Weill Cornell Medicine
Radiology

The Weill Pulmonary Embolism Appropriate Use Criteria (AUC) analyzes Wells Criteria and D-Dimer value.
The AUC makes recommendations to optimize diagnostic effectiveness.
The Pulmonary Embolism AUC is activated when a user orders a CT for Pulmonary Embolism.

Recommended Imaging Procedures	
1	CT Pulmonary Embolism
2	US Lower Extremity
3	D-Dimer

Logic Tables

The following Clinical Condition Logic Tables provide the Shoulder Pain AUC logic for each clinical condition.
The logic includes priors, contraindications, metal reduction and advanced US techniques where applicable.

Key

Value	Score
Blank	No Score Assigned
0	AUC Not Applicable – Allows User to Proceed with Original Order
1	Inappropriate
2	Contact Radiology
3	Appropriate
4	Appropriate Preferred

Advice Text

The Advice Text provided in each condition is for Ordering Provider information and education purposes.

Logic Table

Base Condition	Contraindication	CT PE	US	D-Dimer	References	Recommendation Grade
(Wells score > 4 or D-dimer elevated)		4			1,2,4,5	A
(Wells score > 4 or D-dimer elevated), Renal Disease/Allergy to Contrast	IOD	3			1,2,4,5,LBP	B
Wells <= 4, D-dimer normal, not pregnant		1			1,2,4,5	A
Wells <= 4, D-dimer normal, Pregnant, Signs and Symptoms of DVT		1	4		1,2,4,5	A
Wells <= 4, D-dimer normal, Pregnant, no Signs and Symptoms of DVT		2			1,2,4,5	A
Wells 2-4, D-dimer not done		1		4	1,2,4,5	A
Wells < 2, PERC positive, D-dimer not done, not pregnant		1		4	1,2,4,5	A
Wells < 2, PERC negative, D-dimer not done, not pregnant		1			1,2,4,5	A
Wells < 2, D-dimer not done, pregnant		1		4	1,2,3,4,5	B

Sources

The Pulmonary Embolism AUC has been developed by Weill Cornell Medicine utilizing the following published sources and Local Best Practice (LBP).

No.	Source	Grade
1	Prospective validation of Wells Criteria in the evaluation of patients with suspected pulmonary embolism, Wolf SJ, McCubbin TR, Feldhaus KM, Faragher JP, Adcock DM. Prospective validation of Wells Criteria in the evaluation of patients with suspected pulmonary embolism. Ann Emerg Med, 2004 Nov 44(5):503-10., https://www.ncbi.nlm.nih.gov/pubmed/15520710	4
2	Derivation of a simple clinical model to categorize patients probability of pulmonary embolism: increasing the models utility with the SimpliRED D-dimer, Wells PS, Anderson DR, Rodger M, Ginsberg JS, Kearon C, Gent M, Turpie AG, Bormanis J, Weitz J, Chamberlain M, Bowie D, Barnes D, Hirsh J. Derivation of a simple clinical model to categorize patients probability of pulmonary embolism: increasing the models utility with the SimpliRED D-dimer. Thromb Haemost. 2000 Mar;83(3):416-20., https://www.ncbi.nlm.nih.gov/pubmed/10744147	3
3	American Thoracic Society documents: an official American Thoracic Society/Society of Thoracic Radiology Clinical Practice Guideline--Evaluation of Suspected Pulmonary Embolism in Pregnancy, Leung AN, Bull TM, Jaeschke R, Lockwood CJ, Boiselle PM, Hurwitz LM, James AH, McCullough LB, Menda Y, Paidas MJ, Royal HD, Tapson VF, Winer-Muram HT, Chervenak FA, Cody DD, McNitt-Gray MF, Stave CD, Tuttle BD; ATS/STR Committee on Pulmonary Embolism in Pregnancy. American Thoracic Society documents: an official American Thoracic Society/Society of Thoracic Radiology Clinical Practice Guideline--Evaluation of Suspected Pulmonary Embolism in Pregnancy. Radiology. 2012 Feb;262(2):635-46., https://www.ncbi.nlm.nih.gov/pubmed/22282185	5
4	Kline JA. Diagnosis and Exclusion of Pulmonary Embolism. Thromb Res. 2018 Mar;163:207-220. doi: 10.1016/j.thromres.2017.06.002. Epub 2017 Jun 7. PMID: 28683951. https://pubmed.ncbi.nlm.nih.gov/28683951/	5
5	Hendriksen JM, Geersing GJ, Lucassen WA, Erkens PM, Stoffers HE, van Weert HC, Büller HR, Hoes AW, Moons KG. Diagnostic prediction models for suspected pulmonary embolism: systematic review and independent external validation in primary care. BMJ. 2015 Sep 8;351:h4438. doi: 10.1136/bmj.h4438. PMID: 26349907; PMCID: PMC4561760. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4561760/	5
LBP	Weill Cornell Medicine - Local Best Practice	NA

Contributors

The Pulmonary Embolism AUC has been developed by the following.

Keith Hentel, MD, MS, ED & MSK Radiology, Informatics WCPO
Alvin Mushlin, MD, ScM, Public Health/Population Health, WCPO
Rahul Sharma, MD MBA, Emergency Medicine, WCPO
Ralph Slepian, MD, Anesthesia/CMO, WCPO
Jessica Rotman, MD, ED & MSK Radiology, WCPO
George Shih MD, MS Informatics, WCPO
Joseph Underwood, MD, Emergency Medicine, Columbia P&S
Joshua Weintraub, MD, Imaging Guided Interventions, Columbia P&S
Peter Wyer, MD, Emergency Medicine, Columbia P&S

Additional Contributors

Thomas Jessen, JD, Informatics WCPO
Courtney Yeager, MS, Imaging WCPO

No Conflicts Reported