Imaging Length of Follow ICU Interventions PFTs 1 Lipoid pneumonia from carbon 60 oil. A 59-year-old previously Didn't vape High Flow Nasal None Case Report Low seven-day history of Lipoid pneumonia Ingested several vitamins and CT Chest multiple pulmonary Negative for infection. Oil red O none Initial steroids 14 | Improvement over several | Unknown vasculitis workup was unremarkable days. Then Kamani A., Thompson M., Mackenzie healthy male progressive shortness of breath, minerals including Carbon 60 oil emboli and non-specific diffuse staining for lipids was positive; cough and subjective fevers. liquid suspension orally daily for ground glass opacities diagnosis of lipoid Clinical Toxicology. Conference: North the past six months every pneumonia, then American Congress of Clinical morning. (Pseudomonas given pulse dosing Toxicology, NACCT 2019. United aeruginosa pneumonia was and then tapering States, 57 (10) (pp 900-901), 2019. treated for seven days) course of prednisone Date of Publication: 2019. with improvement in AN: 628976679 oxygen requirements and symptoms over the next several weeks 64-year-old male, with a Four years of vaping (quit smoking) | Vaporizing device, contents not | Organizing Pneumonia. CT | bronchoscopy cytology showed | Wedge resection of the left lower lobe | Auto-immune negative Case Report High 2 A case of organizing pneumonia upper respiratory complaints, Organizing Pneumonia None. Surveillance After cessation of his chest showing patchy infiltrates inflammatory cells without pleuritic chest pain, and an secondary to use of an electronic 20 pack year smoking showed organizing pneumonia with a and stopped vaping. vaporizer his symptoms abnormal CT cicatricial pattern (mild interstitial completely resolved without nicotine delivery system. in the right lower lobe. Over the evidence of malignancy. Baumann B., Churg A., Aboulhosn K. fibrosis associated with organizing the use of corticosteroids. 6 month period of surveillance, Canadian Journal of Respiratory, pneumonia. Occasional lymphoid areas of dense opacification Critical Care, and Sleep Medicine. aggregates). either resolved or changed to Conference: 12th Annual Canadian predominantly ground glass Respiratory Conference, CRC 2019. opacities best described by the Canada. 3 (Supplement 1) (pp 9), reverse halo sign 2019. Date of Publication: 2019. AN: 628914449 3 The effects of E-cigarettes on Human THP-1 Cinnamon flavoured e-liquid Vaporised Cinnamon flavoured E-liquid containing nicotine Cellular analysis Low pulmonary inflammation and induced 60% (SD=8.387) cell study / test tube macrophages and inflammasome activation. death in THP-1 macrophages epithelial cells. Bell R.L., O'Kane C., Shyamsundar compared to negative control at 35% (SD=0.723) (n=3, M., Dombrowski Y. Thorax. Conference: British Thoracic p<0.05). Vaporised Cinnamon Society Winter Meeting, BTS 2018. flavoured E-liquid induced United Kingdom. 73 (Supplement 4) 59% (SD=30.500) cell death (pp A32-A33), 2018. Date of in epithelial cells compared to Publication: December 2018. negative controls at 15% AN: 627696194 (SD=2.153) and 91% (SD=10.710) cell death in THP-1 macrophages compared to negative controls at 44% (SD=2.730) (n=3, p<0.05). 4 Hypersensitivity pneumonitis in the 73-year-old female. 50 E-cig started for cessation history of dyspnea and non- Chronic Hypersensitivity Vaping, details unknown CT chest revealed diffuse Bronchial washings negative for none Autoimmune neg, nasal swab for Tapering dose of Improvement 1 month follow-up, None Case report setting of electronic cigarette use: A pack year smoker. productive cough pneumonitis ground glass opacities in the micro. viruses negative. the patient was prednisone case report. Zaborniak K., Kalicinsky upper lung fields, associated noted to be C. Allergy, Asthma and Clinical subplueral septal thickening, symptom free, and Immunology. Conference: Canadian traction bronchiectasis, and chest radiography Society of Allergy and Clinical areas of honeycombing revealed significant Immunology Annual Scientific interval Meeting, CSACI 2018. Canada. 15 improvements. (Supplement 1) (no pagination), 2019. Date of Publication: March 2019. AN: 627350687 5 The journey to ECMO could start with 16-year-old female with a "Recently started vaping" initially presented to an outside Hypersensitivity Pneumonitis Ninety-six hours after being Still in hospital Intubation (hypoxic Case Report High bilateral ground-glass opacities On ECMO, showed blood clots Ceftriaxone no a single vape: A case of severe history of obesity, hospital with lower back pain, a in her lung bases. predominance. Tox screen negative. improvement. ECMO. | cannulated on to VV ECMO, | ventilated at time of | resp fail), and exceptionally thick Methylpred dose we were able to wean her writing... headache, and shortness of hypersensitivity pneumonitis in a scoliosis, and anxiety. inotropes, nitric secretions in her airway. Repeat Smoker 0.5 pack per day. flows and her sweep, oxide, VV-ECMO pediatric patient. 48h post Methylpred (dose Attis M., King J., Hardison D., Bridges decanulated next day. Still on unknown) showed macrophage mechanical ventilation at time predominance ASAIO Journal. Conference: 29th of writing Annual Extracorporeal Life Support Organization Conference, ELSO 2018. United States. 64 (Supplement 2) (pp 14), 2018. Date of Publication: September - October 2018. 6 Diffuse alveolar hemorrhage induced Thirty-three-year-old male Patient admits to vaping for the past 2 months worsening dyspnea and CT Chest diffuse ground glass his bronchoalveolar lavage wedge resection revealed evidence of Echo normal. all serologies were Antibiotics 2 weeks His symptoms improved with case report High non invasive ventilation with diabetes and seizure | with overtly increased exposure time (BAL) revealed increasing blood bland pulmonary hemorrhage with no unremarkable including normal prior to presentation. complete resolution of alveolar Agustin M., Eusebio R., Gonzalez- disorder p in four sequential aliquots evidence of capillaritis or diffuse ESR, CRP, RF, toxicology screen, Pulse dose steroids hemorrhage after 2 weeks on Huertas J., Cabrera F., Yamamoto M., serum eosinophils, ANA, ANCA, post wedge resection. steroids. alveolar damage Tazelaar H.D. anti-GBM and antiphospholipid "quick taper" antibodies. MICRO NEGATIVE American Journal of Respiratory and Critical Care Medicine. Conference: American Thoracic Society International Conference, ATS 2018. United States. 197 (MeetingAbstracts) (no pagination), 2018. Date of Publication: 2018. AN: 622970616 Rapid response to steroids; Seen in outpatient Intubation, 7 A case of organizing pneumonia 40year old African "increased use of e-cigarettes recently to help Intermittent chest pain, CXR: scattered bilateral Normal anatomy. BAL micro Transbronchial biopsy performed: not Case report -Organizing pneumonia related to electronic cigarette use. American female patient. her quit smoking," worsening dyspnea for "past pulmonary infiltrates. Computed | negative. AFB negative. commented on. Open lung biopsy: methylprednisolone" extubated; transitioned to oral setting, length mechanical conference Khan M., Khateeb F.M., Khan Z., few weeks." Hypoxic. unknown. follow up ventilation. abstract organizing pneumonia prednisone. Tomography of Chest showed Akhtar J., Srour K., Hammersley J.R. CT was done multifocal discrete and confluer American Journal of Respiratory and which showed ground glass opacities diffusely Critical Care Medicine. Conference: resolution of involving bilateral lung lobes American Thoracic Society ground glass International Conference, ATS 2018. opacities United States. 197 (MeetingAbstracts) (no pagination), 2018. Date of Publication: 2018. AN: 622970597 8 The dark side of vaping; acute 43 year old patient who Recently question smoking 7 days ago and 7 days of worsening dyspnea Granulomatous lung disease CT Chest: showed no evidence | transbronchial biopsy of the | epithelioid noncaseating granulomas Prednisone 60 mg | Complete symptom and image | Four months follow | None Case report dyspnea and granulomatous lung developed acute dyspnea exchanged with e-cigs and chest tightness of acute pulmonary embolism, right upper lobe, which revealed oral, tapering dose resolution up appointment. conference disease associated with electronic after substituting but did reveal multiple small, epithelioid noncaseating duration of six months abstract Complete Resolution on traditional smoking with ebilateral, pulmonary nodules granulomas Poponea N., Shehada E., Freeman N. cigarettes. past medical (new from last year's CT) follow up CT. American Journal of Respiratory and history significant for Critical Care Medicine. Conference: pulmonary embolism and American Thoracic Society <u>asthma.</u> International Conference, ATS 2018. United States. 197 (MeetingAbstracts) (no pagination), 2018. Date of Publication: 2018. AN: 622970578 9 Severe fixed obstructive lung disease 45-year-old man with an completely transitioned to vaping 9 months Sudden exertional dyspnea. Severe fixed obstruction but Gas chromatography/mass GP: a normal chest x-9 months after None Serum ANA, rheumatoid factor, Antibiotics, Persistent severe severe obstruction with an Case report - VERY HIGH -"Lung biopsy" showed in a former smoker with heavy Eunremarkable past before symptom onset. He vaped 4 puffs Worsening on outpatient abx, NO bronchiolitis obliterans on spectrometry and infrared ANCA, ESR, IgE and alpha-1albuterol, symbicort, obstruction. total lung presentation. FEV1 of 1.0 L (24% predicted, conference persistent severe lymphoplasmacytic respiratory PP), FVC 2.3 L (45 PP), and | abstract / poster | obstruction at 9 medical history. Former every 15-30 minutes, at the second highest puffers, and prednisone. He biopsy. spectroscopy analysis of the showed mosaicism with severe cigarette use. antitrypsin were normal spirivia, and capacity measured 8.52 L bronchiolitis with peribronchial Macedonia T.V., Krefft S.D., Rose smoker. 