



User Guide 使用說明

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一、 以臨床問題為例說明：

How effective is long-term warfarin at preventing recurrent pulmonary embolism ?

長期使用 Warfarin 在預防肺栓塞的復發有多大的效果?

二、 版權說明頁 Subscription and License Agreement

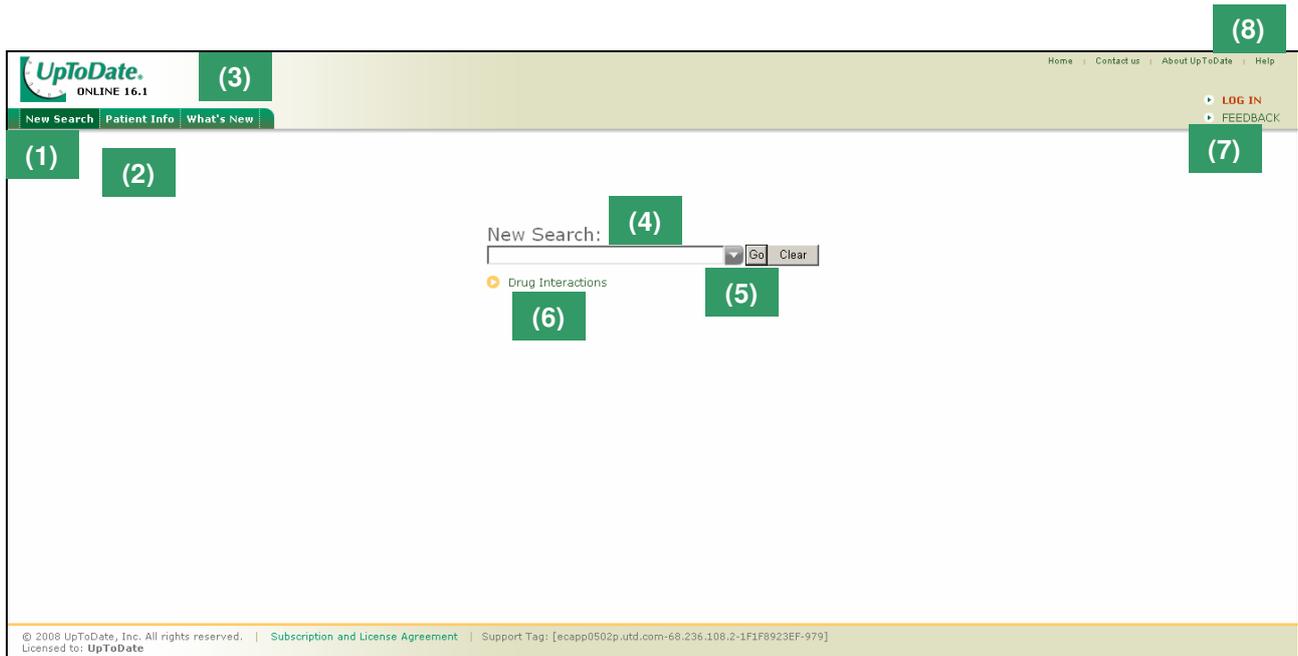
每次進入 UpToDate 的第一個畫面為版權說明頁，如（圖一）所示：

- (1) Accept：若需進入資料庫檢索，請務必點選 Accept
- (2) Decline：則會將畫面傳向 UpToDate, Inc. 的首頁



(圖一)

三、 主畫面說明：



(圖二)

◎以下之說明對應於(圖二)所標示之號碼

- (1) New Search：檢索畫面，亦為回到主畫面之選項
- (2) Patient Information：UpToDate 提供了將近 130 個 Patient information
亦可於檢索區輸入欲查詢之 Patient information
例如：patient info hypertension
- (3) What's New：每次新版更新時，主編們會摘選最重要的資料並以最簡要的方式呈現
- (4) New Search：指令欄/檢索區，可輸入單一關鍵字、詞句或問題
- (5) Go：執行檢索
- (6) Drug Interactions：Lexi-Comp 藥物交互作用模組
- (7) Feedback：將您寶貴的意見 email 給 UpToDate
- (8) 其他選項
Home：UpToDate Homepage
Contact us：UpToDate 聯絡資料
About UpToDate：UpToDate 內容說明
Help：線上求助

