

17	is in the E.N.D.S.7 Haddad J, Carpenter D, Kopeck S Chest. Conference: CHEST 2016. United States. 102 (4 Supplement 1) (pp S624). 2016. Date of Publication: October 2016. AN: 61368522	35 year old female at 32.6 weeks gestation	intermittent over the last month, but heavy weeks prior to presentation. BELF- MIXING VAPE CARTRIDGES WITH glycerol, vegetable oil and strawberry flavoring.	afebrile, but in respiratory distress	lipid pneumonia	Computed tomography (CT) angiography of the thorax with contrast showed upper lobe predominant ground glass opacities and "crazy paving"	WBC 19,300	Vaginal delivery	Discharged day 5	none	High-flow nasal cannula. Vaginal delivery of 32 weeks gestation.	Case report - conference abstract	Medium - Poor quality paper assumes lipid pneumonia without bronch diagnosis. May have been Pneumonia from pre-eclampsia	
18	Chronic idiopathic neutrophilia in a smoker, resolved after smoking cessation with the use of electronic cigarettes . A case report. Farsalinas K.E., Romagna G Clinical Medicine Insights: Case Reports. 6 (pp 15-21). 2013. Date of Publication: 2013. AN: 38045346	male Caucasian patient born in 1977, presented in September 2005. 19 pack-year smoker.	Used as a quitting agent. Not implicated in disease here.	asymptomatic elevation of white blood cell and neutrophil count, and mildly elevated C-reactive protein levels.	Chronic idiopathic neutrophilia	laboratory and imaging investigations ruled out any infectious, hematological, rheumatological, or endocrine causes.	Resolution of leukocyte count and CRP with smoking cessation (used vaping to quit)	6.5 years	none	0 increased monitoring	Case report	Medium		
19	Acute eosinophilic pneumonia following electronic cigarette use. Aher ZL, Wiggins A., Hodgson C, Kling A., Hoeller D.C., Hoeller J.M. Respiratory Medicine Case Reports. 27 (pp 171-173). 2019. Date of Publication: 2019. Article Number: 100825. Date of Publication: 2019. AN: 200172837	previously healthy 18- year-old female. Non- smoker.	"Baby Smok Beast Mod device" with 6% nicotine fluid 5 times per day for 30 minutes. Started two months prior to presentation.	presented to the Emergency Room after one day of fever, nonproductive cough, difficulty breathing, and pleuritic chest pain.	acute eosinophilic pneumonia	Inflated acute hyperinflated right lower lung airspace consolidation consistent with a pneumonia. The CTPA excluded PE, but found diff use ground-glass opacity air-space disease and coalescing nodules	bronchial alveolar lavage (BAL) was performed, revealing 20% eosinophils in the lavage fluid.	IV Azithromycin, no effect. methyl- prednisolone 125mg intravenous every 6 hours. After two days she showed significant improvement and was switched to prednisone 60mg. Taper dose after 6 days.	0 increased monitoring	Case report	Medium			
20	Lung injury from inhaling butane hash oil (BHO) pneumonia. Anderson R.P., Zecher K. Respiratory Medicine Case Reports. 26 (pp 171-173). 2019. Date of Publication: 2019. AN: 2001443419	Previously healthy 18F. One pack per day	Did not use. Daily dabbing	SOB, hypoxic. Diffuse respiratory wheezes on exam with bilateral rhonchi	"severe pneumonitis" presumed No bronch or biopsy	Butane hash oil (BHO) dabbed chest x-ray was positive for bilateral patchy infiltrates with mild hyperinflation. CT was negative for pulmonary embolus or other acute pathologic process, but showed bilateral patchy infiltrates	three breathing treatments, IV steroids	unknown. Presumed discharge?	unknown	Case report	Low - dabbing			
21	Lung injury associated with electronic cigarettes inhalation diagnosed by transbronchial lung biopsy. Nakamura K., Hara Y., Nakamura T., Takemura T. Respiratory Medicine Case Reports. 6 (1) (no page number). 2018. Article Number: 100282. Date of Publication: January 2018. AN: 619949375	46-year-old healthy man, 20 pack-year smoker quit 3 months prior to presentation.	Used for one month prior to symptoms	respiratory distress, night sweats, fever, and weight loss	Listed as "acute alveolitis with intra-alveolar fibrosis caused by a cig use. We diagnosed a cigarette-induced ALI caused by inhalation."	Chest radiography revealed apical opacities in the bilateral upper lung fields with extensive bilateral ground glass opacity (GGO) predominantly around the lateral segments of the lung (Fig. 1A). Chest computed tomography (CT) revealed GGO and traction bronchiectasis throughout the entire bilateral upper lobes, non-segmental GGO with candlestick shadow was also observed in the middle lobe.	transbronchial lung biopsy examination led to the diagnosis of acute alveolitis, intra-alveolar fibrosis accompanied with exuberant abundant lipoid-laden macrophages, eosinophils, and neutrophils.	methyprednisolone pulse therap	Rapid resolution of symptoms	none	Case Report	Medium		
22	Good, bad, and ugly on vaping . https://www.ajronline.org/article.ajr?iid=309124 Narang R, Narang D, Narang S, Salmari J, Gayen N, Ullman G. Chest. Conference: CHEST 2015. Montreal, QC Canada. Conference Publication (see pagings). 148 (4 MEETING ABSTRACT) (no page number). 2015. Date of Publication: October 2015. AN: 7212048	23-year-old morbidly obese male patient with no significant past medical history	Vaping for last 6 months.	Emergency Department with worsening productive cough with red sputum and shortness of breath. Febrile. Tachypnea.	Hypersensitivity Pneumonitis	BALF cultures were negative. BAL cell count and differential showed 80% lymphocytes.	Transbronchial biopsy of the left and right lungs exhibited noncaseating epithelioid granulomas.	Normal WBC and LFTs. Tuberculin skin test, fungal serologies, cytomegalovirus, toxoplasma, and HIV were all negative. ACE level was normal	rapidly with cessation of e-cigarette usage and steroid treatment	Improved rapidly with cessation of e-cigarette usage and steroid treatment. Discharged home.	none	Case report - conference abstract	High	
23	Acute lipid pneumonia secondary to e-cigarette use. An unlikely replacement for cigarette. Mori S., Sengari R., Aiyama A. Chest. Conference: CHEST 2015. Montreal, QC Canada. Conference Publication (see pagings). 148 (4 MEETING ABSTRACT) (no page number). 2015. Date of Publication: October 2015. AN: 7212048	31-year-old female smoker was	Recent three month e-cigarette use	admitted to the hospital for progressive dyspnea and cough	Lipid pneumonia	Chest x-ray noted bilateral air space opacities. CT of the chest (Fig. 1) revealed diffuse ground glass opacities with interlobular septal thickening consistent with "crazy paving" pattern.	bronchoalveolar lavage (Fig 2) showed reactive pneumocytes and alveolar macrophages with granular opacities with interlobular septal thickening consistent with lipid content	Blood and sputum cultures were negative.	Empiric abs, but worsened to ARDS. Required IV steroids	patient noted rapid improvement with cessation of e-cigarettes and systemic steroids	in-hospital	Case report - conference abstract	High	