40 pack-years, smoke level but with progressively decreasing stopped vaping completely six heated vaping liquid showed a air trapping and patchy ground prednisone in (123 PP), residual volume FEV1/FVC ratio 41%. At nine month follow up. aggregates of pigmented C.S. having stopped 18 months nicotine levels. weeks after symptom onset, but outpatient setting - 5.78 L (272 PP), FEV1 0.79 L complex mixture including months follow up: total lung glass opacities. macrophages without organizing (19 PP), FVC 2.0 L (38 PP), American Journal of Respiratory and earlier. "Heavy vaping" dyspnea persisted. pyridines, furfural, vanillin, Worsening capacity measured 8.52 L pneumonia or obliterative bronchiolitis Critical Care Medicine. Conference: nicotyrine, aldehydes, **exertional dyspnea.** FEV1/FVC ratio 40% and (123 PP), residual volume 5.78 American Thoracic Society DLCO 20.50 (54 PP). HRCT L (272 PP), FEV1 0.79 L (19 glycerins, and propylene glycol, Outpatient International Conference, ATS 2018. supplemental O2. was unchanged PP), FVC 2.0 L (38 PP), without detectable alpha-United States. 197 (MeetingAbstracts) diketones/diacetyl. FEV1/FVC ratio 40% and mycophenolate DLCO 20.50 (54 PP). HRCT (no pagination), 2018. Date of mofetil, azithromycin Publication: 2018. and prednisone, still was unchanged. NO AN: 622969320 showed persistent BASELINE PFTS severe obstruction. MENTIONED IN THIS 40 PACK YEAR SMOKER 10 Every dog has its day: FIBOS caused 55 year-old never DID NOT VAPE persistent cough, unchanged Flavoring-induced bronchiolitis pet food company at which he CT scan of his chest decreased FEV1/FVC ratio of Case report -Triple therapy 3 years. is by diacetyl exposure from an unusual smoker, Hispanic male. over several years, productive obliterans syndrome (FIBOS) had previously worked used demonstrated biapical scarring symptoms have 35%, increased residual conference Dog-food factory worker. of a small amount of white to secondary to diactyl exposure diacetyl as a flavoring agent. along with bilateral volume to 180% of predicted, abstract remained stable Warrior K., Gamino A.J. "PMHx COPD" but never brown sputum and diminished DLCO, overall bronchiectasis. without American Journal of Respiratory and smoker... consistent with severe progression, Critical Care Medicine. Conference: without dyspnea. obstructive disease with air American Thoracic Society trapping and a mild gas International Conference, ATS 2018. transfer defect United States. 197 (MeetingAbstracts) (no pagination), 2018. Date of Publication: 2018. AN: 622965243 11 A case of acute hypersensitivity 33 year old male without DID NOT VAPE 3 weeks of cough productive of Hypersensitivity pneumonitis Cannabis DABBING daily. Chest CT demonstrating diffuse Bronchoalveolar lavage studies Transbronchial biopsy pathology WBC 11,000. Blood cultures, ED azithromycin and He improved without steroid none Case report patchy ground glass opacities including PJP, viral studies, and showed mixed interstitial inflammation sputum culture, respiratory viral bronchodilator, not treatment and was discharged pneumonitis due to cannabis dabbing. significant past medical clear sputum and shortness of conference Richman L.S., Whitaker J., Kinnard history. installs breath. subjective fevers, and nodular consolidation AFB cultures were negative (composed of lymphocytes, plasma panel, Strep Pneumo urine antigen, helpful. Then told to home abstract stop dabbing and got commercial flooring myalgias, headaches and cells and scattered eosinophils). AFB Legionella urine antigen, American Journal of Respiratory and pleuritic chest pain. Hypoxic. and GMS stains were negative Histoplasma urine antigen, beta D better WITHOUT Critical Care Medicine. Conference: glucan and aspergillus steroids. American Thoracic Society galactomannin were negative International Conference, ATS 2018. United States. 197 (MeetingAbstracts) (no pagination), 2018. Date of Publication: 2018. AN: 622965113 12 A case of hypereosinophilia and 18-year-old female with None listed Hypereosinophilia and Frequent e-cigeratte and Not listed presented with hypereosinophilia. Possible strongyloides Monthly mepolizumab therapy Low - likely bogus eosinophilic asthma due to electronic history of celiac disease eosinophilic asthma marijuana use. The absolute eosinophil count was exposure (details not and cessation of all electronic demonstrated persistent conference because pt had cigarette use. and severe asthma 14,040 cells/microliter (normal: 15- listed). Received cigarettes resulted in a count eosinophil-mediated abstract strongyloides Helgeson A., Brooks J., Lobo F. 500 cells/microliter). ivermectin for the decrease to 113 inflammation with poor large exposure and Allergy and Asthma Proceedings. Strongyloides cells/microliter, improved airway mechanics, borderline treatment Conference: 2017 New England exposure and two oral exhaled nitric oxide and improvement after confounding study. Society of Allergy Spring Meetings. bronchodilator use and steroid courses pulmonary symptom United States. 38 (4) (pp 329), 2017. caused reduction in resolution. markedly elevated exhaled Date of Publication: July-August 2017. eosinophil count to nitric oxide. AN: 620503434 1,116 cells/microlitre. Monthly mepolizumab therapy and cessation of all electronic 13 Acute hypoxic respiratory failure with A 56-year-old female. NEW E-CIG start within last month Incidental hypoxia at a Crazy paving A CXR showed no significant bronchoscopy which revealed Laboratory studies were at her initial course of On follow up in clinic one No abnormality at follow up. Case report - Low past medical history was abnormalities and a CT normal airways with minimal Initial PFTs not mentioned. conference crazy paving associated with colonoscopy. chronic nonbaseline, including a normal white empiric antibiotics month later she had quit pulmonary angiogram revealed secretions. Bronchoalveolar significant for an productive morning cough on blood cell count, normal platelets, without improvement. smoking and electronic abstract electronic cigarette use. Sturek J., Malik N. diffuse left-greater-than-right lavage yielded a cell count of orthotopic liver transplant Discharged on cigarette use and her hypoxia and normal coagulation. Chest. Conference: CHEST 2017 for hepatitis C infection upper lobe predominant crazy 1.2 million cells with 90% oxygen, instructed to had resolved. Pulmonary Annual Meeting. Canada. 152 (4 five years prior, and she alveolar macrophages, 5% stop smoking. function tests showed no Supplement 1) (pp A746), 2017. Date was maintained on neutrophils, and 5% abnormality and a repeat CT of Publication: October 2017. tacrolimus. SMOKER one lymphocytes. Cytology and scan of the chest showed microbiology studies were all complete interval resolution of AN: 619297965 pack per day. negative the crazy paving pattern Lab study on Not described 14 Cigarettes, e-cigarettes and Very Low levels of cytokines were Case report -Pseudomonas aeruginosa: pseudomonas aeruginosa conference significantly higher in cells Interactions in the CF lung?. isolates and human resp abstract infected with PA exposed to epithelial cells. CYSTIC McGown K.-A., Bengoechea J., CSE (cig smoke extract) (IL-Dumigan A., Elborn J.S., Tunney FIBROSIS LUNG CELLS 8: 239%; TNF-alpha: 92%) M.M., Gilpin D. (line A549) and ECSE (e-cig smoke Journal of Cystic Fibrosis. extract) (IL-8:175%; TNF-Conference: 39th European Cystic alpha: 17%), compared to Fibrosis Conference. Switzerland. 15 mock infected PA controls (Supplement 1) (pp S65), 2016. Date of Publication: June 2016. AN: 614323809 abx)ceftriaxone repeat chest CT (figure 2.) 3 months 15 Acute inhalational lung injury related to 60 year old cigar smoking patient reported using strong flavored eweakness, chills and cough, Inhalational lung injury, bilateral upper lobe predominant None None listed Case report ground glass infiltrate on chest the use of electronic nicotine delivery male fever, hypoxia. Bilateral upper presumed Acute and pulmonary function test at conference cigarettes prior to each admission. system (ENDS). zone crackles on exam Hypersensitivity pneumonitis. 3 months were normal. abstract Atkins G., Drescher F. (Recurrent symptoms - two Chest. Conference: CHEST 2015. episodes - after exposure to e-Montreal, QC Canada. Conference cigerttes. Cleared with abs NO STEROIDS. Publication: (var.pagings). 148 (4 MEETING ABSTRACT) (no pagination), 2015. Date of Publication: October 2015. AN: 72120185 16 Dabble with danger: A case of severe 19-year-old male with a DID NOT VAPE. Dabbed 6 days prior to worsening dyspnea, cough, diffuse parenchymal lung injury, Chest CT demonstrated diffuse bronchoalveolar lavage (BAL) Connective tissue disease Antibiotics. High dose discharged home with No follow up intubated overnight Normal at 3 months Case report - Low - dabbing, not respiratory failure following inhalation history of daily marijuana presentation pleuritic chest pain, and trace ARDS. was performed. Gram stain was bilateral infiltrates and serologies were unremarkable. corticosteroids supplemental oxygen and a for acute hypoxic conference vaping of butane hash oil. negative and alveolar cell count three month tapering course abstract hemoptysis pneumomediastinum respiratory failure. Stahlmann C.G., McMahon M., Bhatt revealed a non-specific alveolitis of steroids Extubated after two N.A., Perkins M.P., Philip A.I. with eosinophils <10% American Journal of Respiratory and Critical Care Medicine. Conference: American Thoracic Society International Conference, ATS 2015. Denver, CO United States. Conference Publication: (var.pagings). 191 (MeetingAbstracts)