◎ New Search 指令欄/檢索區說明：

- (1) 可輸入：病名(diseases)、症狀(symptoms)、程序(procedures)、藥名(drugs)、實驗室異常(laboratory abnormalities)
- (2) UpToDate 可辨識同義字(synonyms)、縮寫(abbreviations or acronyms)以及字根(word roots)
- (3) UpToDate 會自動做拼字檢查
- (4) 可加入適當的關鍵字，以縮小檢索結果在特定的年齡層，例如：in adults, in children 或 in pregnancy

四、 New Search：開始檢索

(1) New Search：輸入關鍵字

a. 可直接輸入單一關鍵字、多個關鍵字、詞句或問題，如（圖三）所示。

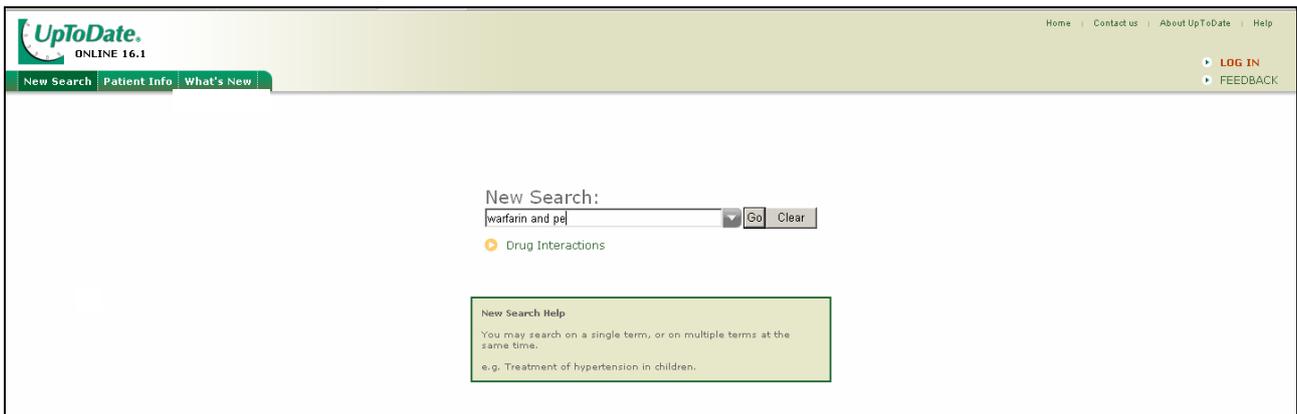
例如：『treatment of hypertension in pregnancy』、
『warfarin and PE』（以臨床問題為例之檢索詞）

