with his alcohol use. He reports that he drinks ten hard seltzers along with four to five hard liquor beverages daily. He reports tremulousness and anxiety after stopping drinking ten hours ago. His CIWA-Ar score is 16. What is the expected result of using phenobarbital for this patient?

Select one:

- Decreased likelihood of hospital admission
- Greater risk of ICU admission
- Higher morbidity and mortality risk
- Increased risk of complications from medication side effects

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Green, et al (2024)

Use of Topical Anesthetics in the Management of Patients With Simple Corneal Abrasions: Consensus Guidelines from the American College of Emergency Physicians

Annals of Emergency Medicine

Use of Topical Anesthetics in the Management of Patients With Simple Corneal Abrasions: Consensus Guidelines from the American College of Emergency Physicians

- They took the drops!!
- OMG They are going to melt their cornea!!

Use of Topical Anesthetics in the Management of Patients With Simple Corneal Abrasions: Consensus Guidelines from the American College of Emergency Physicians

Methods

Writing Workgroup

The AAO and ACEP each appointed 5 members to a joint workgroup, with cochairs from each specialty (Table E1, available at http://www.annemergmed.com). Participants were chosen based on their established clinical expertise; experience with research; literature appraisal; and the creation of clinical policies, guidelines, and/or consensus statements. All members disclosed conflicts of interest, and none reported any potential financial or intellectual conflicts relating to corneal abrasion or its associated pain therapy.

Use of Topical Anesthetics in the Management of Patients With Simple Corneal Abrasions: Consensus Guidelines from the American College of Emergency Physicians

Principal Question

Among ED adults discharged home with a simple corneal abrasion, is there evidence that analgesia using short courses (up to 24 hours) of commercially available topical anesthetics, when compared to saline placebo or nonuse, is associated with more frequent adverse visual outcomes or healing?

Patient Management Recommendations

Level A recommendations. None specified.

Level B recommendations. In adult ED patients with simple corneal abrasions as defined in these guidelines, it appears safe to prescribe or otherwise provide a commercial topical anesthetic (ie, proparacaine, tetracaine, oxybuprocaine) for use up to every 30 minutes as needed during the first 24 hours after presentation as long as no more than 1.5 to 2 mL total (an expected 24-hour supply) is dispensed and any remainder is discarded after 24 hours. See Figures 3 and 4 for our recommended protocol and patient instructions, respectively.[17,18]

Use of Topical Anesthetics in the Management of Patients With Simple Corneal Abrasions: Consensus Guidelines from the American College of Emergency Physicians

ED experience

Four randomized controlled trials that were not powered for adverse outcomes or healing, a larger observational study, and a follow-up report from the latter (Table 2) inform this question. [12-15,17,18]

Waldman et al[13] randomized 116 patients with uncomplicated corneal abrasions to receive tetracaine 1% (n=59) versus saline solution (n=57), with drops to be applied every 30 min for 24 hours while awake. Both groups were given chloramphenicol eye ointment. Follow-up at 48 hours showed no difference in corneal healing or persistent symptoms.

Shipman et al[14] randomized patients with uncomplicated corneal abrasions to tetracaine 0.5% (n=56) versus placebo (n=55) drops every 30 min as needed for 24 hours. At follow-up between 24 and 48 hours, there was no difference in residual corneal abrasion between the 2 groups.

Ting et al[15] randomized a total of 47 patients with corneal abrasions and welding flash burns to 0.4% tetracaine eye drops versus normal saline solution hourly while awake for 36 to 48 hours. Of the 34% of patients who had follow-up, there was no difference in primary outcome of persistent corneal defect at 36 to 48 hours (2/7 in the tetracaine group, 1/9 in the saline group). At the 2-week telephone follow-up (81% of the 47 randomized patients), there was no difference in visual problems.

Ball et al[12] randomized patients to 0.05% proparacaine (n=15) versus placebo (n=18) drops as needed for up to 7 days. Both groups were given topical gatifloxacin. Follow-up at 1, 3, and 5 days showed no delayed wound healing in either group.