Appendix 2 (as supplied by the authors): Literature Review

Other investigations

Treatment

Outcome

Type of Paper Relevance

Bronchoscopy

Pt Demographic

(no pagination), 2015. Date of

Publication: 2015.

Vape Details

Symptoms

Pattern of Disease

Adulterant / Agent

Holdorf J., Carpenter D., Kopec S. Chest. Conference: CHEST 2016. United States. 150 (4 Supplement 1) (pp 502A), 2016. Date of Publication October 2016. AN: 613468622	weeks gestation	6 Intermittent over the last month, but heavy vaping hours prior to presentation. SELF-MIXING VAPE CARTRIDGES WITH glycerin, vegetable oil and strawberry flavoring.	afebrile, but in respiratory distress	lipoid pneumonia	Computed tomography (CT) angiography of the chest 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 week fetus.	Case report - conference abstract	Medium - Poor quality paper assumes lipoid pneumonia without bronch diagnosis. May have been Pulm edema from pre-eclampsia	
Chronic idiopathic neutrophilia in a smoker, relieved after smoking cessation with the use of electronic cigarette: A case report. Farsalinos K.E., Romagna G. Clinical Medicine Insights: Case Reports. 6 (pp 15-21), 2013. Date of Publication: 2013. AN: 368245346	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, haematological, rheumatological, or endocrine conditions		Resolution of leukocyte count and CRP with smoking cessation (used vaping to quit)		none	Case report	Low - vape used as quitting agent, not implicated in disease	
Acute eosinophilic pneumonia following electronic cigarette use. Arter Z.L., Wiggins A., Hudspath C., Kisling A., Hostler D.C., Hostler J.M. Respiratory Medicine Case Reports. 27 (no pagination), 2019. Article Number: 100825. Date of Publication 2019. AN: 2001726357		"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, diffi-culty breathing, and pleuritic chest pain.		Initialchest x-ray demonstrated right lower lung airspace consolidation con-sistent with a pneumonia. The CTPA excluded PE, but found diff use ground-glass patchy airspace disease and coalescing nodules		and BAL cultures were negative for viral, fungal, and bacterial pathogens. No other infectious etiologies to include TB,	effect. methyl- prednisolone 125mg	on tapering dose. Repeat CXR showed improvement on day		D Increased monitoring	Case report	Medium	
Lung injury from inhaling butane has oil mimics pneumonia. Anderson R.P., Zechar K. Respiratory Medicine Case Reports. 26 (pp 171-173), 2019. Date of Publication: 2019. AN: 2001443418	One pack per day		expiratory wheeze on exam with bilateral rhonchi.	No bronch or biopsy.	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			treatments, IV steroids	discharge?	Unknown		Case report	Low - dabbing	
Lung injury associated with electronicigarettes inhalation diagnosed by transbronchial lung biopsy. Itoh M., Aoshiba K., Herai Y., Nakamura H., Takemura T. Respirology Case Reports. 6 (1) (no pagination), 2018. Article Number: e00282. Date of Publication: Januar 2018. AN: 619949375	20 pack year smoker qui 3 months prior to presentation	Used for one month prior to symptoms	sweats, fever, and weight loss	Listed as "acute alveolitis with intra alveolar fibrosis caused by e cig use. We diagnosed e cig-induced ALI caused by inhalation."	opacities in the bilateral upper accompanied with exudate containing abundant lipid-laden	transbronchial lung biopsy examination led to the diagnosis of acute alveolitis: intra-alveolar fibrosis accompanied with exudate containing abundant lipid-laden macrophages, eosinophils, and neutrophils		methylprednisolone pulse therap	Rapid resolution of symptoms	none	None	Case Report	Medium	
Good, bad, and ugly on vaping. https://journal.chestnet.org/articles0012-3692(16)36286-9/abstrac Narang R., Narang D., Narang S., Salman J., Quyen N., Udeani G. Chest. Conference: CHEST 2015. Montreal, QC Canada. Conference Publication: (var.pagings). 148 (4 MEETING ABSTRACT) (no pagination), 2015. Date of Publication October 2015. AN: 72120408	no significant past medical history	Vaping for last 6 months.	Emergency Department with worsening productive cough with rust colored sputum and shortness of breath. Febrile. Tachypnea.	Hypersensitivity Pneumonitis	scan of the chest showed BAL cell count and differential	Transbronchial biopsy of the left and right lungs exhibited noncaseating epithelioid granulomas		of e-cigarette usage and steroid treatment	cessation of e-cigarette usage	none	none	Case report - conference abstract	High	
Acute lipoid pneumonia secondary to e-cigarettes use: An unlikely replacement for cigarettes. Modi S., Sangani R., Alhajhusain A. Chest. Conference: CHEST 2015. Montreal, QC Canada. Conference Publication: (var.pagings). 148 (4 MEETING ABSTRACT) (no pagination), 2015. Date of Publication October 2015. AN: 72120394 "A little dab will do Ya": An emergence	smoker was		admitted to the hospital for progressive dyspnea and cough		. 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 positive staining (Oil-Red-O) for lipid content		Blood and sputum cultures were negative.	Required IV steroids.	Patient noted rapid mprovement with cessation of e-cigarettes and systemic steroids		Intubated.	Case report - conference abstract Case series	High Low - dabbing	
department case series related to a new form of "High-potency" marijuar known as "wax". Schneberk 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: (var.pagings). 64 (4 SUPPL. 1) (pp S139), 2014. Date of Publication: October 2014. AN: 71668310	the ED. One psychosis, burns from butane explosions in preparation of butane hash oil	3										Case series	Low - dabbing	
END OF EMBASE RESULTS 25 1 addit□	35-vear-old female Ex-	daily use of two refill containers she knew to	emergency department with	Bronchial inhalation / hurn injury	he CT was reported with nodular bronchoscopy was performed,	none	bronchial alveolar lavage culture	meronenem	She was returned to the long-		Bipap. Then	Case Report	HIGH - ECMO	
Life-threatening Vesicular Bronchial	smoker. medical history included coronary artery disease, uncontrolled diabetes mellitus type 2, obesity, deep vein		sudden-onset dyspnea. severe pain in the back of her neck and left arm, which worsened with inhalation.	from vaping. But also had MRSA	infiltrates centered in the lower lung zones (Image 1) with some confluence at the lung bases not previously seen on chest radiograph. Mediastinal adenopathy not previously seen on CT from two years prior and a nodular thickening of the hila were also noted. In addition, there was a 1.5 × 1.5 cm collection of hypodense fluid and loss of distinction in the cortex of the right kidney suggestive of trauma. an extensive pattern of suspected chemical injury was noted in her airways. bronchoscopy was performed that demonstrated erythema of the tracheal tissues extending to the carina that appeared cobblestoned and/or leathery. The main bronchi 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			levofloxacin and vancomycin.	erm rehabilitation unit at the nitial treatment center. There she progressed well, where she was ambulating with an assist device and made significant progress toward an ndependent return to home.		intubation for hypoxic resp failure. VV-ECMO required. She improved on ECMO, eventually receiving a tracheostomy, which was decannulated 14 days later.			