b. 檢索結果，如（圖四）所示。

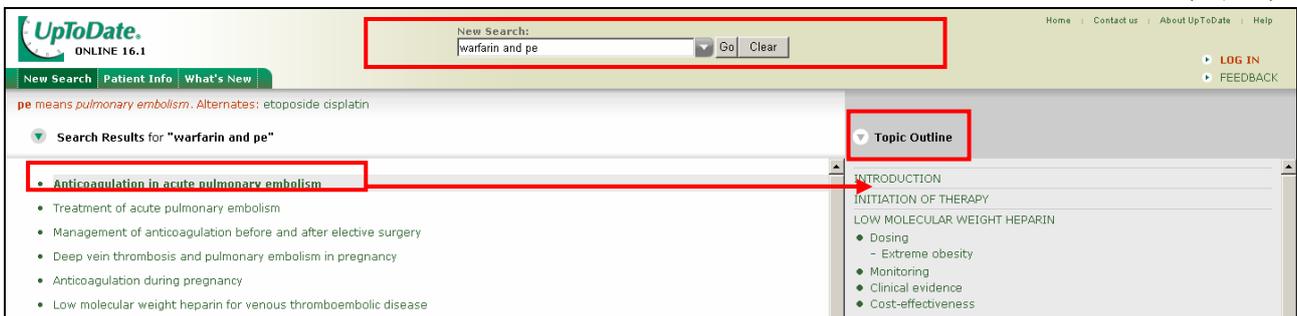
上方：指令欄

左方：檢索結果，一頁以 50 筆的檢索結果為上限，若超過 50 筆，頁碼列於檢索結果最下方，如（圖五）所示

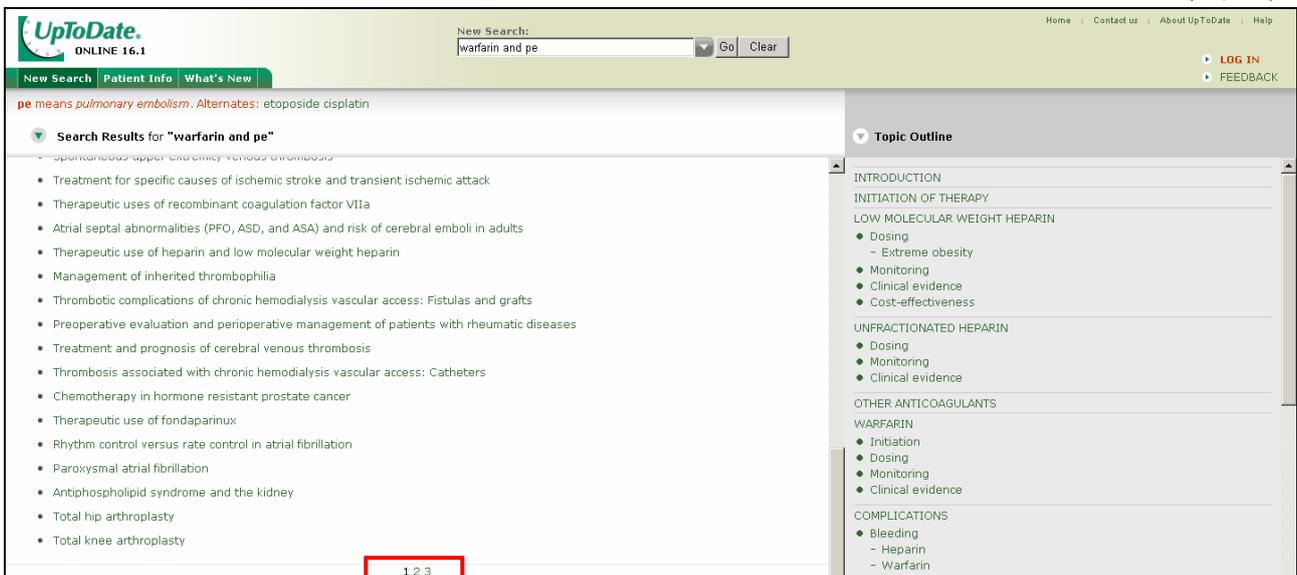
右方：Topic Outline，將滑鼠移至左方之檢索結果 Topic 的上方(不需要點選)，右方即會出現該篇 Outline 以供瀏覽



(圖三)