24	"A little dab will do ya": An emergency department case series related to a new form of "high potency" marijuana known as "wax". Schwartz T, Sterling G.P., Valenzuela R, Mallon W.K. Annals of Emergency Medicine. Conference: American College of Emergency Physicians, ACEP 2014 Research Forum, Chicago, IL, United States. Conference Publication. (see pagings). 64 (4 SUPPL. 1) (pp S139). 2014. Date of Publication: October 2014. AN: 7166310	4 Young patients through the ED. One psychosis, 3 burns from dabbing, explosions in preparation of butane hash oil	DID NOT VAPE									Case series	Low - dabbing	
END OF EMBASE RESULTS														
25	Life-Threatening Vesicular Bronchial Injury Requiring Video-Assisted Thoracoscopic Resection in an Electronic Cigarette Delivery System User. Carter T, Tucker D, Kille A, Pappalardo T, Barber A, Berry E. Clinical Practice & Cases in Emergency Medicine. 13(1):212-217, 2017 Aug. (Case Report) UI: 2948693	35-year-old female. Ex- smoker. medical history included coronary artery disease, uncontrolled diabetes mellitus type 2, obesity, deep vein thrombosis, dyslipidemia, gastroesophageal reflux, headaches, and hypertension. Her surgical history was significant for three- vessel coronary artery bypass grafting	only use of two refill containers she knew to be 2.5% nicotine or 25mg/ml in nicotine concentration, which she believed was equal to a pack of cigarettes. The husband was unable to identify the single refill product that was the most recently used of the two, and the patient had three different ENDS.	emergency department with sudden-onset dyspnea, severe pain in the back of her neck and left arm, which worsened with inhalation.	Bronchial inhalation / burn injury from vaping. But also had MFSA	no CT was performed with nodular infiltrates centered in the lower lung zones (Image 1) with some suspected chemical injury was noted in her airways. bronchoscopy was performed and demonstrated erythema of the tracheal tissues extending to an CT level two years prior and a nodular thickening of the ribs. The main bronchus had a yellow, vesicular appearance with interspersed erythema and increased friability of the tissue. The right mainstem bronchus and remaining airways had a rust-colored appearance along with erythema extending into the visible lower airways.	bronchoscopy was performed, an extensive pattern of suspected chemical injury was noted in her airways. bronchoscopy was performed and demonstrated erythema of the tracheal tissues extending to an CT level two years prior and a nodular thickening of the ribs. The main bronchus had a yellow, vesicular appearance with interspersed erythema and increased friability of the tissue. The right mainstem bronchus and remaining airways had a rust-colored appearance along with erythema extending into the visible lower airways.	bronchial alveolar lavage culture revealed heavy growth of methicillin- resistant <i>Staphylococcus aureus</i> (MRSA) 48 hours after admission. Her urine culture was positive for <i>Escherichia coli</i> . she had a normal complete blood count, procalcitonin, creatine kinase, and troponin. A measured glucose of 667 mg/dL with pseudohyponatremia (128 mmol/L, chloride of 96 mmol/L, and her D- Dimer was noted to be slightly elevated	metoprolol metoprolol and vincoronyl.	She was returned to the long- term rehabilitation unit of the initial treatment center. There she progressed well, where she was ambulating with an assist device and made significant progress toward an independent return to home.	rapid. Then inhalation for hypoxic resp failure. VF-ECMO required. She improved on ECMO, eventually requiring a tracheostomy, which was discontinued 14 days later.	Case Report	HIGH - ECMO	
26	Vaping in the acute ECMO for patients with status asthmaticus after vaping . Bradford L., Abdul M.E., Rong B.J., Jagers L., Clement K.C., Loughlin C.E. Journal of Asthma. (no page number). 2019. Date of Publication: 2019. AN: 63886125	Case 1: 18-year-old male with known history of severe persistent asthma, obesity, and allergic rhinitis. Case 2: 54F severe persistent asthma.	Vaping	Case 1: Acute deterioration. Hypercapnic resp failure, status asthmaticus. Vented during intubation. VF-ECMO for 5 days. Case 2: status asthmaticus. Required intubation. VF-ECMO for 6 days.	Status Asthmaticus	Flexible bronchoscopy yielded bloody lavage fluid suspicious for diffuse alveolar hemorrhage, with 61% neutrophils, 8% eosinophils, and 2% lymphocytes. Flow cytometry of the fluid showed a CD45CD8 ratio of 0.48	Organizing pneumonia	None, resolved without steroids	Discharged home day 5. steroids	Two weeks later, monitoring increased of ct findings.	intubation, VF ECMO	None	Case Series - two patients	Medium - ECMO but severe asthma patients
27	Tree-in-Bloom? Severe Acute Lung Injury Induced by Vaping Cannabis . He T., Ota M., Esposto M., Steinberg H, Mikami M. Annals of the American Thoracic Society. 14(3):468-470. 2017 Oct. (Case Report, Letter) UI: 2848684	54 male "relatively healthy"	DID NOT VAPE e-liquids. Vaped "pure cannabis oil" 32-40% of THC extracted with CO2.	Shortness of breath, hemoptysis	Organizing Pneumonia on transbronchial biopsy	Tree in Bud on CT	Flexible bronchoscopy yielded bloody lavage fluid suspicious for diffuse alveolar hemorrhage, with 61% neutrophils, 8% eosinophils, and 2% lymphocytes. Flow cytometry of the fluid showed a CD45CD8 ratio of 0.48	Organizing pneumonia	None, resolved without steroids	Discharged home day 5. steroids	Two weeks later, monitoring increased of ct findings.	Letter to editor, case report	Low - no e-liquid, just cannabis oil	
28	Respiratory bronchiolitis associated with lung disease secondary to electronic nicotine delivery system use confirmed with open lung biopsy. Dover M, Nandakumar L, Singh M, Wiley D, Windsor M, Fialding D. Respiratory Medicine Case Reports. 5(3):e02020. 2017 Oct. (Case Report) UI: 28392919	33-year-old male with 10 pack-years of traditional cigarette and prior treatment for mixed germ cell tumor. had started vaping 10-15 times per day while continuing to smoke 10 traditional cigarettes per day. After 3 months of exposure to e- cigarette vapour, was seen.	"Rylole Refillable e-Vapour" device with "Toucan White Spirit Vapour e-Liquid e-Juice." had started vaping 10-15 times per day while continuing to smoke 10 traditional cigarettes per day.	respiratory bronchiolitis interstitial lung disease (PB-ILD)	chest computed tomography demonstrated multiple well poorly defined pulmonary nodules with fluffy peripheric specification centered along the terminal bronchiovascular units (Tree in bud?)	BAL non-diagnostic	Video-assisted thoracoscopy with lung biopsy of the right upper and right middle lobes was undertaken. The microscopic findings were overall consistent with PB-ILD.	None, resolved without steroids	Discharged home day 5. steroids	One month later.	Case report	Medium		
29	Electronic cigarette usage patterns: a case study combining survey and social media data. Zhan Y, Elbar JF, Leischow S, Zeng D. Journal of the American Medical Association. 320(19):1918- 1919. Jun 01, 2019. (Case Report) UI: 3004163	Online survey (n = 5132) and social media dataset, looking at patterns of use.	Online survey compared to social media, looking at patterns of use.									Journal Article	Low	