26 Danger in the vapor? ECMO for adolescents with status asthmaticus after vaping. Bradford L.E., Rebuli M.E., Ring B.J. Jaspers I., Clement K.C., Loughlin C.E. Journal of Asthma. (no pagination), 2019. Date of Publication: 2019. AN: 628858125	rhinitis. Case 2: 14F severe persistent asthma		Hypercapnic resp failure, status asthmaticus. Vomited during intubation. VV-ECMO for 5 days. Case 2: status asthmaticus. Required intubation. VV-ECMO for 6 days.	Status Asthmaticus				treatments, IV magnesium.	Case 1: Following discharge, ne has continued to use ENDS, and has had six nospital encounters for asthma exacerbations despite adherence to asthma control regimen. Case 2: one return admission, unclear if still using ENDS		Intubation. VV None ECMO	patients	Medium - ECMO, but severe asthma patients	
 "Tree-in-Bloom": Severe Acute Lung Injury Induced by Vaping Cannabis Oil. He T; Oks M; Esposito M; Steinberg Makaryus M. Annals of the American Thoracic Society. 14(3):468-470, 2017 03. [Case Reports. Letter] UI: 28248584 	healthy"	DID NOT VAPE e-fluids. Vaped "pure cannibis 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% lymphocytes, and 2% eosinophils. Flow cytometry of the fluid showed a CD4/CD8 ratio of 0.46	Organizing pneumonia		None, resolved without steroids	,	Two weeks later, complete resolution of ct findings.	J , , , , , , , , , , , , , , , , , , ,	Letter to editor, case report	Low - no e-fluid, just cannabis oil	
	pack years of traditional se cigarette and prior treatment for mixed germ			respiratory bronchiolitis interstitial lung disease (RB-ILD)	chest computed tomography demonstrated multiple new poorly defined pulmonary nodules with fluffy parenchyma opacification centred along the terminal bronchovascular units (?Tree in bud??)	Video-assisted thoracoscopy with lung biopsy of the right upper and right middle lobes was undertaken. The microscopic findings were overal consistent with RB-ILD			resolution of radiographic indings on cessation.	One month later.		Case report	Medium	
case study combining survey and social media data. Zhan Y; Etter JF; Leischow S; Zeng D. Journal of the American Medical Informatics Association. 26(1):9-18, 2019 Jan 01. [Journal Article] UI: 30544163 30 Cannabis Use and Bleomycin: An Overview and Case Study of Pulmonary Toxicity. [Review] Merkle S; Tavernier SS. Clinical Journal of Oncology Nursing 22(4):438-443, 2018 08 01. [Case Reports. Journal Article. Review]	describes the effects cannabis may have on the lungs, reviews indications for cannabis	Online survey compared to social media, looking at patterns of use. DID NOT VAPE										Review Article	Low	
UI: 30035790 31 Spontaneous Pneumomediastinum After Electronic cigarette Use. Marasco RD; Loizzi D; Ardo NP; Fatone FN; Sollitto F.	toxicity in a young patien with a history of Hodgkin lymphoma and cannabis use. 17 M dyspnea and disphagia, non-smoker, previously healthy.		1	Pneumomediastinum	Standard thoracic radiography revealed streaking lucencies outlining mediastinal contours, such as subcutaneous emphysema (Fig.1). Chest computed tomography scan showed the so called "ring sign" (due to				Discharged after day two in nospital			Case Report	low	
Hypersensitivity Pneumonitis and Acute Respiratory Distress Syndrom From E-cigarette Use. Sommerfeld CG; Weiner DJ; Nowalk A; Larkin A Pediatrics. 141(6), 2018 06. [Case Reports. Journal Article] UI: 29773665	year-old woman who	"After vaping"	presented with dyspnea, cough, and pleuritic chest pain	Hypersensitivity Pneumonitis and ARDS	air surrounding the pulmonary artery and its branches) and double bronchial wall (Fig. Computed tomography of the chest revealed dependent opacities in both lung bases, superimposed smooth interlobular 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.	None	came back negative,"	methylprednisolone therapy was initiated. After this the patient rapidly improved, was	ntravenous methylprednisolone therapy was initiated. After this the patient rapidly improved, was weaned off vasopressor support, and was extubated			Case report	medium	
33 Sudden sensorineural hearing loss associated with electronic cigarette liquid: The first case in the literature. Demir E; Topal S. International Journal of Pediatric Otorhinolaryngology. 114:26-28, 201 Nov. [Case Reports. Journal Article]	ingestion of e-fluid	DID NOT VAPE. Ingested the fluid										Case reprt	low	
Respiratory failure caused by lipoid pneumonia from vaping e-cigarettes. Viswam D; Trotter S; Burge PS; Walters GI. BMJ Case Reports. 2018, 2018 Jul 06. [Case Reports. Journal Article] UI: 29982176		"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		resolution CT showed diffuse lavage was unyielding		thrombocytopenia, which was long standing, and her biochemical and inflammatory markers were normal	treated with empirical steroids and there was improvement in her oxygenation	EC with different flavours and			Case report	medium	
35 Spontaneous coronary artery dissection in a postpartum e-cigarett smoker. Ahmed N; Kalininskiy A; Gandhi H; Shin JJ. BMJ Case Reports. 2018, 2018 Jun 04. [Case Reports. Journal Article] UI: 29866694	no significant medical history, but was a habitua e-cigarette smoker	habitual e-cigarette smoker	presented with atypical chest pain 2 weeks after an uncomplicated delivery while breast feeding				levated cardiac enzymes and ST segment elevations in the anterior leads. An urgent cardiac catheterisation was performed, which revealed dissection and occlusion of the left anterior descending artery, and a drugeluting stent was placed that resulted in the resolution of chest					Case report	low	
Organizing pneumonia related to electronic cigarette use: A case report and review of literature. [Review] Khan MS; Khateeb F; Akhtar J; Khatz; Lal A; Kholodovych V; Hammersle J. The clinical respiratory journal. 12(3):1295-1299, 2018 Mar. [Case Reports. Journal Article. Review]	ort ,	She reported increased use of e cigarettes during this time period to help her quit smoking.	patient presented with symptoms of worsening dyspnoea and intermittent chest pain for past 1 month. Patient developed acute hypoxemic respiratory failure requiring intubation and mechanical ventilation	organizing pneumonia		Organizing pneumonia on open lung biopsy	- ala	treated with steroids along with abstinence from e cigarette use.	Successfully treated with steroids"			Case Report	Medium	
UI: 29392888 37 Flavored e-cigarette liquids reduce proliferation and viability in the CALU airway epithelial cell line. Rowell TR; Reeber SL; Lee SL; Harr RA; Nethery RC; Herring AH; Glish GL; Tarran R. American Journal of Physiology - Lung Cellular & Molecular Physiolog 313(1):L52-L66, 2017 07 01. [Journal Article. Research Support, N.I.H., Extramural. Research Support Non-U.S. Govt] UI: 28428175	e-liquids is	of 13 different flavored e-liquids. gas chromatography-mass spectrometry.	demonstrated a dose-dependent decrease of MTT metabolism by all flavors tested.						ithe 13 flavored e-liquids have diverse chemical constituents. It. Since all of the flavors exhibited some degree of exicity and a diverse array of chemical constituents with little inhalation toxicity available, we conclude that flavored eliquids should be extensively ested on a case-by-case pasis to determine the potential for toxicity in the lunguand elsewhere.			Journal Article	low	
[Clozapine and the electronic cigarette; a case study]. [Review] [Dutch] Sterke stijging van clozapinespiegel na overschakelen van traditionele op elektronische sigaretten. Nonner TS; Timmer SJ. Tijdschrift voor Psychiatrie. 58(4):31 7, 2016. [Case Reports. Journal Article. Review] LII: 27075224	patient who switched from traditional cigarettes to electronic cigarettes and thereupon had a significant increase in the clozapine serum level			increased level led to considerable side-effects and, as a result, the patients clozapine dosage had to be reduced.									low	