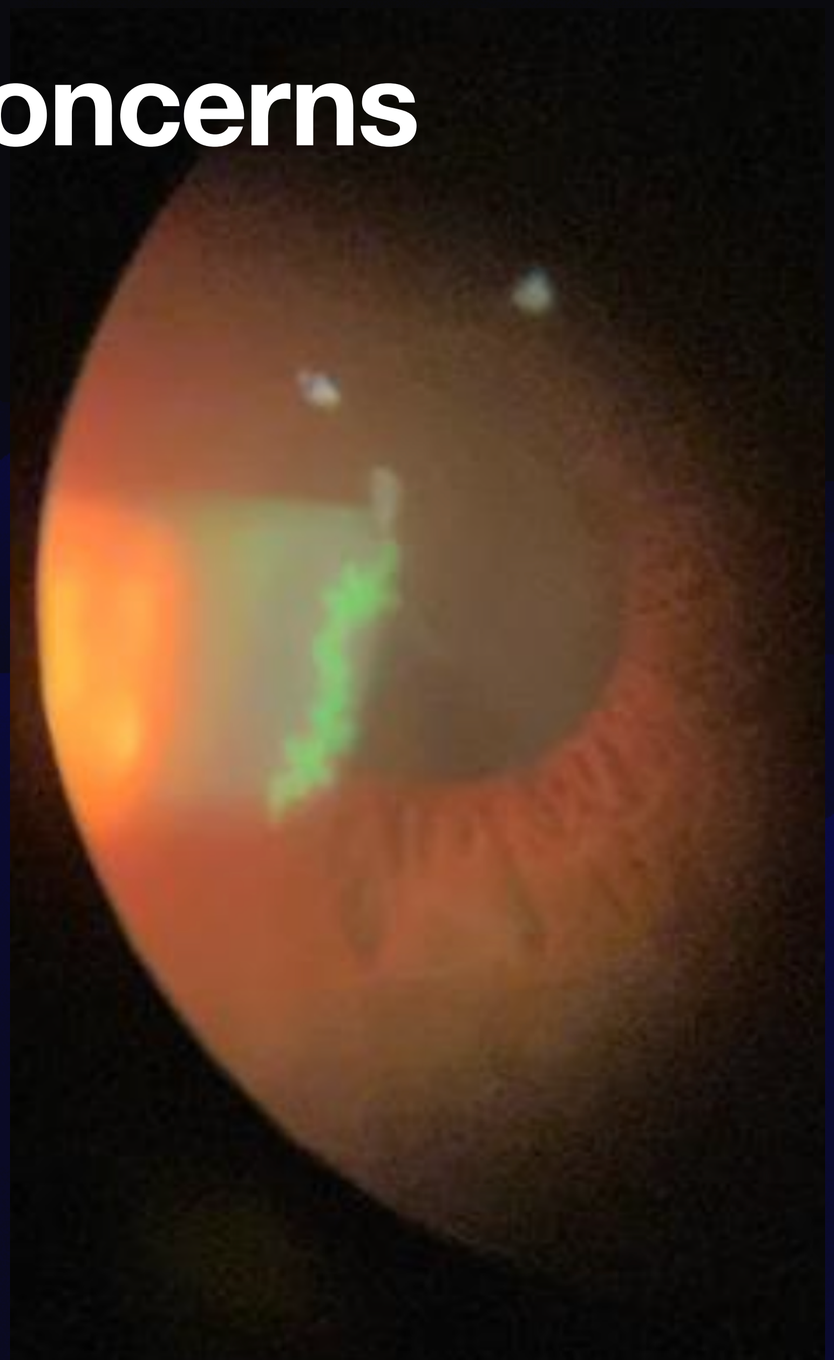
Use of Topical Anesthetics in the Management of Patients With Simple Corneal Abrasions: Consensus Guidelines from the American College of Emergency Physicians