30	Cannabis Use and Bleomycin: An Overview and Case Study of Pulmonary Toxicity. (Review) Merkle S, Timmer JS. Clinical Journal of Oncology Nursing. 22(4):438-443. 2018 Sep 01. (Case Report, Journal Article, Review) UI: 30035760	describes the effects cannabis may have on the lung, reviews indications for cannabis use in patients with cancer, and explores an atypical case of progressive subcutaneous lymphoma and cannabis use.	DID NOT VAPE										Review Article	Low
31	Sporadic Pneumothorax After Electronic cigarette Use. Mazzoni RB, Laitini D, Arino NP, Falcone FN, Solitto F. Chest. Conference: CHEST 2016. United States. 102 (4 Supplement 1) (pp S624). 2016. Date of Publication: October 2016. AN: 61368522	17 M dyspnea and disphagia, non-smoker, previously healthy.	First vaping attempt, single deep inhalation leading to pneumothorax	dyspnea and disphagia.	Pneumothorax	Standard thoracic radiography revealed stranding locusts outlining mediastinal contours, such as subcutaneous emphysema (Fig. 1). Chest computed tomography scan showed the so called "ring sign" (due to air surrounding the pulmonary artery and its branches) and double bronchial wall (Fig. 2).	Standard thoracic radiography revealed stranding locusts outlining mediastinal contours, such as subcutaneous emphysema (Fig. 1). Chest computed tomography scan showed the so called "ring sign" (due to air surrounding the pulmonary artery and its branches) and double bronchial wall (Fig. 2).	None	Monitor	Discharged after day two in hospital	Case report	low		
32	Hypersensitivity Pneumonitis and Acute Respiratory Distress Syndrome From e-Cigarette Use. Sommerfeld CG, Wiener DJ, Neenan A, Larkin A. Pediatrics. 141(6). 2018 Oct. (Case Report, Journal Article) UI: 29773605	previously healthy 18- year-old woman who	"After vaping "	presented with dyspnea, cough, and pleuritic chest pain	Hypersensitivity Pneumonitis and ARDS	Controlled tomography of the chest revealed dependent opacities in both lung lobes, supercardiac bronchovascular interior septal thickening, and pleural effusions.	bronchoalveolar lavage revealed cellular debris and reactive mononuclear cells, and cell counts were remarkable for elevated mononuclear cells and eosinophilia.	"marking for an infectious etiology came back negative."	intravenous methylprednisolone therapy was initiated. After this the patient rapidly improved, was weaned off ventilator support, and was extubated	intravenous methylprednisolone therapy was initiated. After this the patient rapidly improved, was weaned off ventilator support, and was extubated	Case report	medium		
33	Sudden sensorineural hearing loss associated with electronic cigarette liquid: The first case in the literature. Dent E, Tapp S. International Journal of Pediatric Otorhinolaryngology. 114:26-28. 2018 Nov. (Case Report, Journal Article)	6 year old accidental ingestion of e-liquid	DID NOT VAPE. Ingested the fluid										Case report	low
34	Respiratory failure caused by lipid pneumonia from vaping e-cigarettes . Wasson D, Trotter S, Barge PS, Walters G. BMJ Case Reports. 2018. 2018 Jul 06. (Case Report, Journal Article) UI: 2982176	Young female	"Vaper"	young female vaper presented with insidious onset cough, progressive dyspnoea on exertion, fever, night sweats and was in respiratory failure when admitted to hospital	Lipid pneumonia	chest radiograph and high- resolution CT showed diffuse ground-glass infiltrates with reticulation	bronchoscopy and high-volume lavage was unyielding	video-assisted thoracoscopic biopsy was done later and was suggestive of lipid pneumonia	Hematological tests revealed only thrombocytopenia, which was long standing, and her biochemical and inflammatory markers were normal	She was initially treated with empirical steroids and there was improvement in her oxygenation	"Despite our advice to quit vaping , she continued to use EG with different flavours and there is not much improvement in her clinical and spirometric parameters."	Case report	medium	
35	Sporadic coronary artery dissection in a postpartum e-cigarette smoker. Kinnery N, Kinnery A, Gandhi H, She J.J. BMJ Case Reports. 2018. 2018 Jun 04. (Case Report, Journal Article) UI: 2989594	41-year-old woman with no significant medical history, but was a habitual e-cigarette smoker	habitual e-cigarette smoker	presented with atypical chest pain 2 weeks after an uncomplicated delivery while breast feeding		Standard thoracic radiography revealed stranding locusts outlining mediastinal contours, such as subcutaneous emphysema (Fig. 1). Chest computed tomography scan showed the so called "ring sign" (due to air surrounding the pulmonary artery and its branches) and double bronchial wall (Fig. 2).	Standard thoracic radiography revealed stranding locusts outlining mediastinal contours, such as subcutaneous emphysema (Fig. 1). Chest computed tomography scan showed the so called "ring sign" (due to air surrounding the pulmonary artery and its branches) and double bronchial wall (Fig. 2).	None	Monitor	Discharged after day two in hospital	Case report	low		
36	Organizing pneumonia related to electronic cigarette use. A case report and review of literature. (Review) Khan MS, Khatab F, Ahtar J, Khan Z, Liu A, Nhoobdoobay V, Hammerley J. The clinical respiratory journal. 13(3):126-129. 2018 Mar. (Case Report, Journal Article, Review) UI: 2932888	40-year-old female patient. She reported increased use of a cigarette during this time period to help her quit smoking.	patient presented with symptoms of worsening dyspnoea and intermittent chest pain for past 4 months. Patient developed acute hypoxemic respiratory failure requiring intubation and mechanical ventilation	organizing pneumonia	Organizing pneumonia on open lung biopsy				treated with steroids along with abstinence from a cigarette use.	"Successfully treated with steroids"	Case report	Medium		
37	Flavored e-cigarette liquids reduce proliferation and viability in the CALU3 airway epithelial cell line. Raevel TR, Neeter SL, Lee SL, Harris RA, Nethery RC, Herring AH, Ghah SA, Tarran R. American Journal of Physiology - Lung Cellular & Molecular Physiology. 313(1):L52-L68. 2017 Oct 01. (Journal Article, Research Support, N.I.H., Extramural, Research Support, Non-U.S. Gov't) UI: 29428175	Tested multiple flavours of e-liquids	13 different flavored e-liquids, gas chromatography-mass spectrometry.	demonstrated a dose-dependent decrease of MTT (metabolism by all flavors tested)							"The 13 flavored e-liquids have decreased MTT metabolism by all flavors tested." Since all of the flavors exhibited some degree of toxicity and a diverse array of chemical constituents with the inhalation toxicity available, we conclude that flavored e- liquids should be extensively tested on a case-by-case basis to determine the potential for toxicity in the lung and elsewhere.	Journal Article	low	