A Cancer That Went Up in Smoke: Pulmonary Reaction to e-cigarettes Imitating Metastatic Cancer. Ring Madsen L; Vinther Krarup NH; Bergmann TK; Baerentzen S; Neghabat S; Duval L; Knudsen ST. Chest. 149(3):e65-7, 2016 Mar. [Case Reports. Journal Article] UI: 26965975		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 suspicious 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."	Upon cessation of e-cigarette use (known as vaping), the lung nodules disappeared, and the liver lesions regressed	Case report	low
Ruchlemer R; Amit-Kohn M; Raveh D; Hanus L. Supportive Care in Cancer. 23(3):819-22, 2015 Mar. [Case Reports. Journal Article]	Goal: identify the safest way of using medicinal cannabis in immunosuppressed patients by finding the optimal method of		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; Spindle T; Eissenberg T. Journal of Addiction Medicine. 8(4):234-40, 2014 Jul-Aug. [Case Reports. Journal Article. Research Support, N.I.H., Extramural. Research Support, U.S. Govt, P.H.S Review] UI: 25089953	sterilization with minimal loss of activity of Fictional Amalgamations of actual patients. Broad overview. No factual cases. No discussion of adverse events							Case reports (3 fictitious cases)	
Case report of electronic cigarettes possibly associated with eosinophilic pneumonitis in a previously healthy active-duty sailor. Thota D; Latham E. Journal of Emergency Medicine. 47(1):15-7, 2014 Jul. [Case Reports. Journal Article] UI: 24462024	20-year-old previously healthy man, sailor.	3 days of persistent cough, shortness of breath, and facial flushing. "noticed symptom cluster beginning 1 h after smoking an e-cigarette 3 days prior"	acute eosinophilic pneumonia (AEP)	CXR "subtle 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 lungs more than lower lobes. Considerations include opportunistic infection such as pneumocystis jirovecii versus atypical or viral pneumonias. Acute alveolar disease such as diffuse alveolar hemorrhage, drug toxicity, or hypersensitivity pneumonitis is on the differential		Cbc 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% basophil, 17% macrophages and 74% eosinophils. Started him on albuterol, and was no improvement if symptoms. 1 g ceftriaxone an mg of doxcycl initial treatment community-act pneumonia. Trust hantibiotics steroids and his symptoms impre 60 mg of predn and was dischafrom the hospital day 5 w improvement in symptoms.	showed improvement. Symptoms improved. 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 later showed significant interval	Case report	medium
toxicity induced by an electronic cigarette. Hureaux J; Drouet M; Urban T. Thorax. 69(6):596-7, 2014 Jun. [Case Reports. Clinical Conference. Journal Article] UI: 24436327	43M history of primary lung adenocarcinoma with a documented isolated brain metastasis (stage pT3N0M1b) treated by stereotactic brain radiotherapy, right upper lobectomy and chemotherapy. On surveillance for 7 months	described onset of cough with whitish secretions. He subsequently developed		CT not done. CXR not different to previous.			opacity (Normal pre-lobectomy. Mixed obstructive / restrictive.(FVC 74%, FEV1 45%)	e medium
McCauley L; Markin C; Hosmer D. Chest. 141(4):1110-1113, 2012 Apr. [Case Reports. Journal Article] UI: 22474155	42-year-old woman was 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. past medical history also was signifi cant for asthma, reported rheumatoid arthritis, fi bromyalgia, schizoaffective disorder, and hypertension		Exogenous lipoid pneumonia due to e-cigarette use.	Chest radiographic imaging showed new multifocal bilateral opacities. CT images (Fig 1) revealed extensive bilateral upperand lower-lobe patchy ground glass pulmonary opacities in a "crazy paving" pattern. Bronchoscopy and BAL wer performed. The cell count showed 48% neutrophils, 8% lymphocytes, 43% monocytes, and 1% eosinophils. Results of all bacterial and viral cultures remained negative; fungal cultures showed light growth of Candida . Results of a viral DFA panel, Pneumocystis jeroveci DFA and Legionella antigen tests were negative. BAL cytologic examination revealed abundant lipid-laden macrophages	n	WBC count of 18.0 (3 10 3) 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 Pertussis polymerase 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 antinuclear antibody, cyclic citrullinated peptide , and rheumatoid factor were negative. A bird fancier's panel showed	radiograph was normal, and pulmonary function testing showed mild diffusion		
45 [Fatal alveolar haemorrhage following a "bang" of cannabis]. [French] Hemorragie alveolaire fatale apres bang de cannabis. Grassin F; Andre M; Rallec B; Combes E; Vinsonneau U; Paleiron N. Revue des Maladies Respiratoires. 28(7):919-23, 2011 Sep. [Case Reports. English Abstract. Journal Article] UI: 21943539	did not vape	haemoptysis	DAH	CT scan showed bilateral, diffuse alveolar shadowing. Bronchoalveolar lavage reveale massive alveolar haemorrhage.	Autopsy showed toxic alveolar haemorrhage.	trace reactivity to nigeon and Hb of 9.3g/l. Investigations for infection and immunological was given and	,	case report	low
Pleural effusion with electronic cigarette use: A not-so-safe alternative to tobacco. Bitetzakis C., Diaz Leyva J., Mazalewski W., Zilka B. Embase Classic+Embase Journal of Hospital Medicine. Conference: Hospital Medicine, HM 2018. United States. 13 (4 Supplement 1) (no pagination), 2018. Date of Publication: 2018.		<u>'</u>	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. 4 week repeat CT of the chest following abstinence from further vaping was without re-accumulation of the left-sided effusion. The pleural thickening noted on the		There was no leukocytosis and initial infectious work up was negative. Thoracentesis: 700mL serous exudative by Light's criteria Cytology was negative for malignant cells.	e- No reaccumulation. Pleural thickening stable.	Case Report	Low
disease. Henry T.S., Kanne J.P., Kligerman S.J.	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 lipoid pneumonia.	right side anneared stable with Four patterns: 1. dependent consolidation and diffuse ground-glass opacity. 2. diffuse nodular areas of consolidation and ground-glass opacity. 3. extensive centrilobular ground- glass attenuation nodules, especially in the anterior region, and more confluent ground- glass opacity in the dependent lungs, with lobules of mosaic attenuation. 4. fibrosis				Correspondence	e High
[http://www.ncbi.nlm.nih.gov/pubmed/? term=314910701 48 Pulmonary lipid-laden macrophages and vaping. Maddock S.D., Cirulis M.M., Callahan	presentation is of a 21M.	presented with 1 week of dyspnea, cough, abdominal pain, nausea, and vomiting.	ARDS	characterized by peripheral reticulation. dround-dlass Bilateral interstitial opacities on chest radiography. Chest computed tomography (CT) showed diffuse consolidative opacities BAL lipid leiden macrophages range 25% to >75%. Five BAL samples macrophage predominant. One neutrophilic predominant.		negative HIV testing and a markedly elevated level of C- reactive protein (30.7 mg per deciliter). Neutrophilic lymphocytosis. 2 patients high steroids. 2 patie non-high dose steroids. Five p received antibio One patient rec observation only	nts atients tics. eived	VV ECMO in one patient. Correspondence	e High
[http://www.ncbi.nlm.nih.gov/pubmed/?term=31491073] 49 Lung Biopsy Findings in Severe Pulmonary Illness Associated With Ecigarette Use (Vaping). Mukhopadhyay S., Mehrad M.,	Case series 8 patients. eight men (aged 19-61 years) with respiratory symptoms following e- cigar ette use All patients reported vaping THC; two were also vaping nicotine. One individual had a history of dabbing. One patient used "Dank" brand THC	patients), cough (n = 6/8), and dyspnea (n = 5/8). Most patien	acute lung injury, manifesting as organizing pneumonia, diffuse alveolar damage (DAD), unclassifiable organizing acute lung injury, 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, fibrinous 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		with corticosteroid therapy	One patient required mechanical ventilation Journal Article	High
50 Diffuse alveolar damage and ecigarettes: Case report and review of literature. Bakre S.A., Al-Farra T.S., Al-Farra S. Embase Classic+Embase Respiratory Medicine Case Reports.	anxiety, deep vein	4-day history of progressively worsening shortness of breath, nasal congestion, fevers, chills, cough, lower extremity swelling and generalized body aches.		Chest CT with contrast revealed bilateral diffuse predominant ground glass attenuation with scattered alveolar opacities of the lungs. Due to clinical deterioration, a repeat chest CT without contrast done 9 days after showed multifocal consolidation in bilateral lungs which had worsened when compared to previous CT. Small trace pleural effusions were present but no pneumothorax.	was not prominent. and findings video assisted thoracoscopic surgery (VATS) with biopsy of the right middle and lower lung lobes was performed	e WBC count of 9.97, hemoglobin 9.9, hematocrit 35.8, and platelet count of 266. Blood culture showed no growth. Influenza A and B Antigen and cryptococcal antigen were negative. Bronchoalveolar lavage culture showed no growth and gram stain was negative. Serology for rheumatoid factor was normal and histoplasma antigen was not detected. Electrolytes, blood urea nitrogen, and creatinine were normal. Echocardiogram revealed elevated right ventricular systolic pressure (81–90 mmHg) with	, 5	Mechanical yentilation Journal Article	High
ELECTRONIC CIGARETTE USE. Lin C., Choi H. Embase Classic+Embase	34 year old female, prior tobacco smoker, with a history of carcinoid tumor requiring bi-lobectomy due to obstructive pathophysiology	presented to clinic ten months post-operatively with new-onset cough and wheezing		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. ?Transbroncial biopsy. pathology demonstrated multinucleated giant cells with epithelioid histiocytes with eosinophils, compatible with a granulomatosis secondary to electronic cigarette use		subsequent right heart catheterization confirming Emperic antibio not effective.	tics	Case report - conference abstract	Medium
52 Vaping is a risk factor for	present two male patients age 15 and 16	spontaneous pneumothorax after vaping and were initially treated with tube thoracostomy placement	spontaneous pneumothorax			spontaneous pneumothorax i treated with tub thoracostomy placement. Both patients had recurrences recurrences recurrences recurrences recurrence-free since.	guiring ontion	Journal Article	Low
AN: 2002927927 53 Effect of e-cigarette exposure on production of virulence factors by Pseudomonas aeruginosa. Gallagher K., McGown K.A., Carson G., Tunney M., Gilpin D. Embase Classic+Embase Journal of Cystic Fibrosis. Conference: 42nd European Cystic Fibrosis Conference. United Kingdom. 18 (Supplement 1) (pp S96), 2019. Date of Publication: June 2019. [Conference Abstract]	In-vitro study, four Pseudomonas aeruginosa isolates. strawberry e-cigarette vapour extract (ECVE cinnamon ECVE, flavourless ECVE and propylene glycol/vegetable glycerin (PG/VG) ECVE						Increased biofilm with cinnamon ECVE but not others. Strawberry ECVE, cinnamon ECVE, flavourless ECVE and PG/VG ECVE significantly increased pyocyanin in some isolates. Possible that ECVE may affect Pseudomonas virulence.	Case report - conference abstract	low
Spontaneous Combustion of a Lithiumion Battery: A Case Report. Morse J., Tittman S., Gelbard A. Embase Classic+Embase Laryngoscope. 129 (1) (pp 45-48), 2019. Date of Publication: January 2019. [Review] AN: 623896061	of flashlight lithium ion battery	with severe oropharyngeal and upper aerodigestive thermal injuries after spontaneous combustion of a lithium-ion battery in a flashlight						Review Article	Very low
55 Spontaneous pneumomediastinum in an adolescent: Case report and literature review. Fastag E., DeBruin W.J. Embase Classic+Embase	16 year-old Asian male with prior history of moderate persistent asthma, with no exacerbations for more than a year,	presented complaining of sudden onset chest pain that occurred immediately after forcefully clearing his throat	Spontaneous Pneumomediastinum	Radiographic studies of the chest and necks as well as Computerized Axial Tomography were positive for a large pneumomediastinum with air dissecting the soft tissues of the neck		IV Clindamycin conservative.	Discharged after day two in hospital none	Case report - conference abstract	Very low
56 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, SGIM 2018. United States. 33 (2 Supplement 1) (pp 514), 2018. Date of Publication: 2018. [Conference Abstract]	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
assessment of e-cigarette refill components on airway epithelia. Singh J., Luquet E., Smith D.P.T.,	in-vitro. tested 18 different e-cigarette refill e-cigarette refill flavours for their toxicity on human derived bronchial cells (Beas2B)						Cellular toxicity seen by some components of flavourants	Review Article	low