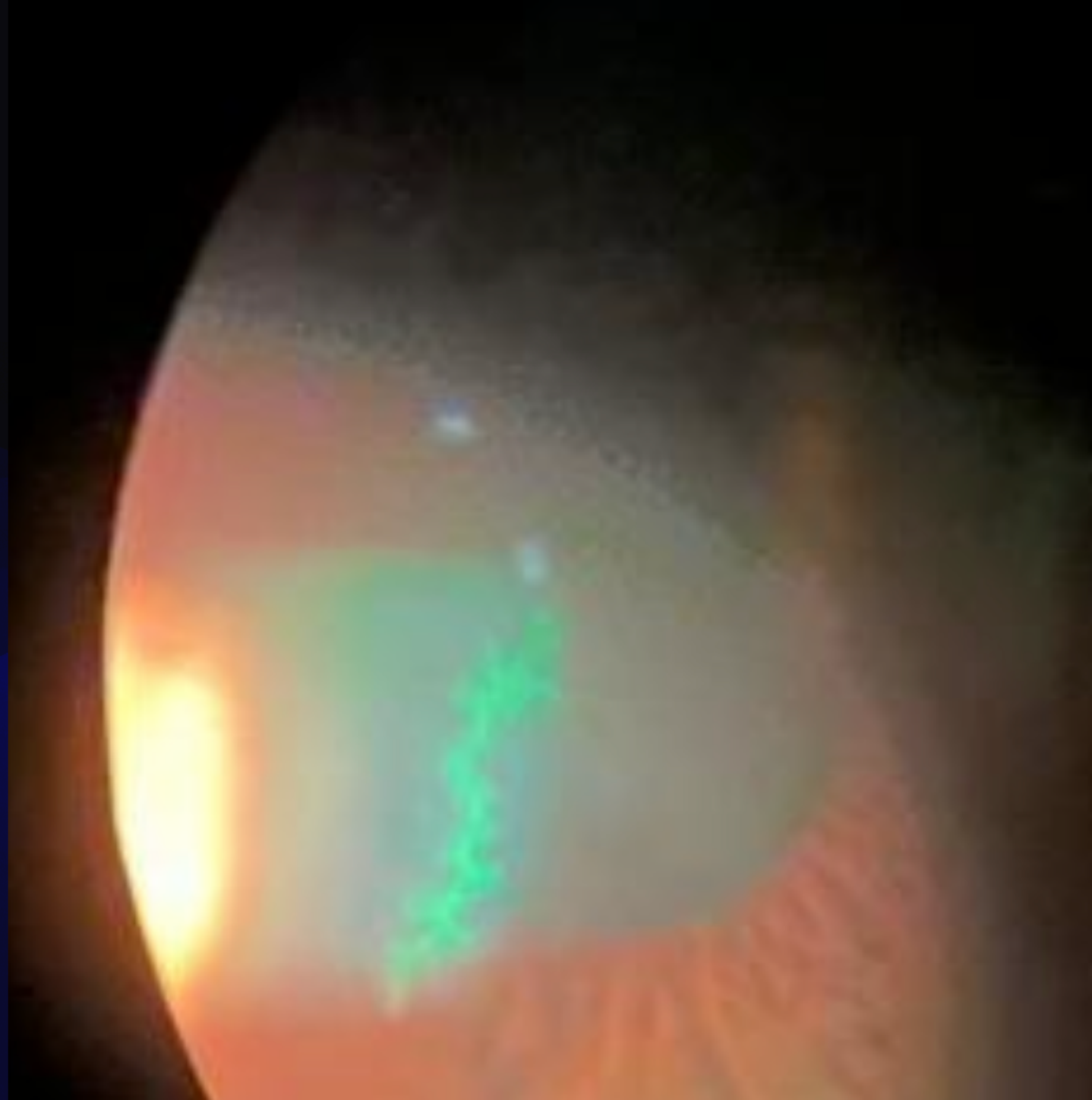
The 2 nonrandomized reports describe real-world clinical experience in a defined region (southern tip of New Zealand's South Island) served by a single hospital and its associated single ophthalmology clinic. This relative geographical isolation and government health care should have minimized unaccounted complications in patients lost to follow-up. In the first report, Waldman et al[17] reviewed 459 ED patients with simple corneal abrasions treated according to a local home use protocol of 1% tetracaine (Table 2).[12-15,17,18] Although follow-up was not mandated, there were no serious or permanent complications identified within the regional system. In a less rigorous follow-up report in which their protocol changed to 0.4% oxybuprocaine (Table 2), no associated serious or permanent complications were identified over 7 years in an estimated 1,524 ED patients. Both studies instructed patients to discard the drops after 24 hours. [12-15,17,18] When combining the patients treated in their 3 studies, there were no associated serious or permanent complications identified in an estimated 1,891 patients (harm 0 of 1,891; 95% confidence intervals 0% to 0.2%).[13,17,18]

Use of Topical Anesthetics in the Management of Patients With Simple Corneal Abrasions: Consensus Guidelines from the American College of Emergency Physicians

- Conclusion
  - It Won’t Melt Your Corneas!

Concerns





Concerns

- Pain relief can cause delay in follow up
- Bottles often have 5 ml or more, dip no more than 2.5
- Exclusionary conditions and criteria not well-defined
- Pt education: use of topical anesthetics versus ABX/oinments

A 45-year-old woman comes to the emergency department because of an eight-hour history of persistent pain in the right eye. She wears soft contact lenses and reports that she did not remove them before sleeping. On awakening, she experienced intense pain in her right eye and increased tearing, along with sensitivity to light. She underwent corneal transplant in the right eye three years ago. Fluorescein staining reveals a 4-mm corneal abrasion at the nine o'clock position with no pooling or stain (negative Seidel sign). What feature of this patient's history would preclude her from receiving a short course of tetracaine for home use?

Select one:

- History of corneal transplant
- Presence of photophobia
- Size of the corneal abrasion
- Use of soft contact lenses

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Select one:

- History of corneal transplant ✓
- Presence of photophobia
- Size of the corneal abrasion
- Use of soft contact lenses

A 57-year-old woman has an 18-hour history of pain the right eye. She reports that she was sweeping her garage one day ago and feels like there is dust in her eye. She does not wear contact lenses but uses reading glasses. Ocular examination reveals a small corneal abrasion on the inferior aspect of the right eye. Eye pressures are normal. Visual acuity is mildly decreased due to tearing. Topical anesthetics provide good relief. What information should be included in her discharge instructions?

Select one:

- Discard any remaining drops after 24 hours of use.
- Rub the eyelid hourly to ensure even distribution of the eyedrop.
- Use the medication until pain-free but no more than 7 days.
- Warm drops in the microwave for 15 seconds prior to use.

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A 72-year-old woman is being evaluated because of a 48-hour history of left eye redness, deep aching pain, and a vesicular rash on the left upper eyelid. She has a history of diabetes mellitus and rheumatoid arthritis managed with medication. On examination, the rash appears to be spreading to the tip of her nose. Visual acuity is decreased in the left eye, and fluorescein staining reveals a dendritic pattern. What is the most appropriate treatment for this patient?

