

30 DE ABRIL — 5ª FEIRA

**ALGORITMO DE INVESTIGAÇÃO:
TVP E EMBOLIA PULMONAR.
SCORES DE WELLS**

ANTÓNIO PEDRO MACHADO

Venous thromboembolic diseases:

the management of venous thromboembolic diseases
and the role of thrombophilia testing

**Two-level Wells score: templates
for deep vein thrombosis and
pulmonary embolism**

June 2012



Scores de Wells
Doença tromboembólica venosa



**Cálculo da probabilidade clínica
pré-teste de TVP e EP**

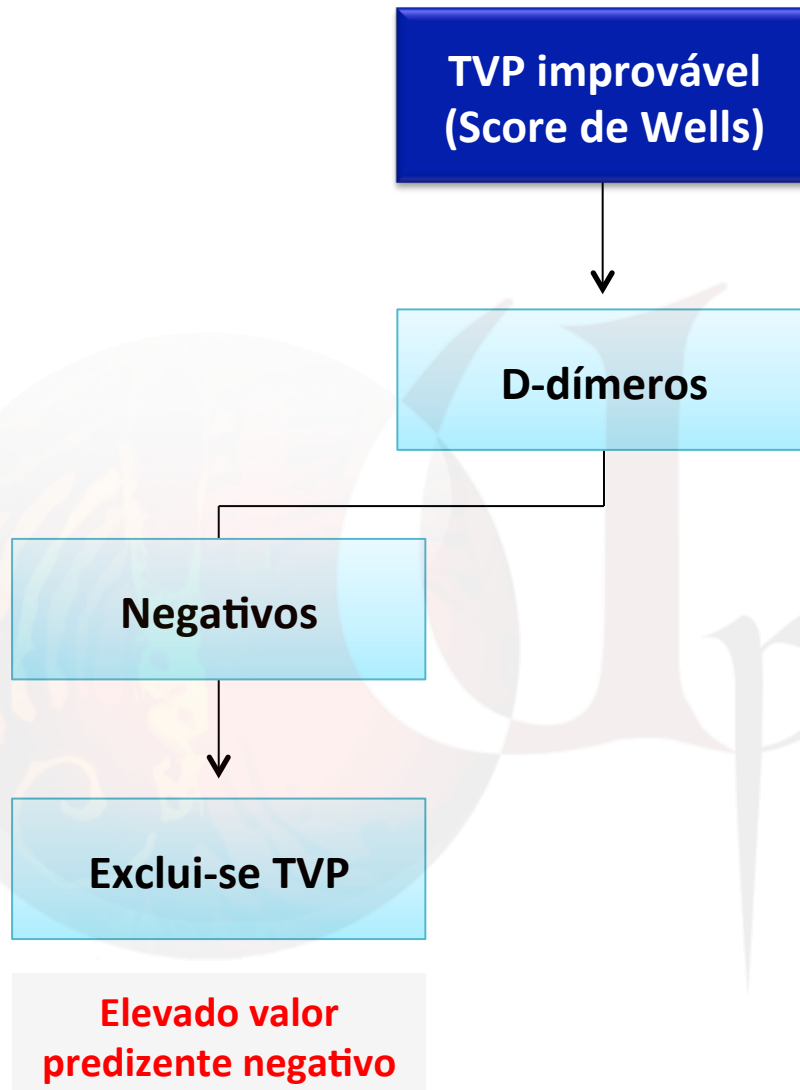


Seleccção do teste diagnóstico

TVP - Score de Wells

Características clínicas	Pontos	Score
Neoplasia maligna tratada nos últimos 6 meses ou sob tratamento paliativo	1	
Paralesia, parésia ou imobilização recente dos MI com gesso	1	
Acamamento recente por ≥ 3 dias ou cirurgia major nas últimas 12 semanas	1	
Desconforto localizado ao longo do trajecto do sistema venoso profundo	1	
Edema da perna até ao joelho	1	
Diâmetro da perna edemaciada pelo menos 3 cm superior ao da perna assintomática	1	
Edema com sinal de “godet” confinado à perna sintomática	1	
Veias superficiais colaterais (não varicosas)	1	1
TVP prévia documentada	1	
Um diagnóstico alternativo é tão provável como a TVP	-2	?
Probabilidade clínica em função do score		
TVP provável	≥ 2 pontos	
TVP Improvável	≤ 1 ponto	1