38	Clozapine and the electronic cigarette : a case study. (Review) Dabiri Steen vasingen von Gussappegel no overschaalen was i badische up elektronische sigaretten. Nanner TS, Timmer SJ. Tijdschrift voor Psychiatrie. 55(4):314- 7. 2015. (Case Report, Journal Article, Review) UI: 2902924	patient who switched from traditional cigarettes to electronic cigarettes and therapeutic had a significant increase in the clozapine serum level	increased level led to considerable side-effects and, as a result, the patient's clozapine dosage had to be reduced.										Case report	low

39	A Cancer That Went Up in Smoke: Primary Reaction to e-Cigarettes Initiating Metastatic Cancer. Ring Madison L, Vintner Kristin M, Bergmann T, Eisenstein S, Naghbat S, Dinal L, Knudson ST. Chest. 146(3):e657. 2015 Mar. [Case Reports. Journal Article] U: 2955575	a 45-year-old female consumer of e-cigarettes	presented with 4 months of abdominal pain and fever	Lung and liver nodules. Multiple multinucleate giant cell foreign body reaction to lipophilic material	multiple pulmonary nodules and liver lesions suggestive of widespread metastases.	lung biopsy revealed an area with multinucleated giant cells suggestive of a foreign body reaction to a lipophilic material.	"an extensive evaluation found no evidence of malignancy."	Cessation	Upon cessation of e-cigarettes use (known as vaping), the lung nodules disappeared, and the liver lesions regressed	Case report	low					
40	Infused medical cannabis and the immunocompromised patient. Rucklimer R, Amel-Kohn M, Resch D, Hirsch L. Supportive Care in Cancer. 23(3):819-22. 2015 Mar. [Case Reports. Journal Article] U: 2521651	Not patient based. Goal: identify the safest way of using medical cannabis in immunosuppressed patients by finding the optimal method of administration with minimal loss of activity	Not related to vaping	Looked at opportunistic microorganisms and ways to sterilize cannabis						Journal Article	low					
41	Electronic cigarettes: a review of safety and clinical issues. [Review] Weaver M, Breland A, Spinola T, Eisenberg. Journal of Addiction Medicine. 9(4):234-40. 2014 Jul-Aug. [Case Reports. Journal Article. Research Support, U.S. Gov'. P.H.S. Review] U: 2529963	Fictional amalgamations of actual patients.	Broad overview. No factual cases. No discussion of adverse events							Case reports (3 fictitious cases)	low					
42	Case report of electronic cigarette possibly associated with eosinophilic pneumonitis in a previously healthy young adult male. Thota D, Latham E. Journal of Emergency Medicine. 47(1):157. 2014 Jul. [Case Reports. Journal Article] U: 2448204	20-year-old previously healthy man, sailor	3 days of persistent cough, shortness of breath, and facial flushing. "noticed symptom cluster beginning 1h after smoking an e-cigarette 3 days prior"	acute eosinophilic pneumonia	CXR "acute diffuse patchy reticulonodular opacities." CT Chest: no evidence of pulmonary embolism with predominantly diffuse ground-glass opacities involving the upper and middle lobes of the lung more than lower lobes. Considerations include opportunistic infection such as pneumocystis jirovecii versus atypical or viral pneumonias. Acute allergic disease such as diffuse alveolar hemorrhage, drug toxicity, or hypersensitivity pneumonitis is on the differential	pulmonary report suggested no evidence of bacteria, viruses, fungus, parasites, or neoplasm via bronchoscopy, sputum, and serum laboratory tests	Coc 2.0% eosinophils, bronchial alveolar lavage demonstrated "abundant macrophages, eosinophils, and scattered benign respiratory epithelial cells. There are no chunky eosinophilic inclusions identified in the macrophages. The right upper lobe cell count yielded 3268 WBCs [white blood cells] with 3% neutrophils, 2% eosinophils, 17% macrophages and 74% eosinophils.	started him on albuterol, and there was no improvement in his symptoms. 1 gm of ceftriaxone and 100 mg of dicyclanil for initial treatment of community-acquired pneumonia. Treated with antibiotics and steroids and his symptoms improved. 50 mg of prednisone and was discharged from the hospital on hospital day 5 with improvement in his symptoms.	7 day 1h CXR on pred symptoms improved	a follow-up 2 days later with Pulmonology, at which time he stated he was feeling better and that his symptoms had almost completely resolved. A repeat chest x-ray study performed 1 week later showed significant interval improvement of the left lung base opacity.	Case report	medium				
43	A case report of subacute bronchovascular interstitial pneumonia induced by an electronic cigarette. Haines J, Drowe M, Uhan T, Thorpe. 86(6):596-7. 2014 Jun. [Case Reports. Critical Care Medicine. Journal Article] U: 2443627	43M history of primary lung adenocarcinoma resected 18 months prior. A documented isolated bronchiectasis stage (pT2N0M0) treated by stereotactic brain radiotherapy, right upper lobectomy and chemotherapy. On surveillance for 7 months	La dynamique" by CIGARETTE and two "e-liquids" (Nicotily 19 mg/ml of nicotine) and Eastern (19 mg/ml of nicotine) (Conceplains). Vaped 25 times a day, taking 5-6 puffs each time, which enabled him to stop smoking tobacco cigarettes	After 48 h, the patient described onset of cough with whitish secretions. He subsequently developed progressive breathlessness on minimal exertion (Sudol Stage 5) over a period of 1 week. Sought medical attention after four weeks.	"Suspected bronchitis"	CT not done. CXR not different to previous.	None done				Normal pre-bronchov. Mwd obstructive (restrictive, P/FVC 74%, FEV1 45%)	case report, case conference	medium			
44	An unexpected consequence of electronic cigarette use. McCaskey L, Martin C, Hoerner D. Chest. 141(1):110-113. 2012 Apr. [Case Reports. Journal Article] U: 2247495	42-year-old woman admitted to the hospital with a 7-month history of dyspnea, productive cough, and subjective fevers. She had been seen multiple times in the ED with similar complaints and had received several courses of antibiotics. Her past medical history also was significant for asthma, reported rheumatoid arthritis, ti bomyalgia, schizophrenia, and hypothyroidism	had recently started using electronic cigarettes (e-cigarettes), about 7 months prior, which coincided with the onset of her respiratory symptoms	Eosinophilic lipid pneumonia due to e-cigarette use.	Chest radiographic imaging showed bilateral, bilateral opacities. CT images (Fig 1) revealed extensive bilateral peripheral lower-lobe patchy ground glass pulmonary opacities in a "crazy paving" pattern. Bronchoscopy and BAL were performed. The cell count showed 48% neutrophils, 8% lymphocytes, 47% macrophages, and 1% eosinophils. Results of all bacterial and viral cultures remained negative. Fungal cultures showed light growth of Candida. Results of a nasal Botrytis polysaccharide chain reaction swab were negative. Results of urine Legionella antigen and serum Mycoplasma IgG and IgM tests were negative. Results of a hypersensitivity pneumonitis panel, extracted nuclear antigen panel, and tests for antimicrobial antibody, cyclic citrullinated peptide, and rheumatoid factor were negative. A hist factor 3 panel showed trace reactivity to salmon and Hb of IgG. Investigations for infection and immunological disorder were negative and toxicology was negative except for cannabis.	WBC count of 18.0 (13.0-3.1) with a normal differential and hemoglobin level of 11.2 g/dL. The chemistry panel and brain natriuretic peptide levels were normal. Results of an HIV test were negative. Results of a nasal Botrytis polysaccharide chain reaction swab were negative. Results of urine Legionella antigen and serum Mycoplasma IgG and IgM tests were negative. Results of a hypersensitivity pneumonitis panel, extracted nuclear antigen panel, and tests for antimicrobial antibody, cyclic citrullinated peptide, and rheumatoid factor were negative. A hist factor 3 panel showed trace reactivity to salmon and Hb of IgG. Investigations for infection and immunological disorder were negative and toxicology was negative except for cannabis.	The patient was instructed to avoid the use of e-cigarettes, and subsequently her symptoms improved.	A follow-up chest radiograph was normal, and pulmonary function testing showed mild diffusion impairment but no obstructive or restrictive defects.	Not listed							