Select one:

- Discharge home with topical anesthetic drops and oral antiviral medication.
- Emergent ophthalmology consultation.
- Hospitalize for intravenous antibiotics.
- Initiate the sepsis bundle order set for facial cellulitis.

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- Hospitalize for intravenous antibiotics.
- Initiate the sepsis bundle order set for facial cellulitis.

A 4-month-old girl is brought to the emergency department by her parents because she has been crying inconsolably for the past two hours. On initial evaluation, the child has a small scratch over the left side of her face with copious tears but no other signs of trauma. If the findings on physical examination confirm the presumptive diagnosis, what is the next step in management?

Select one:

- Begin treatment with erythromycin ointment into the left eye every six hours.
- Call child protective services.
- Discharge the patient home with topical anesthesia drops.
- Patch the left eye.

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Friedman, et al (2023).

Randomized Trial Comparing Low- vs High-Dose IV Dexamethasone for Patients With Moderate to Severe Migraine.

***Neurology*, *101*(14), e1448–e1454.**

Randomized double-blinded comparison of

4 mg Dexamthasone with metoclopromide

vs

10 mg Dexamethasone with metoclopromide

Comparing Intravenous Dexamethasone Doses in Patients with Migraine in the Emergency Department

Dexamethasone reduces the frequency of migraine recurrence following emergency department (ED) discharge

However, its optimal dose remains unknown

Does a high dose of intravenous (IV) dexamethasone provide more relief than a low dose when administered with metoclopramide 10 mg IV?

Randomized double-blind study

Adult patients with moderate to severe migraine (N = 209)

Low-dose group

Dexamethasone 4 mg IV

+

Metoclopramide 10 mg IV

vs

High-dose group

Dexamethasone 16 mg IV

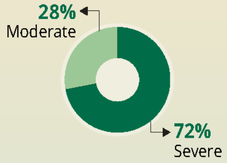
+

Metoclopramide 10 mg IV

Assessments for sustained headache relief

Mean age of patients
38 Years

Female patients
86%



Patient-reported migraine attack severity

Low dose vs high dose IV dexamethasone

	Low-dose group	High-dose group
Patients achieving sustained headache relief	34%	41%
	(95% CI for absolute difference of 7%: –6, 20%)	
Headache relief within two hours	74%	78%
	(95% CI for absolute difference of 4%: –8, 16%)	
Headache days (median) in the week following ED discharge	2 (25th, 75th percentile: 1, 5)	2 (25th, 75th percentile: 0, 4)
	(95% CI for mean difference of 0.4: –0.3, 1.2)	

CI = Confidence interval

Dexamethasone doses exceeding 4 mg with 10 mg metoclopramide IV are unlikely to provide extra benefits in patients with migraine in the ED

doi: 10.1212/WNL.0000000000207648

Neurology®

A 42-year-old woman comes to the emergency department due to a severe migraine. Intravenous metoclopramide and dexamethasone are administered. She is evaluated by her primary care physician for follow-up 48 hours after treatment. What is the most likely expectation for headache relief in this patient?

Select one:

- Neither dose of dexamethasone leads to substantial headache relief.
- Significant headache relief is observed only with a 4-mg dexamethasone dose.
- Significant improvement in headache is observed only with a 16-mg dexamethasone dose.
- There is no significant difference in headache relief between a 4-mg and 16-mg dexamethasone dose.

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A 28-year-old patient with a history of recurrent migraines is treated in the emergency department with a combination of intravenous metoclopramide and dexamethasone. What is the likely outcome regarding headache relief in this scenario?

Select one:

- A greater number of patients in the low-dose dexamethasone group had moderate to severe pain after ED discharge.
- If the patient's headache was present for longer than 72 hours, they will have better outcomes when given high-dose dexamethasone.
- Only 25% of patients had headache relief within 2 hours of initial treatment.
- 75% of patients will not achieve sustained headache relief without additional medication.

A 50-year-old patient with acute migraine is treated with intravenous metoclopramide and dexamethasone. Following improvement of the headache, the patient asks about the effectiveness of a longer course of oral corticosteroids to decrease headache recurrence. What is the most appropriate response?

Select one:

- A longer course of oral corticosteroids has no added benefit.
- A longer course of oral corticosteroids will likely be effective for headache recurrence.
- Oral corticosteroids should be used in conjunction with intravenous dexamethasone for better results.
- The study provides no direct information on the use of oral corticosteroids.

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A 35-year-old woman comes to the emergency department because of a six-hour history of severe migraine. Intravenous metoclopramide 10 mg is administered for treatment. What strategy for dexamethasone would be most effective in achieving sustained headache relief?

Select one:

- Intramuscular dexamethasone 10 mg
- Intravenous dexamethasone 4 mg
- Intravenous dexamethasone 16 mg
- Dexamethasone is not effective in this setting.

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Shaish, et al. (2023)

Diagnostic Accuracy of Unenhanced Computed Tomography for Evaluation of Acute Abdominal Pain in the Emergency Department.

JAMA Surgery, *158*(7)

Diagnostic Accuracy of Unenhanced Computed Tomography for Evaluation of Acute Abdominal Pain in the Emergency Department.