Investigação diagnóstica para a TVP



ORIGINAL ARTICLE

Evaluation of D-Dimer in the Diagnosis of Suspected Deep-Vein Thrombosis

Philip S. Wells, M.D., David R. Anderson, M.D., Marc Rodger, M.D.,
Melissa Forgie, M.D., Clive Kearon, M.D., Ph.D., Jonathan Dreyer, M.D.,
George Kovacs, M.D., Michael Mitchell, M.D., Bernard Lewandowski, M.D.,
and Michael J. Kovacs, M.D.

ABSTRACT

BACKGROUND

Several diagnostic strategies using ultrasound imaging, measurement of D-dimer, and assessment of clinical probability of disease have proved safe in patients with suspected deep-vein thrombosis, but they have not been compared in randomized trials.

METHODS

Outpatients presenting with suspected lower-extremity deep-vein thrombosis were potentially eligible. Using a clinical model, physicians evaluated the patients and categorized them as likely or unlikely to have deep-vein thrombosis. The patients were then randomly assigned to undergo ultrasound imaging alone (control group) or to undergo D-dimer testing (D-dimer group) followed by ultrasound imaging unless the D-dimer test was negative and the patient was considered clinically unlikely to have deep-vein thrombosis, in which case ultrasound imaging was not performed.

RESULTS

Five hundred thirty patients were randomly assigned to the control group, and 566 to the D-dimer group. The overall prevalence of deep-vein thrombosis or pulmonary embolism was 15.7 percent. Among patients for whom deep-vein thrombosis had been ruled out by the initial diagnostic strategy, there were two confirmed venous thromboembolic events in the D-dimer group (0.4 percent; 95 percent confidence interval, 0.05 to 1.5 percent) and six events in the control group (1.4 percent; 95 percent confidence interval, 0.5 to 2.9 percent; $P=0.16$) during three months of follow-up. The use of D-dimer testing resulted in a significant reduction in the use of ultrasonography, from a mean of 1.34 tests per patient in the control group to 0.78 in the D-dimer group ($P=0.008$). Two hundred eighteen patients (39 percent) in the D-dimer group did not require ultrasound imaging.