life-threatening association. switched to vaping over the last 7 mo	sars, but inths. He inths. He inths. He mes 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 Tension Pneumothorax Tension Pneumothorax Tension Pneumothorax 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.	was inserted and connected to the water suction device. Did not resolve. Right video-assisted thoracoscopy with a thoracoscopic wedge resection of the right apical blebs, complete thoracoscopic pleurectomy, and talc pleurodesis were performed with resolution of the pneumothorax		Case report - conference abstract Case Report very low
vapor as a possible etiology to total colonic necrotizing enterocolitits: A case report. Gillen S., Saltzman D. Embase Classic+Embase Journal of Pediatric Surgery Case Reports. 2 (12) (pp 536-537), 2015. Date of Publication: January 2015. [Article] AN: 600707852 60 Evaluation of e-cigarette liquid vapor and mainstream cigarette smoke after direct exposure of primary human bronchial epithelial cells. Scheffler S., Dieken H., Krischenowski O., Forster C., Branscheid D., Aufderheide M.	out cell viability and oxidative stress levels in the cells were analyzed as to			"extremely well." He is growing appropriately and meeting his developmental milestones during his last check at 9 months of age. 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	Journal Article very low
Embase Classic+Embase International Journal of Environmental Research and Public Health. 12 (4) (pp 3915-3925), 2015. Date of Publication: 08 Apr 2015. [Article] AN: 603697894 61 Not only smoking is deadly: fatal 34-year-old man, DID NOT VAPE. Ingested three nicoti				cigarette exposed cells was 4.5-8 times lower and the oxidative stress levels 4.5-5 times higher than those of e- cigarette vapor exposed cells, depending on the donor Deceased after ingestion	Case Report Very low
ingestion of e-juice-a case report. Bartschat S., Mercer-Chalmers- Bender K., Beike J., Rothschild M.A., Jubner M. Embase Classic+Embase International journal of legal medicine. 129 (3) (pp 481-486), 2015. Date of Publication: 01 May 2015. [Article] AN: 608159086	ee" (of of nicotine.				
62 Efficacy and safety of electronic cigarettes for smoking cessation: A systematic review. Allehebi R.O., 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: (var.pagings). 191 (MeetingAbstracts) (no pagination), 2015. Date of Publication: 2015. IConference Abstractl				Meta-analysis showed that point prevalence abstinence was significantly better for ecigarettes vs. placebo at 1 month (RR 1.71, 95% CI 1.08-2.72, I2 = 0%). However, differences for point prevalence abstinence did not reach statistical significance at 3 months (RR 1.95, 95% CI 0.74-5.13, I2 = 65%) or 6 months (RR 1.32, 95% CI 0.59-2.93, I2 = 59%), with large heterogeneity between studies rendering the validity of these pooled estimates	Review Article low
cigarette use. Frossard S.M., Volansky P.M., Endara-Bravo 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: (var.pagings). 191 (MeetingAbstracts) (no pagination), 2015. Date of Publication: 2015. [Conference Abstract] AN: 72049343	the para-tracheal musculature		Despite of intravenous administration of diphenhydramine, famotidine, methylprednisolone, and intramuscular epinephrine, patient's dyspnea worsened	Extubated after 24hours. Intubation with mechanical ventilation	Case report - conference abstract
Refractile foreign material deposits and alveolar hemorrhage in crack cocaine smoker. Sogomonian R., Gandhi V., McGarry T., Moezzi 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: (var.pagings). 63 (4) (pp 695), 2015. Date of Publication: April 2015. [Conference Abstract] AN: 71918847		extensive right upper lobe quasi- nodular ground-glass infiltrate and a similar but less severe process in the right lower lobe Brochoalveolar lavage (BAL) fluid samples were non- hemorrhagic. Transbronchial biopsy demonstrated alveolar hemorrhage with refractile foreign material deposits	No evidence of pneumocystis. Microbiologic evaluation, including routine cultures, legionella and histoplasma urine antigens, as well as sputum mycobacterial smears, were ultimately negative		Case report - conference abstract very low
Vaping-Associated Lung Injury. Boland JM; Aesif SW. Ovid MEDLINE(R) ALL American Journal of Clinical Pathology. 2019 Oct 25. [Journal Article] UI: 31651033 Case series. 17 patient biopsies. 3 men; median age, 35 years [range, 19–67]), all of whom had a history of vaping (71% with marijuana or cannabis oils)	Organizing pneumonia, DAH, and Acute fibrinous pneumonitis with organization	lavage fluid was available and contained abundant foamy macrophages	showed patterns of acute lung injury, including acute fibrinous pneumonitis, diffuse alveolar damage, or	Despite treatment with glucocorticoids and maximum supportive care, two patients with diffuse alveolar damage died. Remainder survived.	Correspondence High
Illegal products containing THC are blamed for vaping lung disease in Utah. Tanne JH. Ovid MEDLINE(R) ALL BMJ. 367:l6216, 2019 Oct 25. [Letter] UI: 31653640					Correspondence Medium
67 E-cigarettes and Vaping Implicated in Recent Cases of Severe Lung Disease. Potera C. Ovid MEDLINE(R) ALL American Journal of Nursing. 119(11):12, 2019 Nov. [Journal Article]					Journal Article low
68 E-cigarette Use, or Vaping, Practices and Characteristics Among Persons with Associated Lung Injury - Utah, April-October 2019. Lewis N; McCaffrey K; Sage K; Cheng CJ; Green J; Goldstein L; Campbell H; Ferrell D; Malan N; LaCross N; Maldonado A; Board A; Harris D; Callahan S; Aberegg S; Risk I; Willardson S; Carter A; Nakashima A; Duncan J; Burnett C; Atkinson-Dunn 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. Age group (yrs) (83) 14–19 11 (13%) 20–29 43 (52%) and 30–39 23 (28%) 40–66 6 (7%). Preexisting conditions: (N=79) Asthma 16 (20%) Chronic obstructive pulmonary disease 2 (3%) Anxiety 27 (34%) Depression 18 (25%) Hypertension 4 (25%) Hypertension 4 (5%) Heart failure 1 (1%) One or more of the above 42 (53%) UI: 31647788	g injury, s s c), the ny (60%) ning sources l online re most day, were ay. blic dence	Not listed	Treated with steroids 59 (75%)	Hospitalization 70 (89%). ICU admission 35 (44%). CPAP/BiPAP support (No intubation) 30 (38%). Intubation and mechanical ventilation 9 (11%)	Journal Article medium
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; Jatlaoui TC; Koumans EH; Kiernan EA; Layer M; Cates JE; Kimball A; Weissman DN; Petersen EE; Reagan-Steiner S; Godfred-Cato S; Moulia D; Moritz E; Lehnert JD; Mitchko J; London J; Zaki SR; King BA; Jones CM; Patel A; Delman DM; Koppaka 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 18. 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.	vidad bu				CDC report Medium
70 Vaping-Associated Acute Lung Injury: A Case Series. Triantafyllou GA; Tiberio PJ; Zou RH; Lamberty PE; Lynch MJ; Kreit JW; Gladwin MT; Morris A; Chiarchiaro J. American Journal of Respiratory & Critical Care Medicine. 2019 Oct 01.	roducts, 39.2, interquartile range (IQR)= 0.65 oC] and a variety of respiratory and gastrointestinal symptoms,	Computed tomography (CT) scans revealed multi-lobar ground glass opacities with subpleural sparing (BAL). Microbial cultures were negative in the BAL. Cell count showed 280 white blood cells/mm3 (differential: 13% neutrophils, 31% lymphocytes, 2% eosinophils,	Most received corticosteroids [total median daily prednisone dose 40 (IQR=60) mg for a median of 4 (IQR=4.75) days].	median duration of symptoms was 8.5 (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=7.25) 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 Caucasian man 18-year-old Caucasian man 18-year-old Caucasian man reported a history of vaping just prior episodes reported a history of vaping just prior episodes episodes Ra; Feldman MB; Dutko RA; Karagounis TK; Johnson AL; Folch EE; Vyas JM. Journal of Medical Case Reports [Electronic Resource]. 13(1):283, 2019 Sep 09.	to both presented twice with recurrent right-sided spontaneous pneumothoraces within 2 weeks	51% monocytes) on the first patient and 380 white blood cells/mm3 (differential: 11% neutrophils, 8% lymphocytes, 0% eosinophils, 69% right-sided spontaneous pneumothorax on chest X-ray and computed tomography scan	chest tube and drainage of air on each occasion	Improved two weeks	Case Report medium
[Journal Article] 72 ATS Health Alert-Vaping-associated Pulmonary Illness (VAPI). Carlos W.G., Crotty Alexander L.E., Gross J.E., Dela Cruz C.S., Keller J.M., Pasnick S., Jamil S. Embase Classic+Embase American journal of respiratory and critical care medicine. 200 (7) (pp P15-P16), 2019. Date of Publication: 01 Oct 2019. [Article] AN: 629375338 PMID 31532698 [http://www.ncbi.nlm.nih.gov/pubmed/?]					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: 2002986974 74 Real-Time Digital Surveillance of Vaping-Induced Pulmonary Disease. Hswen Y., Brownstein J.S. Embase Classic+Embase Editorial on Wisconsin and Illinois pt cluster. No new cases Editorial on Visconsin and Illinois pt cluster. No new cases					Editorial Low Correspondence Low
The New England journal of medicine. (no pagination), 2019. Date of Publication: 20 Sep 2019. [Letter] AN: 629392150 PMID 31539466 [http://www.ncbi.nlm.nih.gov/pubmed/?term=31539466] 75 Outbreak of pulmonary diseases linked to vaping. Editorial. No new cases.					Correspondence Low
Hammond D. Embase Classic+Embase The BMJ. 366 (no pagination), 2019. Article Number: I5445. Date of Publication: 10 Sep 2019. [Editorial] AN: 629292824 PMID 31506254 [http://www.ncbi.nlm.nih.gov/pubmed/?term=31506254]					