45	Fatal alveolar hemorrhage following a "bang" of cannabis. [French] Hemorragie alvéolaire fatale après bang de cannabis. Gossain F, Andre M, Rabbe B, Corbeau E, Vincennes UJ, Pakeon N. Revue des Maladies Respiratoires. 28(7):919-21. 2011 Sep. [Case Reports. English Abstract. Journal Article] U: 2194339	did not vape	haemoptysis	DAH	CT scan showed bilateral, diffuse alveolar shadowing	Bronchoalveolar lavage revealed massive alveolar hemorrhage.	Autopsy showed toxic alveolar hemorrhage.	Trace reactivity to salmon and Hb of IgG. Investigations for infection and immunological disorder were negative and toxicology was negative except for cannabis.	Antibiotic treatment was given and favorable progress allowed early discharge.	Death occurred 15 days later due to alveolar hemorrhage following a further "bang" of cannabis.	case report	low				
NEW ARTICLES FROM THIS POINT ON. 25 NEW ENTRIES. October 15, 2019 - October 30, 2019 (2" search update)																
46	Pleural effusion with electronic cigarette use. A not-so-safe alternative to tobacco. Mazurek C, Dale-Layne J, Mazurek W, Oka B. Embase Classic-Embase. Conference: Hospital Medicine, Journal of Hospital Medicine, Conference: Hospital Medicine, 2018, United States. 13 (4 Supplement 1) (no pagination). 2018. Date of Publication: 2018. [Conference Abstract] AN: 62665637	63M former cigarette smoker, having smoked approximately 1 pack per day for 40 years, who had recently transitioned to using electronic cigarettes, or "vaping."	progressive dyspnea and associated hemoptysis of several days duration	Pleural Effusion	Chest radiograph revealed a new left-sided pleural effusion. Subsequent CT angiogram of the chest and pulmonary arteries was without pulmonary embolism but confirmed the presence of the left-sided effusion. Repeat CT of the chest revealed an 8 mm pleural-based thickening on the right but no findings on the left. A week repeat CT of the chest following absence from further vaping was without re-accumulation of the left-sided effusion. The pleural thickening noted on the right was associated with:	There was no microbiology and initial negative work up (ie, sputum, thoracentesis, 700mL, serology negative by LIGHT criteria. Cytology was negative for malignant cells.	Abstaining from e-cigs	No reaccumulation. Pleural thickening stable.	28		Case Report	Low				
47	Imaging of vaping-associated lung disease. Herry T.S., Kanne J.P., Kigerman S.J. Embase Classic-Embase. New England Journal of Medicine. 361(15) (pp 1486-1487). 2019. Date of Publication: 10 Oct 2019. [Letter] AN: 62564917 PMID: 31491070 https://www.ncbi.nlm.nih.gov/pubmed/31491070	Case Series 34 Patients details not discussed. 19 cases seen by authors. 15 cases from the literature	identified four imaging patterns that correlated with pathological findings attributable to vaping, including acute eosinophilic pneumonia, diffuse alveolar damage, organizing pneumonia, and lipid pneumonia.									Correspondence	High			
48	Pulmonary lipid-laden macrophages not normal. Mussack S.D., Cirilo M.M., Calahan S.J., Kanan L.H., Frazee C.S., Raman S.M., Abernig S.K. Embase Classic-Embase. New England Journal of Medicine. 361(15) (pp 1488-1489). 2019. Date of Publication: 10 Oct 2019. [Letter] AN: 62564919 PMID: 31491073 https://www.ncbi.nlm.nih.gov/pubmed/31491073	Case series 3 patients, not normal. 63M former cigarette smoker, having smoked approximately 1 pack per day for 40 years, who had recently transitioned to using electronic cigarettes, or "vaping."	presented with 1 week of dyspnea, cough, abnormal pain, nausea, and vomiting.	ARDS	BAL lipid laden macrophages were present from 20% to 70%. The BAL samples macrophage predominant. One neutrophilic predominance.	negative HIV testing and a relatively elevated level of C-reactive protein (307 mg per deciliter). Neutrophilic lymphocytosis.	2 patients high dose corticosteroids. One patient received antibiotics. One patient received immunosuppressants only.	All patients survived.	None	WV ECMO in one patient.	Correspondence	High				
49	Lung Biopsy Findings in Severe Pulmonary Illness Associated With E-Cigarette Use (Vaping). Mulholland S., Mirvad M., Dammer P., Arava A.V., Saria R., Brenner D.S., Maldonado F., Choi H., Choudhri M. Embase Classic-Embase. American Journal of Clinical Pathology. (no pagination). 2019. Date of Publication: 17 Oct 2019. [Article] AN: 62622317	Case series 8 patients. eight men (aged 19-61 years) with respiratory symptoms following e-cigarette use	All patients reported vaping THC; two were also using nicotine. One individual had a history of asthma. One patient used "bank brand" THC	most common presenting symptoms were fever (n = 7/8 patients), cough (n = 6/8), and dyspnea (n = 5/8). Most patients unresponsive to antibiotic therapy, or a combination of these patterns.	acute lung injury, manifesting as organizing pneumonia, diffuse alveolar damage (DAD), and dyspnea (n = 5/8). Most patients unresponsive to antibiotic therapy, or a combination of these patterns.	Imaging showed diffuse bilateral ground-glass opacities in all patients	Lung biopsies (seven transbronchial, one surgical) showed acute lung injury, including organizing pneumonia and/or diffuse alveolar damage. Common features were fibroblast plugs, hyaline membranes, fibrous exudates, type 2 pneumocyte hyperplasia, and interstitial organization. Some cases featured a sparse interstitial chronic inflammatory infiltrate. Although macrophages were present within the airspaces in all cases, this feature was not prominent, and findings were not consistent with organizing pneumonia. Histologic findings were supportive of diffuse alveolar damage.	Workup for infection was negative in all cases, and there was no evidence for other etiologies.	Corticosteroids	One death. Others recovered with corticosteroid therapy	One patient required mechanical ventilation	Journal Article	High			