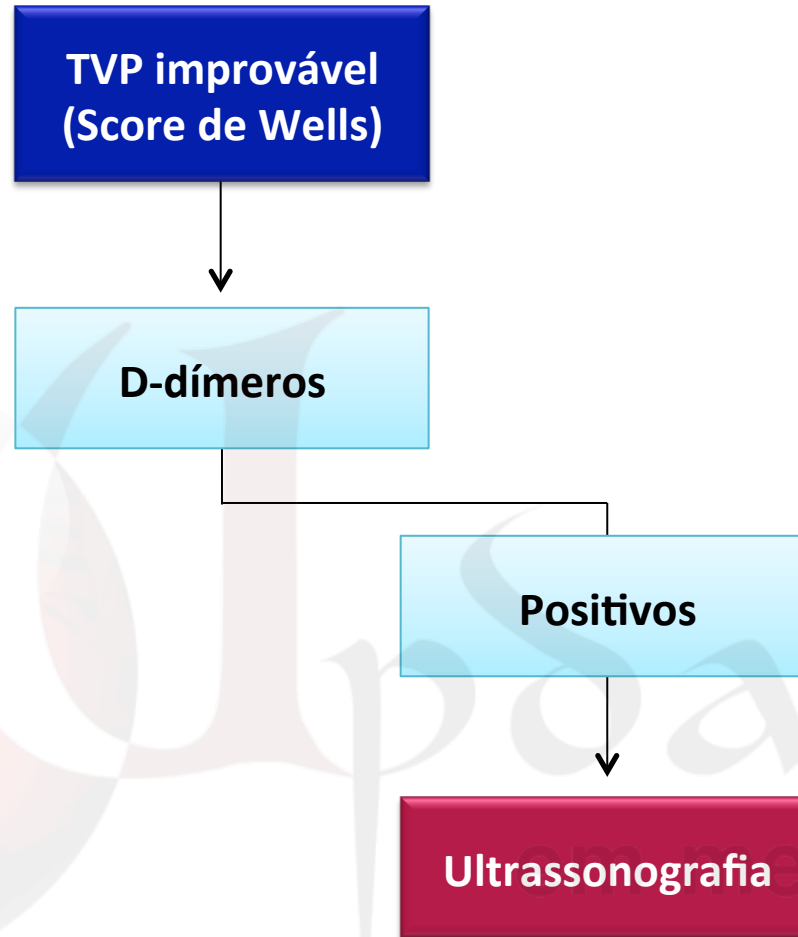
CONCLUSIONS

Deep-vein thrombosis can be ruled out in a patient who is judged clinically unlikely to have deep-vein thrombosis and who has a negative D-dimer test. Ultrasound testing can be safely omitted in such patients.

From the Departments of Medicine, Radiology, and Emergency Medicine, Ottawa Hospital, University of Ottawa, Ottawa, Ont. (P.S.W., M.R., M.F., B.L.); Queen Elizabeth II Health Sciences Centre, Dalhousie University, Halifax, N.S. (D.R.A., G.K., M.M.); London Health Sciences Centre, University of Western Ontario, London, Ont. (J.D.); and Henderson Hospital, McMaster University, Hamilton, Ont. (C.K.) — all in Canada. Address reprint requests to Dr. Wells at Ottawa Hospital Civic Campus, Suite F647, 1053 Carling Ave., Ottawa, ON K1Y 4E9, Canada, or at pwells@ohri.ca.

N Engl J Med 2003;349:1227-35.
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Investigação diagnóstica para a TVP



- A realizar nas próximas 4 h **ou**
- Administrar anticoagulante parentérico se conseguir realizar o exame nas próximas 24 h

Tromboembolismo venoso

**Cansaço
Significativo**

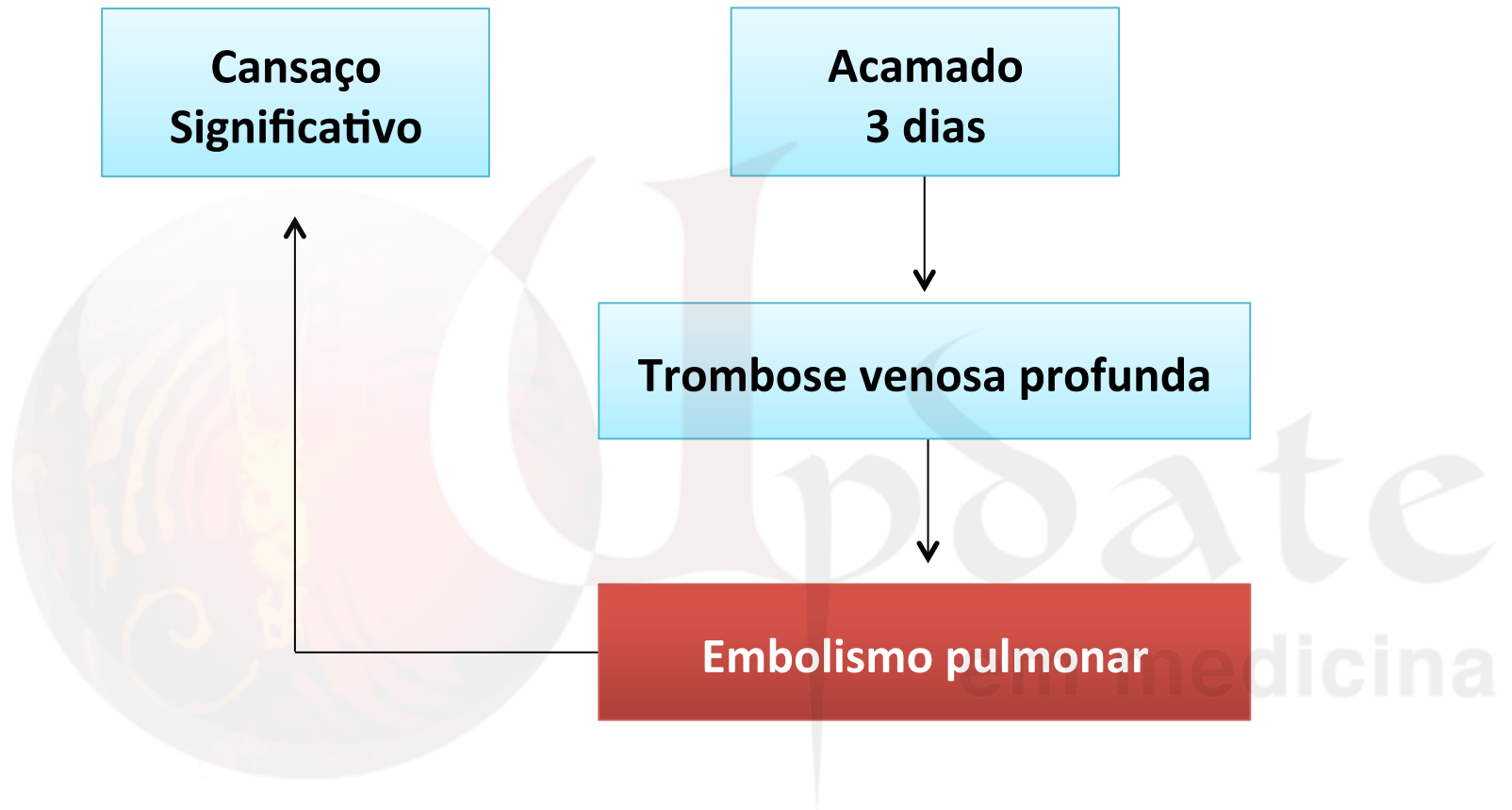
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**Acamado
3 dias**