Design, Setting, and Participants This was an institutional review board–approved, multicenter retrospective diagnostic accuracy study of 201 consecutive adult ED patients who underwent dual-energy contrast-enhanced CT for the evaluation of acute abdominal pain from April 1, 2017, through April 22, 2017. Three blinded radiologists interpreted these scans to establish the reference standard by majority rule. IV and oral contrast media were then digitally subtracted using dual-energy techniques. Six different blinded radiologists from 3 institutions (3 specialist faculty and 3 residents) interpreted the resulting unenhanced CT examinations. Participants included a consecutive sample of ED patients with abdominal pain who underwent dual-energy CT.

Diagnostic Accuracy of Unenhanced Computed Tomography for Evaluation of Acute Abdominal Pain in the Emergency Department.

Table 1. Study Population Characteristics[a]

Patient characteristic	Data
No.	201
Sex, No. (%)	
Female	108 (54)
Male	93 (46)
Age, y, mean (SD)	50.1 (20.9)
BMI,[b] mean (SD)	25.5 (5.4)
Actionable diagnosis at CT, No. (%)	109 (54%)
Primary diagnosis	104 in 98 Patients (49)
Actionable secondary diagnosis	17 in 17 Patients (8)
No primary or actionable secondary diagnosis	92 (46)

Diagnostic Accuracy of Unenhanced Computed Tomography for Evaluation of Acute Abdominal Pain in the Emergency Department.

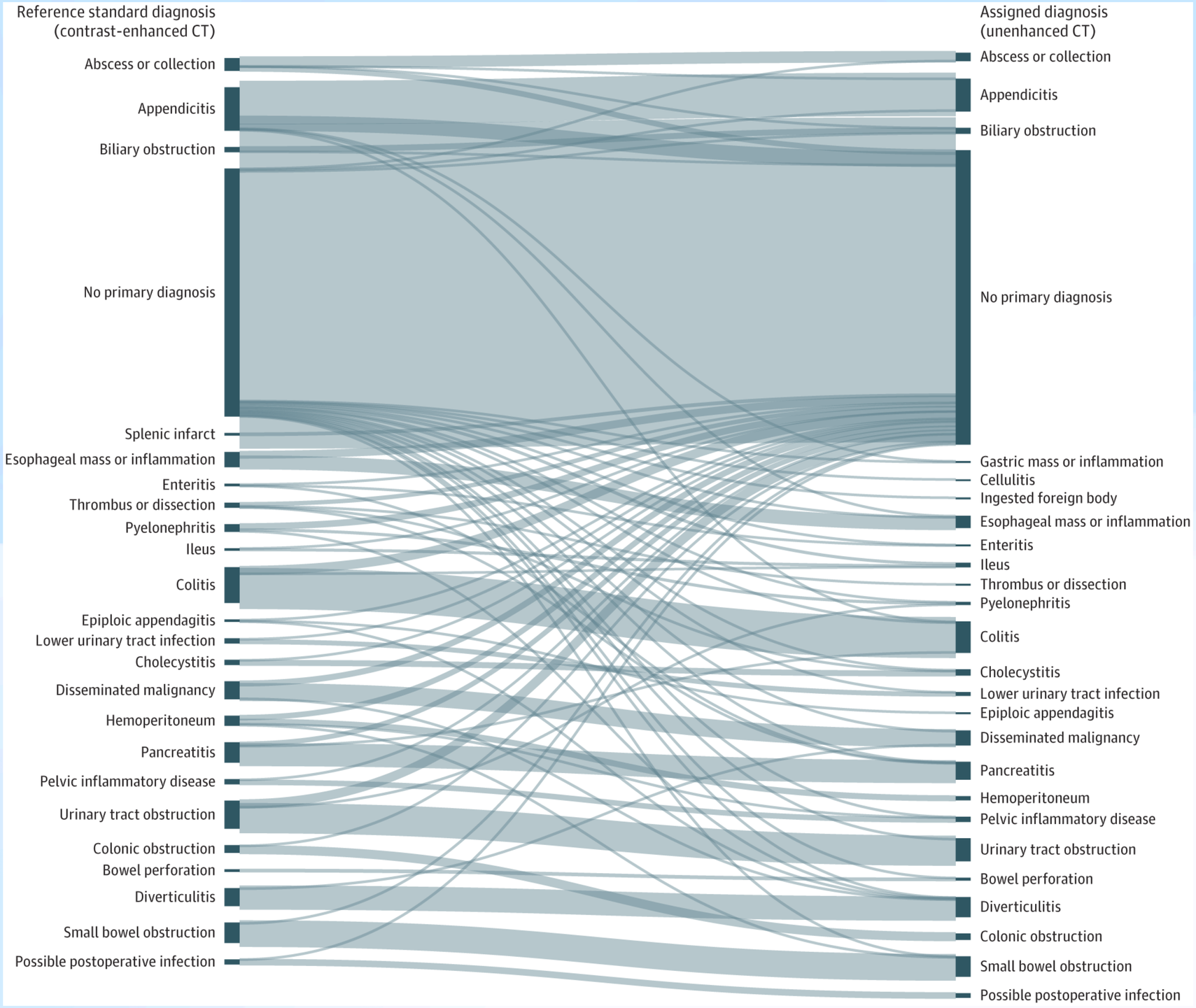
Abdominal pain location, No. (%)	
Diffuse	3 (1)
Epigastric	5 (2)
Left lower quadrant	20 (10)
Left upper quadrant	2 (1)
Left abdomen	1 (0.5)
Lower abdomen	8 (4)
Periumbilical	2 (1)
Right lower quadrant	50 (25)
Right upper quadrant	4 (2)
Right abdomen	3 (1)
Pain location not specified	103 (51)