50	Diffuse alveolar damage and e-cigarettes: Case report and review of literature. Balle S.A., Alf-Fari T.S., Alf-Fari S. Embase Classic-Embase. Respiratory Medicine Case Reports. 8 (no pagination). 2019. Article Number: 100555. Date of Publication: 2019. [Article] AN: 200268528	47-year-old woman with a history of asthma, severe depression, and obesity	had been smoking e-cigarettes for 3 years prior to presentation.	4-day history of progressively worsening shortness of breath, nasal congestion, fevers, chills, cough, lower extremity swelling, and generalized body aches.	Diffuse alveolar damage (DAD)	Chest CT with contrast revealed bilateral diffuse predominant ground glass attenuation with scattered alveolar opacities of the lungs. Due to critical deterioration, a repeat chest CT without contrast done 9 days after showed mild consolidation in bilateral lungs which had worsened when compared to previous CT. Small trace pleural effusions were present but no pneumothorax.	CRB with differential showed a leukocytosis of 9.7, hemoglobin and lower lung lobes was performed which revealed a diffuse alveolar septal thickening, due to combination of fibroblastic proliferation and alveolar lining cell hyperplasia. Scattered eosinophilic hyaline membranes were also present and these findings were supportive of diffuse alveolar damage.	Antibiotics, steroids, azithromycin.	Discharged to long term care center. CT scan done about 3 months following discharge showed significant improvement in the previously seen infiltrates with complete resolution in the upper lung zones.	3 months	Mechanical ventilation	Journal Article	High			
51	GRANULOMATOSIS DUE TO ELECTRONIC CIGARETTE USE. Lin C, Cho H. Embase Classic-Embase. Chest. Conference: CHEST 2019 Annual Meeting, United States. 156 (4 Supplement) (p 2020). 2019. Date of Publication: October 2019. [Conference Abstract] AN: 200398304	34 year old female, prior tobacco smoker, with a history of carcinoma tumor	Started vaping two months prior to symptoms	presented to clinic ten months post-operatively with new-onset cough and wheezing	Granulomatosis	CT scan demonstrated interval development of bilateral micronodules consistent with granulomatosis or inflammatory bronchiolitis, and follow-up CT scan one month later demonstrated increased burden of reticulonodular opacities and mediastinal lymphadenopathy.	Transbronchial biopsy, pathology demonstrates multinucleated giant cells with eosinophilic cytoplasm, compatible with a granulomatosis secondary to electronic cigarette use.	Empiric antibiotics not effective.			Case report - conference abstract	Medium				
52	Vaping is a risk factor for spontaneous pneumothorax: Two cases. Stanton N.J., Sullivan G.A., Madonna M.B., Shah A.N. Embase Classic-Embase. Journal of Pediatric Surgery Case Reports. 50 (no pagination). 2019. Article Number: 101302. Date of Publication: November 2019. [Article] AN: 200327927	present two male patients age 15 and 16	spontaneous pneumothorax after vaping and were initially treated with tube thorostomy placement	spontaneous pneumothorax								Journal Article	Low			
53	Effect of e-cigarette exposure on production of endotoxin factors by Pseudomonas aeruginosa. Gallagher K., McKee K.A., Carson G., Turney M., Gilpin D. Embase Classic-Embase. Journal of Critical Care. Conference: 42nd European Critical Care Conference, United Kingdom. 18 (Supplement 1) (p 586). 2019. Date of Publication: June 2019. [Conference Abstract] AN: 200197678	In-vitro study, four Pseudomonas aeruginosa isolates.	strawberry e-cigarette vapour extract (ECVE), common ECVE, flavoured ECVE and propylene glycol/vegetable glycerin (PGVG) ECVE	increased complain of sudden onset chest pain that occurred immediately after forcefully clearing his throat	Spontaneous Pneumothorax	Radiographic studies of the chest and neck as well as Computerized Axial Tomography were positive for a large pneumothorax with air dissecting the soft tissues of the neck	IV Ceftriaxone, conservative.	Discharged after day ten in hospital	none		Case report - conference abstract	Very low				
54	Oropharyngeal Injury From Spontaneous Combustion of a Lithium Ion Battery: A Case Report. Stone J., Thross S., Gelbard A. Embase Classic-Embase. Laryngoscope. 129(1) (p 45-48). 2019. Date of Publication: January 2019. [Review] AN: 62399091	16-year-old Asian male with prior history of moderate persistent asthma, with no exacerbations for more than a year.	uses an electronic cigarette occasionally	presented complaining of sudden onset chest pain that occurred immediately after forcefully clearing his throat	Spontaneous Pneumothorax	Radiographic studies of the chest and neck as well as Computerized Axial Tomography were positive for a large pneumothorax with air dissecting the soft tissues of the neck	IV Ceftriaxone, conservative.	Discharged after day ten in hospital	none		Case report - conference abstract	Very low				
55	e-Cigarette technology causing burn injury. Stein J.F., Abraham A. Embase Classic-Embase. Journal of General Internal Medicine. Conference: 41st Annual Meeting of the Society of General Internal Medicine, SCIM 2018, United States. 33 (2 Supplement 1) (p 514). 2018. Date of Publication: 2018. [Conference Abstract] AN: 62323154	72 year old, gender not disclosed	Facial burns while vaping on oxygen	Facial burns while vaping on oxygen	Second degree burns to face and oropharynx							Case report - conference abstract	Very low			
56	Biological and analytical assessment of e-cigarette aerosol components on airway epithelia. Singh J., Luquet E., Smith D.P.T., Pappas H.J., Pappas F. Embase Classic-Embase. Science progress. 99(4) (p 351-368). 2018. Date of Publication: 01 Dec 2018. [Review] AN: 62194494	In-vitro, tested 18 different e-cigarette refill flavours for their toxicity on human derived bronchial cells (Beas2B)	tested 18 different e-cigarette refill flavours for their toxicity on human derived bronchial cells (Beas2B)									Review Article	low			

58	Vaping and tension pneumothorax: A retrospective association. Lo T. Embase Classic+Embase American Journal of Respiratory and Critical Care Medicine. Conference: American Thoracic Society International Conference. ATS 2017. United States. 105 (no pagination). 2017. Date of Publication: 2017. [Abstract] AN: 61772363	21-year-old male	daily cigarette use for the past 4-5 years, but switched to vaping over the last 7 months. He uses the Valsalva maneuver several times while vaping, including 2-3 times the night prior to admission	sudden onset of sharp intense right-sided, pleuritic chest pain and shortness of breath, which were both worse in a supine position. The symptoms started after he has been lifting tables at his workplace.	Tension Pneumothorax	chest X-ray revealed a large right-sided tension pneumothorax. Computerized Tomography (CT) scan of the chest showed the presence of blebs bilaterally in the apices with the right lung affected much worse than the left.	Thoracic vent catheter was inserted and connected to the water suction device. Did not resolve. Right video-assisted thoracoscopic with a thoracoscopic wedge resection of the right apical blebs, complete thoracoscopic pleuroctomy, and talc pleurodesis were performed with resolution of the pneumothorax.	Discharged three days after VATS	none			Case report - conference abstract	low	