Embolismo pulmonar ?

Tromboembolismo venoso



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**Cálculo da probabilidade clínica
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Seleccção do teste diagnóstico

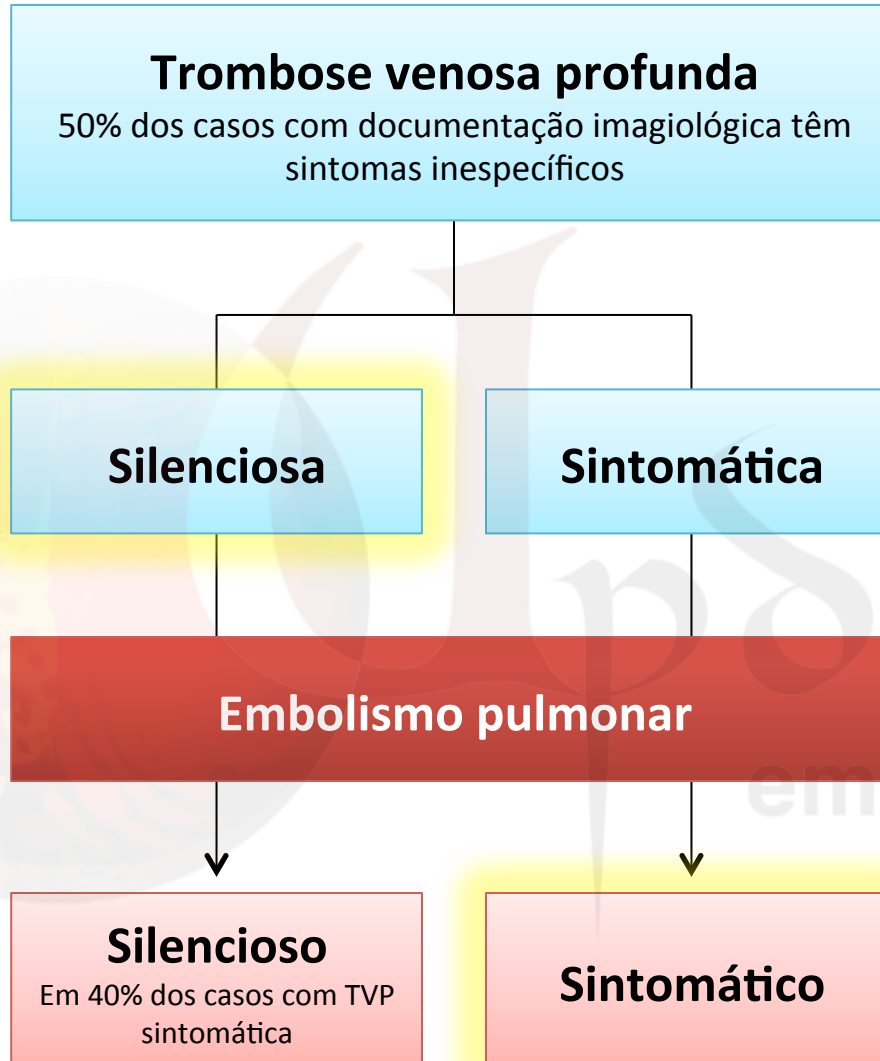
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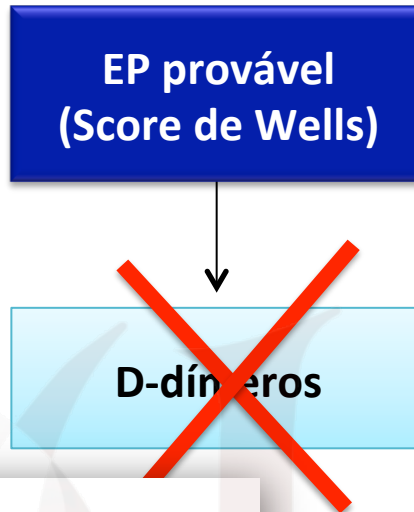
Embolia Pulmonar - Score de Wells