Diagnostic Accuracy of Unenhanced Computed Tomography for Evaluation of Acute Abdominal Pain in the Emergency Department.

Suspected diagnosis by ordering health care professional, No. (%)	
Abscess	3 (1)
Appendicitis	9 (4)
Colitis	1 (0.5)
Crohn disease	4 (2)
Diverticulitis	9 (4)
Hemorrhage	1 (0.5)
Ischemic colitis	1 (0.5)
Neoplasm	2 (1)
Obstruction	10 (5)
Pancreatitis	3 (1)
Perforation	3 (1)
Pyelonephritis	1 (0.5)
Sepsis	1 (0.5)
Trauma	1 (0.5)

Diagnostic Accuracy of Unenhanced Computed Tomography for Evaluation of Acute Abdominal Pain in the Emergency Department.

”In many patients, the risk of withholding iodinated contrast medium may be higher than the risk of administering it.”



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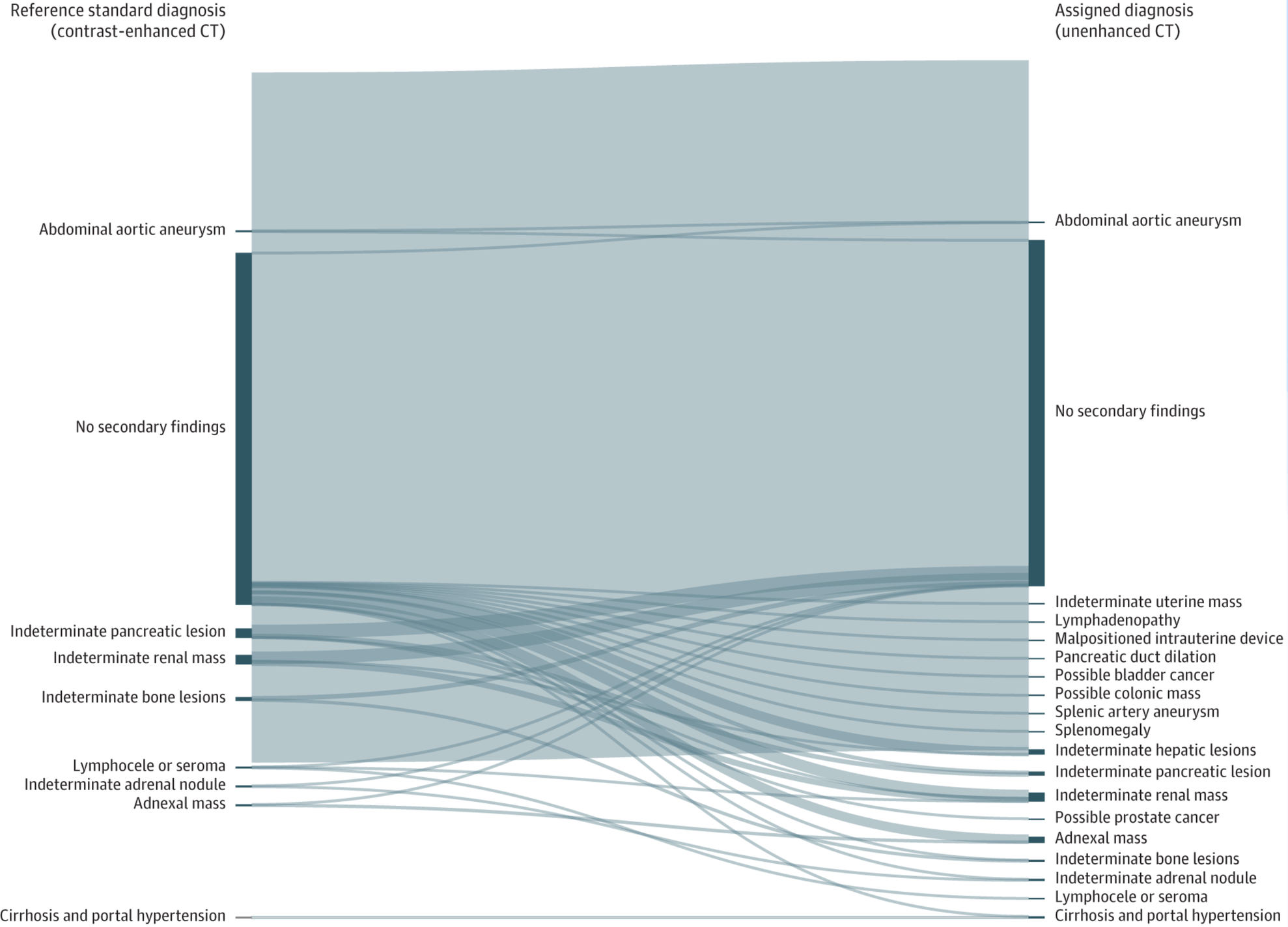

Diagnostic Accuracy of Unenhanced Computed Tomography for Evaluation of Acute Abdominal Pain in the Emergency Department.