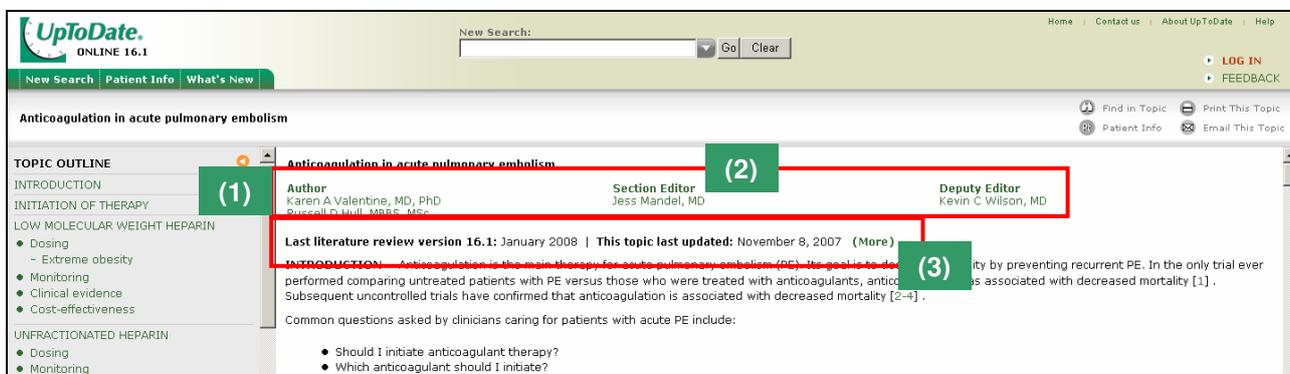
(圖四)



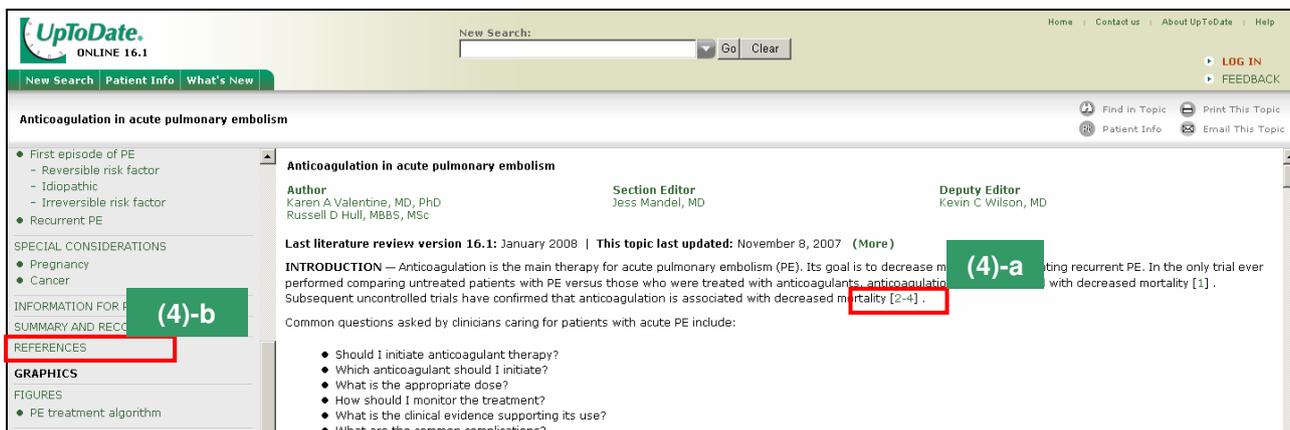
(圖五)

五、 Topic review：全文資料

- (1) Outline 目次：於畫面左方，可利用目次先尋找關鍵字，可發現問題答案所在，直接點選會連接至該段落
- (2) Author/Section Editor/Deputy Editor 作者及編輯群：提供這篇 Topic review 所有參與的作者與編輯者資訊，如（圖六）所示
- (3) Date 更新日期：列出本文最新被更新的日期，如（圖六）所示
- (4) Reference 參考書目：如（圖七）所示；
 - a. 本文中有參考書目之序號，點選序號，會另開視窗，顯示出 Medline Abstracts
 - b. 可點選 Outline 處之 Reference，即列出所有本文之參考書目清單，亦列於本文末處，以綠色顯示之參考書目可帶出 Medline Abstracts
- (5) Graphics 圖表：如（圖八）、（圖九）所示
 - a. 點選圖表，則另開一視窗，顯示其圖表
 - b. 圖表可另外下載，利用 email 或輸出工具列（滑鼠移至圖表上即會出現）
- (6) Drug Information 藥物資訊：藥物品名以綠色字呈現，點選後會另開啟一視窗，此為 Lexi-comp 藥學資訊的詳細介紹
- (7) Related Topics 相關文獻：提供除本文外，與 UpToDate 裡相關主題的 Topic review，直接點選可直接進入該篇 Related Topic 的全文資料
- (8) Find in Topic 查找關鍵字：可利用此功能查詢出文章裡的關鍵字，如（圖十）、（圖十一）所示
- (9) Patient Info 衛教資料：若此文章有 Patient Information，點選此功能會直接顯示 Information for patients 此段落之內容