Características clínica	Pontos	Score
Sinais e sintomas de TVP (no mínimo, edema da perna e dor com a palpação das veias profundas)	3	
Um diagnóstico alternativo é menos provável que a EP	3	3
FC > 100 bpm	1.5	1.5
Imobilização superior a 3 dias ou cirurgia nas 4 semanas anteriores	1.5	1.5
TVP ou EP prévias	1.5	
Hemoptises	1	
Neoplasia maligna (sob tratamento, tratada nos últimos 6 meses ou sob tratamento paliativo)	1	
Scores de probabilidade		
EP provável	> 4 pontos	6
EP improvável	< 4 pontos	

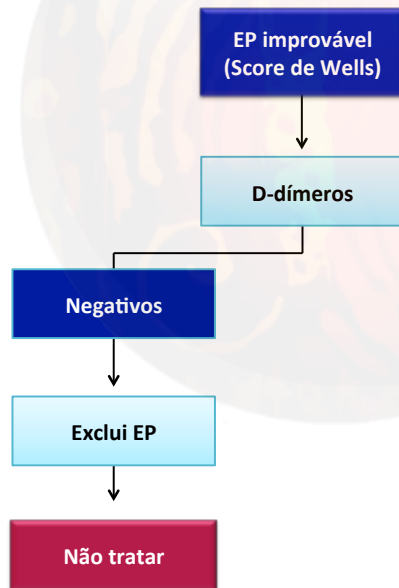
TVP e EP



Investigação diagnóstica do TEP



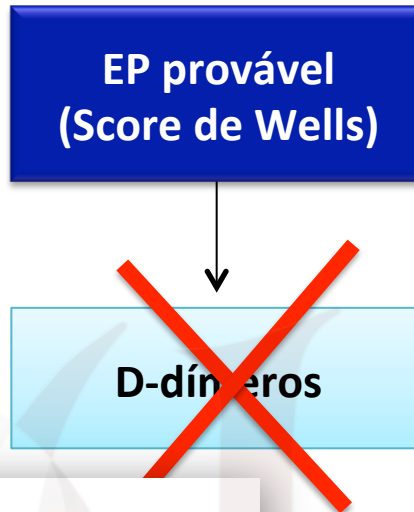
Investigação diagnóstica para TEP



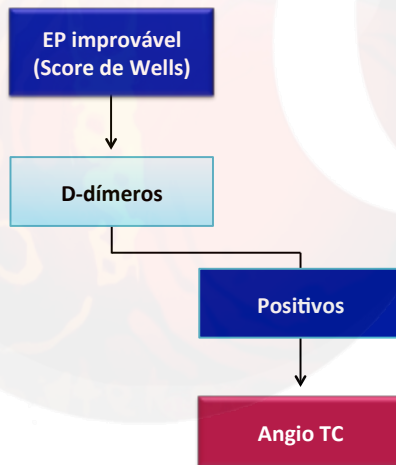
From NICE clinical guideline 144 VTE diseases (June 2012)