Diagnostic Accuracy of Unenhanced Computed Tomography for Evaluation of Acute Abdominal Pain in the Emergency Department.

Findings In this multicenter diagnostic accuracy study, unenhanced CT was approximately 30 percentage points less accurate than contrast-enhanced CT for diagnosing the cause of pain and identifying actionable secondary diagnoses.

To avoid performing multiple CT scans of the abdomen to compare the effect of contrast, which of the following methods was used for this study (Shaish et al., 2023)?

Select one:

- Artificial intelligence (AI) algorithms were utilized to digitally enhance the acquired non-contrast images without the risks associated with intravenous contrast.
- CT scans with contrast performed on the abdomen were compared with those performed without contrast.
- Intravenous contrast was digitally subtracted from dual-energy CT scans of the abdomen performed with contrast.
- The study only included CT scans of the abdomen that were performed with and without contrast.

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Which of the following is most accurate regarding unenhanced CT scans of the abdomen?

Select one:

- They are 30% less accurate than contrast-enhanced CT scans for evaluation of abdominal pain in the emergency department.
- They are 30% more accurate than contrast-enhanced CT scans for evaluation of abdominal pain in the emergency department.
- They are equally accurate to enhanced CT scans of the abdomen.
- They have higher diagnostic accuracy by residents than attending radiologists.

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Which of the following is most accurate regarding the use of contrast when obtaining an abdominal CT scan?

Select one:

- It is often unnecessary for diagnosing most intra-abdominal processes.
- It should be administered for all patients to improve accuracy and reliability.
- It should be considered in a diagnostic risk-benefit analysis for patients with a history of hypersensitivity reaction or severe kidney disease.
- It should be withheld in any patient with a hypersensitivity reaction to contrast medium.

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A 72-year-old patient comes to the emergency department with acute-onset epigastric and left upper quadrant pain. Important diagnostic considerations in this patient include which of the following?

Select one:

- Elderly patients may not have dramatic pain or impressive peritoneal findings.
- Laboratory studies and electrocardiography are typically unnecessary.
- The Glasgow-Blatchford Bleeding Score can help risk-stratify the need for blood transfusion in the setting of a bleeding ulcer.
- Treatment of bleeding ulcers should focus on the use of proton pump inhibitors.

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A 45-year-old man comes to the emergency department with a one-day history of non-localizing abdominal pain, non-bloody diarrhea, and a temperature of 38.1°C (100.5°F). He has a history of recurrent diverticulitis but no other significant medical history. He takes no medications and has no allergies. Which of the following is the most appropriate initial imaging for this patient?

Select one:

- Acute abdominal series (x-ray)
- CT scan of the abdomen and pelvis with intravenous contrast
- CT scan of the abdomen and pelvis without contrast
- CT scan of the abdomen and pelvis with and without intravenous contrast

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Weiner, (2020)

One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose.

Annals of Emergency Medicine, 75(1), 13–17.

One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose.

- Study included all patients treated in Emergency Departments in the State of Massachusetts diagnosed with opioid overdose between July 1, 2011 and September 30, 2015.
- 4+ Years study with 11,557 patients included in the study group