76 Severe Pulmonary Disease Guidance article. No new Associated with Electronic-Cigarette- cases		Journal Article Low
Product Use - Interim Guidance. Schier J.G., Meiman J.G., Layden J., Mikosz C.A., VanFrank B., King B.A., Salvatore P.P., Weissman D.N., Thomas J., Melstrom P.C., Baldwin G.T., Parker E.M., Courtney-Long E.A., Krishnasamy V.P., Pickens C.M., Evans M.E., Tsay S.V., Powell K.M., Kiernan E.A., Marynak K.L., Adjemian J., Holton K., Armour B.S., England L.J., Briss P.A., Houry D.,		
Hacker K.A., Reagan-Steiner S., Zaki S., Meaney-Delman D. Embase Classic+Embase MMWR. Morbidity and mortality weekly report. 68 (36) (pp 787-790), 2019. Date of Publication: 13 Sep 2019. To Don't vape, CDC says, as US lung No new cases.		Editorial Low
Tanne J.H. Embase Classic+Embase BMJ (Clinical research ed.). 366 (pp I5479), 2019. Date of Publication: 09 Sep 2019. [Article] AN: 629269769 PMID 31501087 [http://www.ncbi.nlm.nih.gov/pubmed/?		Lanoriai Eow
term=31501087] 78 US state governments investigate suspected vaping-associated severe lung disease. Furlow B.		Editorial Low
Embase Classic+Embase The Lancet. Respiratory medicine. (no pagination), 2019. Date of Publication: 30 Aug 2019. [Article] AN: 629212713 PMID 31477520 [http://www.ncbi.nlm.nih.gov/pubmed/?		
term=314775201 79 Vaping cannabis and chronic obstructive pulmonary disease. Tashkin D.P. Embase Classic+Embase Annals of the American Thoracic Society. 15 (10) (pp 1137-1138), 2018. Date of Publication: October 2018 of the American Control point	Primary outcomes included breathlessness intensity ratings at isotime in Borg units and endurance exercise time (EET). No effects of cannabis on breathlessness ratings or EET were found compared	Journal Article Low
2018. [Editorial] AN: 624325000 PMID 30272498 [http://www.ncbi.nlm.nih.gov/pubmed/? term=30272498]	with control. Secondary outcomes included spirometry, impulse oscillometry, and a variety of physiological and perceptual responses to exercise, including heart rate, breathing pattern, and the locus of symptom limitation, as well as	
Reply to "Letter to the Editor: No new cases Pulmonary toxicity of electronic cigarettes: More doubts than certainties". Chun L.F., Moazed F., Calfee C.S.,	cannabis-related adverse events. Here again, compared with control, no effects of	Correspondence Low
Matthay M.A., Gotts J.E. Embase Classic+Embase American Journal of Physiology - Lung Cellular and Molecular Physiology. 313 (5) (pp L966-L967), 2017. Date of Publication: 06 Nov 2017. [Letter] AN: 619092869 PMID 20109110		
Pro-inflammatory effects of e-cigarette No new cases. In vitro vapour condensate on human alveolar macrophages. Scott A., Lugg S.T., Aldridge K., Lewis K.E., Bowden A., Mahida R.Y., Grudzinska F.S., Dosanjh D., Parekh		Journal Article Low
D., Foronjy R., Sapey E., Naidu B., Thickett D.R. Embase Classic+Embase Thorax. 73 (12) (pp 1161-1169), 2018. Date of Publication: 01 Dec 2018. [Article] AN: 623684310 Vaped e-cigarette condensate is more No new cases. In vitro		Conference Low
cytotoxic than unvaped ECL on alveolar macrophages. Scott A., Lugg S., Aldridge K., Dancer R., Dosanjh D., Thickett D. Embase Classic+Embase European Respiratory Journal. Conference: European Respiratory Society Annual Congress 2016.		abstract
United Kingdom. 48 (Supplement 60) (no pagination), 2016. Date of Publication: 01 Sep 2016. [Conference Abstract] AN: 614778082		
Lung toxicity of condensed aerosol from E-CIG liquids: Influence of the flavor and the in vitro model used. Bengalli R., Ferri E., Labra M., Mantecca P. Embase Classic+Embase International Journal of Environmental Research and Public Health. 14 (10) (no pagination), 2017. Article Number: 1254. Date of Publication: 20 Oct		Journal Article very low
2017. [Article] AN: 618849206 84 A review of pulmonary toxicity of electronic cigarettes in the context of smoking: A focus on inflammation. Shields P.G., Berman M., Brasky T.M., Freudenheim J.L., Mathe E., McElroy J.P., Song MA., Wewers		Review Article Low
M.D. Embase Classic+Embase Cancer Epidemiology Biomarkers and Prevention. 26 (8) (pp 1175-1191), 2017. Date of Publication: August 2017. [Review] 85 Pulmonary toxicity of e-cigarettes. Review of pulmonary		Review Article Low
Chun L.F., Moazed F., Calfee C.S., Matthay M.A., Gotts J.E. Embase Classic+Embase American Journal of Physiology - Lung Cellular and Molecular Physiology. 313 (2) (pp L193-L206), 2017. Date of Publication: 2017. [Review] AN: 617646580		
86 The role of nicotine in the effects of maternal smoking during pregnancy on lung development and childhood respiratory disease: Implications for dangers of e-cigarettes. Spindel E.R., McEvoy C.T. Embase Classic+Embase		Review Article Low
American Journal of Respiratory and Critical Care Medicine. 193 (5) (pp 486-494), 2016. Date of Publication: 01 Mar 2016. [Review] AN: 612425491		
Electronic cigarettes: The resistance value of the heating filament could be the key to lung toxicity. Chausse P., Naughton G., Dutheil F. Embase Classic+Embase Chest. 148 (1) (pp e29-e30), 2015. Date of Publication: 01 Jul 2015.		Editorial Low
[Article] AN: 605251904 PMID 26149561 [Inttp://www.ncbi.nlm.nih.gov/pubmed/? term=26149561 88 Will chronic e-cigarette use cause lung disease?. Rowell T.R., Tarran R. Embase Classic+Embase American Journal of Physiology -		Review Article Low
Lung Cellular and Molecular Physiology. 309 (12) (pp L1398- L1409), 2015. Date of Publication: 2015. [Review] AN: 607371282 89 Vapors produced by electronic cigarettes and E-juices with flavorings cases	exposure to e-cig aerosols/ juices incurs measurable	Journal Article Low
induce toxicity, oxidative stress, and inflammatory response in lung epithelial cells and in mouse lung. Lerner C.A., Sundar I.K., Yao H., Gerloff J., Ossip D.J., McIntosh S., Robinson R., Rahman I. Embase Classic+Embase PLos ONE. 10 (2) (no pagination), 2015. Article Number: e0116732. Date of Publication: 06 Feb 2015. [Article]	oxidative and inflammatory responses in lung cells and tissues that could lead to unrealized health consequences.	
[Article] AN: 602151086 90 Smoking at the time of curative-intent lung cancer surgery increases perioperative complications: Is there a role for electronic cigarettes?. Lugg S.T., Tikka T., Agostini P.J., Kerr A., Webb J., Adamas K., Bishay E., Steyn R.S., Kalkat M.S., Rajesh No new cases. Patients were asked if they would vape to stop smoking, but never actually vaped.		Conference abstract very low
P.B., Thickett D.R., Naidu B. Embase Classic+Embase Thorax. Conference: British Thoracic Society Winter Meeting 2015. London United Kingdom. Conference Publication: (var.pagings). 70 (SUPPL. 3) (pp A159-A160), 2015. Date of Publication: December 2015. [Conference Abstract] AN: 72199746		
91 Pirfenidone for idiopathic pulmonary fibrosis, thrombocytosis in chronic obstructive pulmonary disease exacerbations, and a longitudinal study on e-cigarettes. Jagpal S., Pistun O., Mikhail J. Embase Classic-Embase American Journal of Respiratory and Critical Care Medicine. 190 (6) (pp 699-700), 2014. Date of Publication: 15 Sep 2014. [Note] AN: 604384405		Journal Article Low
PMID 25221880 [http://www.ncbi.nlm.nih.gov/pubmed/? term=25221880] 92 A case report of subacute bronchial 43M, primary lung La dynamique' by CIGARTEX) and two 'e- After 48 h, the patient described "bronchial syndrome" chest X-ray was unchanged	Conservative. Stopped Improved after 48h. Naning	
toxicity induced by an electronic cigarette. Hureaux J., Drouet M., Urban T. Embase Classic+Embase Thorax. 69 (6) (pp 596-597), 2014. Date of Publication: June 2014. [Short Survey] AN: 52967502 PMID 24436327 Identication: adenocarcinoma with a documented isolated brain metastasis (stage brain metastasis) (stage brain m	vaping.	fully investigated. No blood work. No sputum for infection. Excluded for poor quality and paucity of data.
Inttp://www.ncbi.nlm.nih.gov/pubmed/? term=244363271 93 Subacute bronchial toxicity induced by an electronic cigarette: Take home message. Polosa R., Campagna D., Tashkin D. Embase Classic+Embase Thorax. 69 (6) (pp 588), 2014. Date of Publication: June 2014		Letter Low
[Letter] AN: 53114315 PMID 24827822 [http://www.ncbi.nlm.nih.gov/pubmed/? term=24827822] 94 Vaping-Induced Acute Lung Injury: An Epidemic That Could Have Been cases		Editorial very low
Prevented. Balmes JR. Ovid MEDLINE(R) ALL American Journal of Respiratory & Critical Care Medicine. 2019 Oct 15. [Journal Article] UI: 31613146		