From NICE clinical guideline 144 VTE diseases (June 2012)

Investigação diagnóstica do TEP



Investigação diagnóstica para TEP

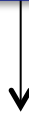


From NICE clinical guideline 144 VTE diseases (June 2012)

From NICE clinical guideline 144 VTE diseases (June 2012)

Investigação diagnóstica do TEP

EP provável
(Score de Wells)



Angio TC

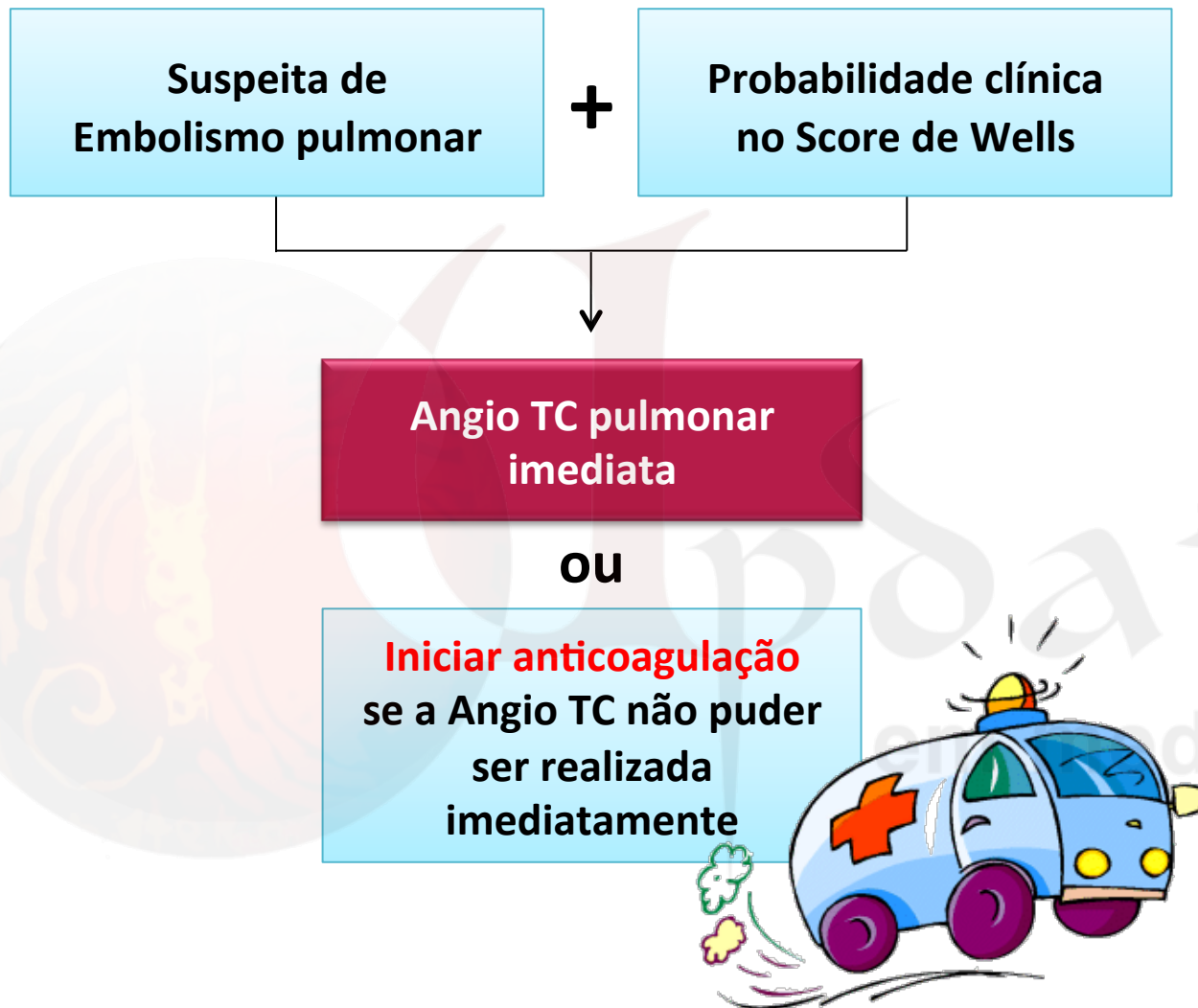


Caro Colega

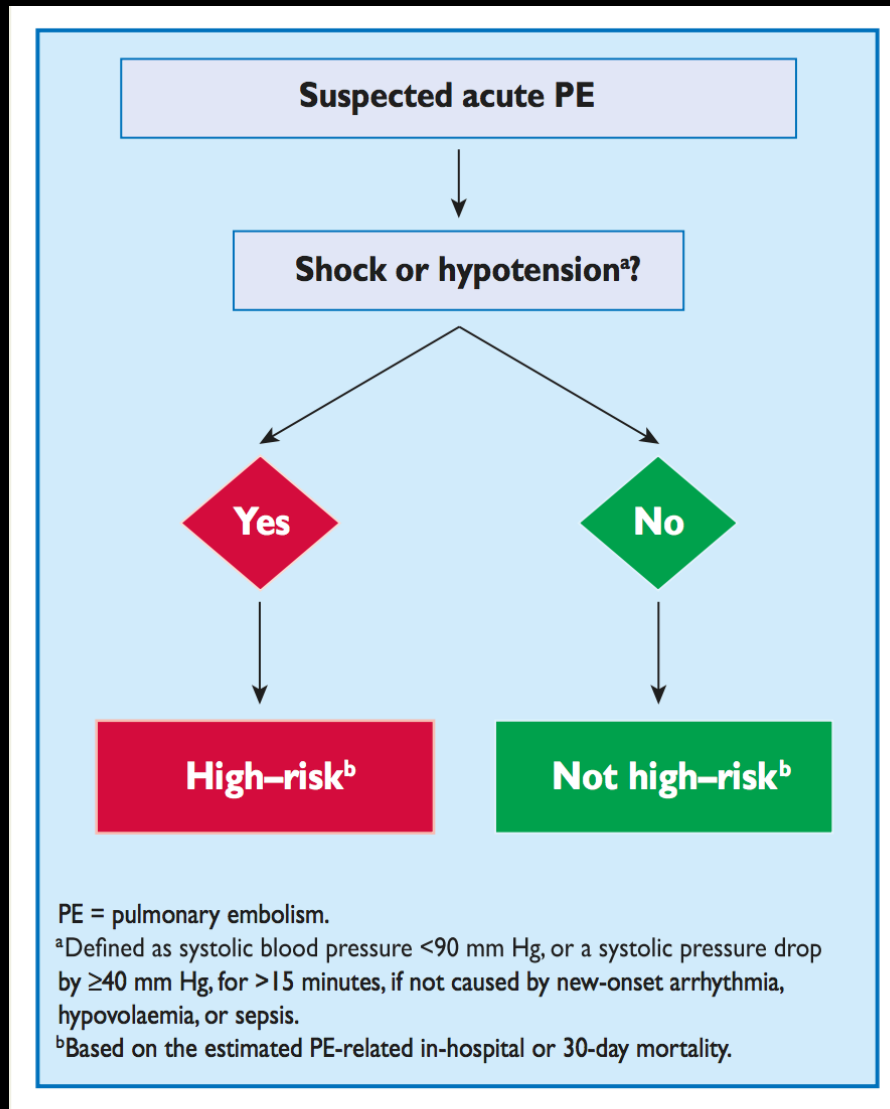
Envio-lhe este doente de 63 anos que tem indicação para realizar angio TC por suspeita de TEP. Tem queixas de cansaço progressivo na última semana e esteve recentemente acamado durante 4 dias por infeção respiratória. Tem PA adequada mas está taquicárdico e tem observação pulmonar negativa. Tem um score de Wells para EP de 6.

Cumprimentos do colega

Investigação diagnóstica para o Embolismo Pulmonar



Embolia Pulmonar. Estratificação inicial





2014 ESC Guidelines on the diagnosis and management of acute pulmonary embolism

The Task Force for the Diagnosis and Management of Acute Pulmonary Embolism of the European Society of Cardiology (ESC)

Endorsed by the European Respiratory Society (ERS)

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