（圖六）



（圖七）

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New Search Patient Info What's New

Anticoagulation in acute pulmonary embolism

Find in Topic Print This Topic Patient Info Email This Topic

INFORMATION FOR PATIENTS

SUMMARY AND RECOMMENDATIONS

REFERENCES (5)

GRAPHICS

FIGURES

- PE treatment algorithm

TABLES

- Heparin protocol I
- Heparin protocol II
- Weight based heparin nomogram

RELATED TOPICS

- Treatment of acute pulmonary embolism
- Inferior vena caval filters
- Fibrinolytic (thrombolytic) therapy in pulmonary embolism and deep vein thrombosis (7)
- Low molecular weight heparin for venous thromboembolism (7)
- Therapeutic use of heparin and low molecular weight heparin
- Therapeutic use of fondaparinux
- Therapeutic use of warfarin
- Protein C deficiency

- Should I initiate anticoagulant therapy?
- Which anticoagulant should I initiate?
- What is the appropriate dose?
- How should I monitor the treatment?
- What is the clinical evidence supporting its use?
- What are the common complications?
- For how long should I treat?

We discuss the initiation of anticoagulant therapy, the different types of anticoagulants, transition to oral anticoagulants, and duration of therapy here. In addition, complications and risk factors for complications are reviewed. Much of the data presented are from studies that did not distinguish patients with acute PE from patients with acute deep vein thrombosis (DVT), instead grouping the diseases together as venous thromboembolism (VTE). This is reflective of the opinion that both DVT and PE are clinical manifestations of a single clinical entity. As a result, most of the opinions, suggestions, and recommendations within our discussion are equally applicable to patients with acute DVT. (7)

The treatment of acute pulmonary embolism including thrombolysis, inferior vena caval filters, and embolectomy is reviewed elsewhere. (See "Treatment of acute pulmonary embolism", see "Inferior vena caval filters", and see "Fibrinolytic (thrombolytic) therapy in pulmonary embolism and deep vein thrombosis").

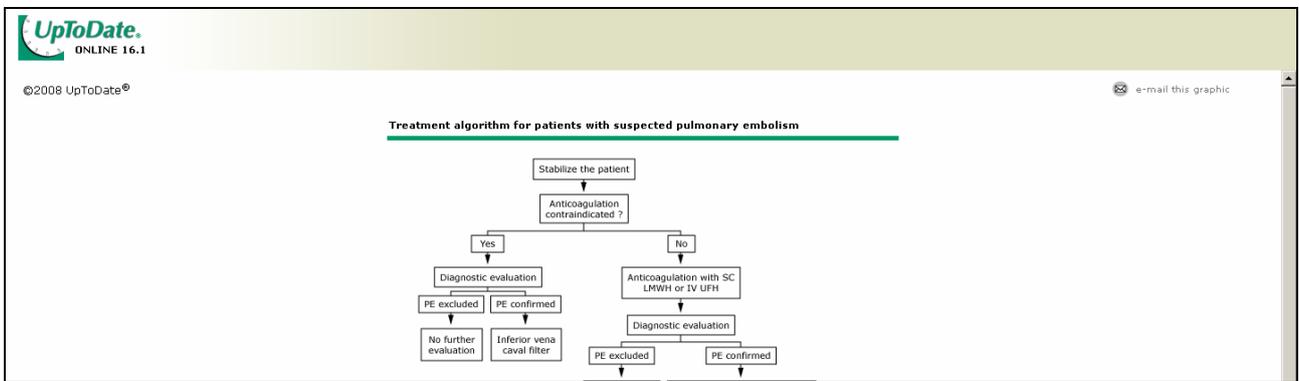
INITIATION OF THERAPY — we recommend that anticoagulation be initiated in all patients for whom there is a high clinical suspicion of pulmonary embolism (PE) or in whom PE has been confirmed because we believe that the high incidence of mortality due to recurrent PE in untreated patients (approximately 30 percent) [5-8] outweighs the risk of major bleeding (less than three percent) [9]. In contrast, anticoagulation should be considered on a case-by-case basis when PE has not been confirmed and the clinical suspicion of PE is low to moderate. (6)