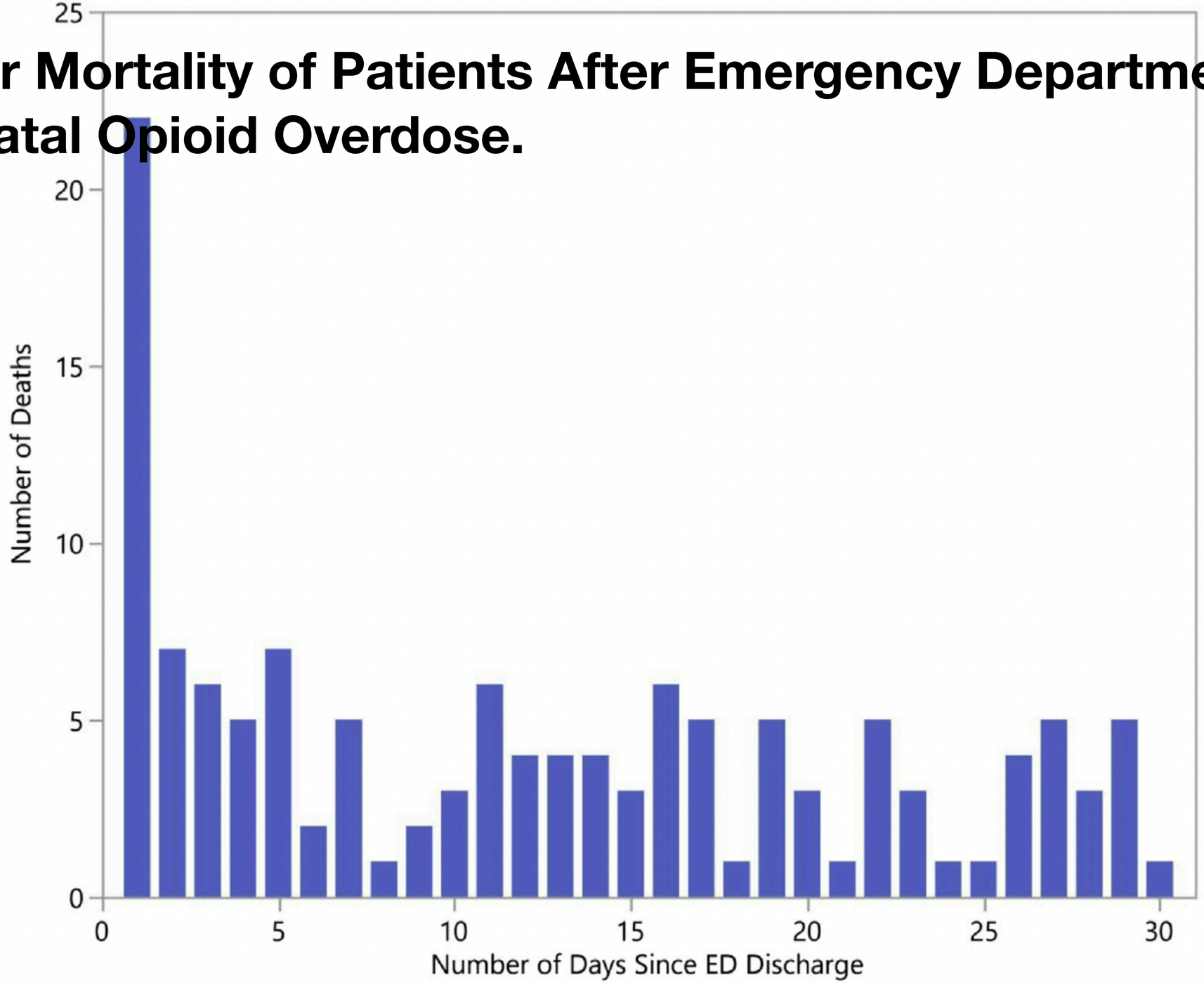
One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose.

- 635 Died within 1 year 5.5%
- 130 dies within 1 month 1.1%
- 29 dies within 2 days 0.25%

Location of Death was deemed important

In a quarter of cases, the place of death was a

One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose.



One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose.

A large number of patients discharged from the ED after an opioid overdose die in the first month. Approximately a fifth of patients who died did so in the first month after ED discharge, and approximately a fifth of those died in the first 2 days. These numbers highlight the importance of early, aggressive intervention for substance use disorder treatment. The initial health care contact in the ED is a critical period for intervention such as buprenorphine initiation,[9] naloxone distribution, counseling, and referral to further treatment before ED discharge. These findings suggest that hospitals rapidly adopt medication for addiction treatment programs and other interventions for ED patients treated for opioid overdose.

A 42-year-old man is treated for an opioid overdose in the emergency department and successfully resuscitated. He has a history of substance use disorder and a recent increase in use. What is an important component of his discharge planning related to follow-up care strategies?

Select one:

- Ensure the patient has a stable housing situation.
- Observe the patient for 24-48 hours.
- Prescribe buprenorphine (Suboxone).
- Provide a referral to a substance use counselor.

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A 35-year-old woman is brought to the emergency department following an opioid overdose. After treatment, she is stable for discharge. Based on the study, what is the most appropriate intervention to reduce her risk of mortality after discharge?

Select one:

- Distribute naloxone for outpatient bystander use.
- Ensure timely follow-up with a primary care provider.
- Hospitalize for 48 hours of observation and inpatient treatment.
- Outpatient referral to a substance use counselor.

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A 28-year-old man is brought to the emergency department after an opioid overdose. He is successfully resuscitated and stabilized. Which statement most accurately reflects the risk of mortality for this patient?

Select one:

- Approximately 20% of those who die do so within the first month after overdose.
- Approximately 29% of those who die do so within the first two days after overdose.
- The majority of those who die are found deceased at a motel.
- The majority of those who die are reportedly suicidal.

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A 50-year-old woman with a history of opioid use disorder is treated in the emergency department after a nonfatal overdose. She has been stabilized and is about to be discharged. Based on the findings from the article, which plan would most likely help reduce her risk of death?

Select one:

- Advise her to seek outpatient therapy.
- Ensure she has a family member or friend to accompany her home.
- Prescribe buprenorphine and provide naloxone prior to discharge.
- Provide a list of nearby drug rehabilitation facilities.

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