95 An Emerging Crisis: Vaping- Associated Pulmonary Injury. Hooper RW 2nd; Garfield JL. Ovid MEDLINE(R) ALL Annals of Internal Medicine. 2019 Oc.	Editorial. No new cases.							Editorial	very low
[Journal Article] UI: 31590182									
96 Pathology of Vaping-Associated Lung Injury. Butt YM; Smith ML; Tazelaar HD;	(Boland 2019). Already included in data extraction							Editorial	High
Vaszar LT; Swanson KL; Cecchini MJ; Boland JM; Bois MC; Boyum JH; Froemming AT; Khoor A; Mira-	under Boland 2019.								
Avendano I; Patel A; Larsen BT. Ovid MEDLINE(R) ALL New England Journal of Medicine.									
2019 Oct 02. [Letter] UI: 31577870									
97 Vaping-Induced Lung Injury. Christiani DC. Ovid MEDLINE(R) ALL New England Journal of Medicine. 2019 Sep 06. [Editorial] UI: 31491071	Editorial on Layden et al. No new cases.							Editorial	High
98 Vaping: UK experts defend safety in face of US lung injury cases.	Editorial. No new cases.							Editorial	Low
Hawkes N. Ovid MEDLINE(R) ALL BMJ. 367:l6027, 2019 Oct 14. [Journal Article] UI: 31611190									
The role of DJ-1 in human primary alveolar type II cell injury induced by cigarette aerosol.								Journal Article	Low
Bahmed K; Lin CR; Simborio H; Karii L; Aksoy M; Kelsen S; Tomar D; Madesh M; Elrod J; Messier E; Maso									
R; Unterwald EM; Eisenstein TK; Criner GJ; Kosmider B. Ovid MEDLINE(R) ALL									
American Journal of Physiology - Lung Cellular & Molecular Physiology 317(4):L475-L485, 2019 Oct 01. [Journal Article]	y.								
UI: 31313616 100 Vaping: CDC investigation continues	s Editorial. No new cases.							Editorial	Low
after patient dies from severe lung injuries. Rimmer A; Iacobucci G.									
Ovid MEDLINE(R) ALL BMJ. 366:I5320, 2019 Aug 29. [Journal Article] UI: 31467143									
101 Vaping and lung injuries: five minutes with Nick Hopkinson. Rimmer A.	Editorial. No new cases.							Editorial	very low
Ovid MEDLINE(R) ALL BMJ. 366:I5314, 2019 Aug 28. [Journal Article] UI: 31462442									
102 Vaping: CDC investigates severe lunginjuries.Hopkins Tanne J.	g Editorial. No new cases.							Editorial	very low
Ovid MEDLINE(R) ALL BMJ. 366:I5228, 2019 Aug 20. [Journal Article] UI: 31431430									
103 Characteristics of a Multistate Outbreak of Lung Injury Associated	CDC Info release. 805 Among patients with data on substances used cases reported as of in e-cigarettes, or vaping products,							CDC report	Medium
with E-cigarette Use, or Vaping - United States, 2019. Perrine CG; Pickens CM; Boehmer	September 24, 2019, tetrahydrocannabinol (THC)-containing product use was reported by 76.9% (36.0%								
TK; King BA; Jones CM; DeSisto CL; Duca LM; Lekiachvili A; Kenemer B; Shamout M; Landen MG; Lynfield R;	(16.0% reported exclusive nicotine-product use).								
Ghinai I; Heinzerling A; Lewis N; Pray IW; Tanz LJ; Patel A; Briss PA; Lung Injury Response Epidemiology/Surveillance Group.	ny g								
Ovid MEDLINE(R) ALL MMWR - Morbidity & Mortality Weekl Report. 68(39):860-864, 2019 Oct 04									
101 E-cigarette Product Use, or Vaping, Among Persons with Associated Lung	in-depth interviews with 86 e-cigarette– or vaping- associated lung injury Among the 86 interviewed patients, 75 (87%) reported using e-cigarette products containing THC during the 3 months preceding illness; 61							Journal Article	High
September 2019. Ghinai I; Pray IW; Navon L;	patients in Illinois and (71%) reported using nicotine-containing Wisconsin during products; 50 (58%) reported using both THC- and nicotine-containing products. Twenty-five								
B; Kimball A; Tenforde MW; Chevinsky JR; Layer M; Ezike N; Meiman J; Layden JE.	(79%) were male, and the median age was 21 years containing products, whereas 11 (13%) reported exclusive use of nicotine-containing								
Ovid MEDLINE(R) ALL MMWR - Morbidity & Mortality Weekl Report. 68(39):865-869, 2019 Oct 04									
[Journal Article] UI: 31581166 102 High-power vaping injures the humar lung.	looking at vaping without							Journal Article	very low
Gotts JE. Ovid MEDLINE(R) ALL American Journal of Physiology -	nicotine in cardiac catheter patients looking at CO2 and O2 tension.								
Lung Cellular & Molecular Physiology 316(5):L703-L704, 2019 May 01. [Journal Article. Comment] UI: 30838866	y. Clinical relevance unknown. No new cases								
103 Pulmonary illness related to e- cigarette use in Illinois and	median age 19 years. products in e-cigarette devices. 61% used respiratory symptoms (98%),	nonspecific inflammation, acute diffuse alveolar damage and	All case patients had bilateral infiltrates on chest imaging	bronchoalveolar lavage; the	Three patients underwent transbronchial lung biopsy, and two of	systemic	One death.	94% of the Journal Article patients were	Very High
Wisconsin—preliminary report. Layden JE, Ghinai I, Pray I, Kimball A, Layer M, Tenforde M, Navon L, Hoots B, Salvatore PP, Elderbrook M.	82% white. 30% history of asthma. nicotine (17% nicotine only). (37% used THC gastrointestinal symptoms (81%), and constitutional symptoms (100%)	foamy macrophages, and interstitial and peribronchiolar granulomatous pneumonitis.	(which was part of the case definition)	antibiotics, glucocorticoids, or both before the procedure. Of	performed during clinical workup; two	glucocorticoids (IV or oral); 83% received IV steroids. 65%		hospitalized, 32% underwent intubation and	
Hoots B, Salvatore PP, Elderbrook M. Haupt T New England journal of medicine. 2019 Sep 6.	1,			specimens with reported cell counts, the median values were	of these patients were receiving both antibiotics and glucocorticoids at the time, and one was receiving neither before the procedure. Pathologists	improved on steroids.		mechanical ventilation. 32% NIV. 58% admitted to ICU.	
				(range, 0 to 6), neutrophils 65% (range, 10 to 91), lymphocytes 7% (range, 1 to 40), and	reported a range of findings, including mild and nonspecific inflammation, acute diffuse alveolar				
				macrophages 21% (range, 2 to 68). A total of 7 of the 14 cytology reports on	damage and foamy macrophages, and interstitial and peribronchiolar granulomatous pneumonitis.				
				bronchoalveolar-lavage specimens noted lipid-laden macrophages with oil red O stain: the other 7 reports did no	Infectious disease evaluations for possible viral, bacterial, and fungal pathogens were negative in nearly all case patients in whom the testing was				
				comment on the use of oil red C stain. Of the 7 samples with noted lipid-laden macrophages,	performed				
		Appendix to: Landman ST, Dhaliwal I, Mack	kenzie CA, et al. Life-threatening b	2 reports listed moderate lipid-		2019. doi: 10.1503/cmaj.191402. Copyright © 2019 Joule Inc	. or its licensors		