59	Antenatal exposure to e-cigarettes (vapor) as a possible etiology to fetal colonic necrotizing enterocolitis: A case report. Gilen S, Saltzman D. Embase Classic+Embase Journal of Pediatric Surgery Case Reports. 2 (12) (pp 538-537). 2015. Date of Publication: January 2015. [Article] AN: 60273352	1-day-old infant male	mother had been consistently smoking an e-cigarette throughout the pregnancy—from 30 to 30 times per day. In addition, during the time of active labor, she smoked the e-cigarette approximately 50-70 times.	vapor of e-cigarette liquid with or without nicotine, vapor of the carrier substances propylene glycol and glycerol as well as to mainstream smoke of KRRAF research cigarettes	colonic necrotizing enterocolitis	pneumonia intestinalis			Infant currently doing "extremely well". This is growing appropriately and meeting his developmental milestones during his last check at 9 months of age.	six months	infant required mechanical ventilation and pressure support thus he was taken to the operating room for emergent abdominal exploration.	Case Report	very low	
60	Evaluation of e-cigarette liquid vapor and mainstream cigarette smoke after direct exposure of primary human bronchial epithelial cells. Schaefer S, Dehan H, Kruschewski D, Forstner C, Brandstedt D, Aufderheide M. Embase Classic+Embase International Journal of Environmental Research and Public Health. 12 (4) (pp 3815-3820). 2015. Date of Publication: 08 Apr 2015. [Article] AN: 60262194							We found toxicological effects of e-cigarette vapor and the pure carrier substances, whereas the nicotine concentration did not have an effect on the cell viability. The viability of mainstream smoke cigarette exposed cells was 4.58 times lower and the oxidative stress levels 4.55 times higher than those of e-cigarette vapor exposed cells, depending on the donor.			Journal Article	very low		
61	Not only smoking is deadly: fatal ingestion of e-juice-a case report. Barakat S, Meron-Chazotte B, Bendor K, Balke J, Rothchild M.A, Jubner M. Embase Classic+Embase International Journal of Legal Medicine. 129 (3) (pp 481-480). 2015. Date of Publication: 01 May 2015. [Article] AN: 60815006	34-year-old man	psychosis.	DIY NOT VAPE. Ingested three nicotine solution vials of the brand "Titanium Ice" (of 90 mL each).	Found deceased after ingestion of nicotine.				Decreased after ingestion			Case Report	Very low	
62	Efficacy and safety of electronic cigarettes for smoking cessation: A systematic review. Alahab R.C., Khan M., Stanbrook M.B. Embase Classic+Embase American Journal of Respiratory and Critical Care Medicine. Conference: American Thoracic Society International Conference. ATS 2015. Denver, CO United States. Conference Publication: (see pagings). 101 (Meeting/abstracts) (no pagination). 2015. Date of Publication: 2015. [Conference Abstract] AN: 60262194	Systematic review 1986 to May 2014. 4601 abstracts identified. 297 articles underwent full-text review	Meta-analysis. Multiple types					Meta-analysis showed that point prevalence abstinence was significantly better for e-cigarettes vs placebo at 1 month (RR 1.71, 95% CI 1.08-2.72, I ² =0%). However, differences for point prevalence abstinence did not reach statistical significance at 3 months (RR 1.65, 95% CI 0.76-3.13, I ² =65%) or 6 months (RR 1.32, 95% CI 0.59-2.93, I ² =65%), with large heterogeneity between studies regarding the validity of these pooled estimates. Estimated after 24hours.				Review Article	low	
63	Complications secondary to electronic cigarette use. Frouzakis S, M., Valsanyi P.M., Endre-Bryas A.S. Embase Classic+Embase American Journal of Respiratory and Critical Care Medicine. Conference: American Thoracic Society International Conference. ATS 2015. Denver, CO United States. Conference Publication: (see pagings). 101 (Meeting/abstracts) (no pagination). 2015. Date of Publication: 2015. [Conference Abstract] AN: 72145143	30-year-old Caucasian man with 10-pack-year smoking history	started using EC two days prior to symptom onset	acute onset dyspnea.	moderate axilla and edema of the para-tracheal musculature				Despite intravenous administration of diphtheria, tetanus, and pertussis antigens, patients' dyspnea worsened.			Intubation with mechanical ventilation	Case report - conference abstract	low
64	Metastatic foreign material deposits and alveolar hemorrhage in crack cocaine smoker. Sogomonian R, Gandhi V., McGerty T, Mezzalana M. Embase Classic+Embase Journal of Investigative Medicine. Conference: 2015 Combined Annual Meeting of the Central Society for Clinical and Translational Research and the Midwestern Section American Federation for Medical Research. Chicago, IL, United States. Conference Publication: (see pagings). 53 (4) (pp 495). 2015. Date of Publication: April 2015. [Conference Abstract] AN: 71918847	50-year-old African-American female prisoner of crack cocaine	DIY NOT VAPE	acute onset of subjective fever, shortness of breath and cough productive of blood-streaked sputum	DAH	Crack Cocaine including binge crack inhalation 2 days prior	extensive right upper lobe consolidation, nodular ground-glass infiltrate and a similar but less severe process in the right lower lobe	diffuse edema of the airways without active hemorrhage. Bronchoalveolar lavage (BAL) fluid samples were non-hemorrhagic. Transbronchial biopsy demonstrated alveolar hemorrhage with refractile foreign material deposits.	No evidence of pneumococci. Microbiologic evaluation, including routine cultures, legumins and histoplasma urine antigens, as well as sputum mycobacterial smears, were clinically negative.				Case report - conference abstract	very low
65	Vaping-Associated Lung Injury. Island JM, Arent SW, Ovid MEDLINE(R) ALL American Journal of Clinical Pathology. 2019 Oct 25. [Journal Article] UI: 31652023	Case series, 17 patients	Island JM, Arent SW, Ovid MEDLINE(R) ALL American Journal of Clinical Pathology. 2019 Oct 25. [Journal Article] UI: 31652023	Organizing pneumonia, DAH, and Acute fibrinous pneumonitis with organization	bilateral pulmonary opacities.	Two cases, bronchoalveolar lavage fluid was available and contained abundant foamy macrophages	In all cases, histopathological findings showed patterns of acute lung injury including acute fibrinous pneumonitis, diffuse alveolar damage, or organizing pneumonia, usually bronchioalveolar and accompanied by bronchiolitis. No histologic findings were specific, but foamy macrophages and pneumocyte vacuolization were seen in all cases and may be useful diagnostic clues in	glucocorticoids and maximum supportive care	Despite treatment with glucocorticoids and maximum supportive care, no patients with diffuse alveolar damage died. Remainder survived.			Correspondence	High	
66	Legal products containing THC are banned for vaping lung disease in Utah. Tenen JL, Ovid MEDLINE(R) ALL BMJ. 367:k216. 2019 Oct 25. [Letter] UI: 31650940	Could not access article											Correspondence	Medium
67	E-cigarettes and Vaping Implicated in Recent Cases of Severe Lung Disease. Pritsker C, Ovid MEDLINE(R) ALL American Journal of Nursing. 119(11):12. 2019 Nov. [Journal Article] UI: 31651460	One page summary of case report. No new information or primary research											Journal Article	low
68	E-cigarette Use, or Vaping, Practices and Associated Lung Injury - Utah, April-October 2019. Lewis N, McCaffrey K, Sage K, Cheng C, Green J, Goldstein L, Campbell H, Ferris D, Mosen N, LeCron N, Mastrototaro A, Beard A, Hancock A, Harris D, Callahan S, Aberg S, Risk E, Willardson S, Cotter A, Nalsettian D, Dunne J, Burnett C, Atkinson R, Dunn A. Ovid MEDLINE(R) ALL MMWR. Morbidity & Mortality Weekly Report. 68(42):953-956. 2019 Oct 25. [Journal Article] UI: 31647788	Analysis of medical records of 79 of 83 vaping cases in Utah. Among 53 interviewed patients, all of whom reported using e-cigarettes or vaping products within 3 months of acute lung injury, group (n=53) 14-19 (41%) reported using any products containing tetrahydrocannabinol (THC), the principal psychoactive component of cannabis. 35 (66%) reported using any nicotine-containing products, and 32 (60%) reported using both, most THC-containing products were acquired from informal sources such as friends or illicit in-person and online dealers. THC-containing products were most commonly used one to five times per day, whereas nicotine-containing products were most commonly used >25 times per day. Product sample testing at the Utah Public Health Laboratory (UPHL) showed evidence of vitamin E acetate in 17 of 20 (85%) THC-	Among 53 interviewed patients, all of whom reported using e-cigarettes or vaping products within 3 months of acute lung injury, group (n=53) 14-19 (41%) reported using any products containing tetrahydrocannabinol (THC), the principal psychoactive component of cannabis. 35 (66%) reported using any nicotine-containing products, and 32 (60%) reported using both, most THC-containing products were acquired from informal sources such as friends or illicit in-person and online dealers. THC-containing products were most commonly used one to five times per day, whereas nicotine-containing products were most commonly used >25 times per day. Product sample testing at the Utah Public Health Laboratory (UPHL) showed evidence of vitamin E acetate in 17 of 20 (85%) THC-	Not listed	Not listed			Treated with steroids 59 (73%)	Hospitalization 70 (89%), ICU admission 35 (44%), CPAP/BIPAP support (No intubation) 30 (38%), Intubation and mechanical ventilation 9 (11%)			Journal Article	medium	
69	Update: Interim Guidance for Health Care Providers Evaluating and Caring for Patients with Suspected E-cigarette, or Vaping, Product Use Associated Lung Injury - United States, October 2019. Siegel DA, Jellison TC, Korman EH, Korman EA, Lauer M, Cohen JE, Kimball A, Weisman DN, Peterson EE, Reagan-Stevens S, Gofford Cole S, Moulia D, Moritz E, Lehnerst JD, Michie J, Landon J, Zhai SR, King BA, Jones CM, Patel A, Daltman DM, Koppala R. Lung Injury Response Clinical Working Group. Lung Injury Response Epidemiology/Surveillance Group. Ovid MEDLINE(R) ALL MMWR. Morbidity & Mortality Weekly Report. 68(41):919-927. 2019 Oct 15. [Journal Article] UI: 31647788	No additional cases. Report provides guidance for 1) initial clinical evaluation; 2) suggested criteria for hospital admission and treatment; 3) patient follow-up; 4) special considerations for groups at high risk; and 5) clinical and public health recommendations.											CDC report	Medium
70	Vaping-Associated Acute Lung Injury - Case Series. Triantafyllou GA, Tibero PJ, Zou RH, Lambert PE, Lyon MA, West JW, Gaudin MF, Morris A, Chazotte B. American Journal of Respiratory and Critical Care Medicine. 2019 Oct 01. [Journal Article] UI: 31574220	6 young men	All patients reported regular use of flavored cannabis and nicotine products, and the most recent exposure ranged between three and nine days prior to presentation. Four patients used the same type of cannabis solution. Most common used cannabis product was "Dank Vape"	fever (median temperature 39.2, interquartile range (IQR)= 0.65 °C) and a variety of respiratory and gastrointestinal symptoms, including dyspnea, non-productive cough, chest and abdominal pain, nausea, vomiting, and watery diarrhea.	Not Defined. No biopsy.	Computed tomography (CT) scans revealed multi-lobar ground glass opacities with subpleural sparing.	Two patients underwent bronchoscopy with bronchoalveolar lavage (BAL). Microbial cultures were negative in the BAL. Cell count showed 280 white blood cells/mm ³ (differential: 15% neutrophils, 31% lymphocytes, 2% eosinophils, 51% monocytes) on the first patient and 380 white blood cells/mm ³ (differential: 11% neutrophils, 8% lymphocytes, 0% eosinophils, 69%	antimicrobial therapy	Median duration of symptoms was 4.5 (IQR=3-5) days, median length of stay in the hospital was 8 (IQR=5-5) days, median length of stay in the ICU was 2 (IQR=1-2) days. No fatalities occurred.		two required mechanical ventilation (the first patient was successfully extubated after one day; the second one after 5 days)	Journal Article	High	
71	Recurrent spontaneous pneumothoraces and vaping in an 18-year-old man: a case report and review of the literature. Benita A, Bar A, Al. Alami BM, Ward RA, Fattouh MB, Dabou RA, Karagayrak T, Johnson AL, Foch EE, Vias JM. Journal of Medical Case Reports [Electronic Resource]. 13(1):283. 2019 Sep 09. [Journal Article]	18-year-old Caucasian man	reported a history of vaping just prior to both episodes	presented twice with recurrent right-sided spontaneous pneumothoraces within 2 weeks	Pneumothorax	right-sided spontaneous pneumothorax on chest X-ray and computed tomography scan			Improved	no weeks			Case Report	medium
72	ATS Health Alert: Vaping-associated Pulmonary Illness (VAPI). Carter W. C., Cray, Alexander L.E., Gross J.E., Diaz Cruz C.S., Keller J.M., Patrick S., Jerni S. Embase Classic+Embase American Journal of Respiratory and Critical Care Medicine. 200 (7) (pp 1157-1160). 2019. Date of Publication: 01 Oct 2019. [Article] AN: 60262338 PMID: 31552098 https://www.ncbi.nlm.nih.gov/pubmed/31552098	Patent information. No cases											Journal Article	Low
73	Vaping-related lung illnesses: time to act. The Lancet Oncology Embase Classic+Embase The Lancet Oncology. 20 (10) (pp 1327). 2019. Date of Publication: October 2019. [Editorial] AN: 202286974	Editorial on Wisconsin and Illinois cluster. No new cases											Editorial	Low
74	Real-Time Digital Surveillance of Vaping-Induced Pulmonary Disease. Hsiao Y, Brownstein JS. Embase Classic+Embase The New England Journal of Medicine. (no pagination). 2019. Date of Publication: 20 Sep 2019. [Letter] AN: 60380150 PMID: 31539466 https://www.ncbi.nlm.nih.gov/pubmed/31539466	Correspondence on real-time surveillance and monitoring of outbreak. No new cases											Correspondence	Low
75	Outbreak of pulmonary diseases linked to vaping. Hammond D. Embase Classic+Embase The BMJ. 360 (no pagination). 2019. Article Number: 3440. Date of Publication: 10 Sep 2019. [Editorial] AN: 620292824 PMID: 31502254 https://www.ncbi.nlm.nih.gov/pubmed/31502254	Editorial. No new cases.											Correspondence	Low