The efficacy of anticoagulant therapy depends upon achieving a therapeutic level of heparin within the first 24 hours of treatment [10-12]; therefore, anticoagulation should be initiated immediately after it has determined that it is indicated.

Anticoagulation should be initiated using subcutaneous low molecular weight heparin (SC LMWH) or intravenous unfractionated heparin (IV UFH) [13]. We prefer SC LMWH in hemodynamically stable patients with PE. In contrast, we use IV UFH in patients with persistent hypotension, massive PE (ie, massive PE) or severe renal failure. (See "Low molecular weight heparin" below and see "Unfractionated heparin" below.) (5)

In the rare patient in whom there is a high clinical suspicion of PE but a strong contraindication to anticoagulation (eg, active bleeding), diagnostic evaluation should be expedited. Anticoagulation-independent therapies (eg, inferior vena caval filter) should be pursued once PE is confirmed (show figure 1). (See "Treatment of acute pulmonary embolism" below.)

(圖八)



(圖九)

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New Search Patient Info What's New

Anticoagulation in acute pulmonary embolism

Find in Topic Print This Topic Patient Info Email This Topic

TOPIC OUTLINE

- INTRODUCTION
- INITIATION OF THERAPY
- LOW MOLECULAR WEIGHT HEPARIN
 - Dosing
 - Extreme obesity
 - Monitoring
 - Clinical evidence
 - Cost-effectiveness
- UNFRACTIONATED HEPARIN

Anticoagulation in acute pulmonary embolism

Author: Karen A Valentine, MD, PhD; Russell D Hull, MBBS, MSc

Section Editor: Jess Mandel, MD

Deputy Editor: Kevin C Wilson, MD

Last literature review version 16.1: January 2008 | This topic last updated: November 8, 2007 (More)

INTRODUCTION — Anticoagulation is the main therapy for acute pulmonary embolism (PE). Its goal is to decrease mortality by preventing recurrent PE. In the only trial ever performed comparing untreated patients with PE versus those who were treated with anticoagulants, anticoagulation was associated with decreased mortality [1]. Subsequent uncontrolled trials have confirmed that anticoagulation is associated with decreased mortality [2-4].

Common questions asked by clinicians caring for patients with acute PE include:

(圖十)

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New Search Patient Info What's New

Anticoagulation in acute pulmonary embolism

Find in Topic: We found 53 instances of "warfarin" in this topic. Find Again Cancel

WARFARIN

- Initiation
- Dosing
- Monitoring
- Clinical evidence

COMPLICATIONS

- Bleeding
 - Heparin
 - Warfarin
 - Management
- Thrombocytopenia

DURATION OF THERAPY

Although early trials suggest that fondaparinux may be a viable option for initial therapy for acute PE, we do not believe that these data confirmatory trials are reported. (See "Therapeutic use of fondaparinux").

WARFARIN — In most cases, initial heparin therapy is administered short-term, then transitioned to a long-term orally-active anticoagulant. Most oral anticoagulants are vitamin K antagonists that suppress the production of the vitamin K-dependent clotting factors, II, VII, IX, and X. Although several vitamin K antagonists exist, warfarin is the most common and best studied; thus, it is the focus of our discussion.

There are circumstances in which SC LMWH may be continued long-term rather than transitioning to oral warfarin, including pregnancy and malignancy. Long-term SC LMWH is an option for other patients as well, but is generally prohibited by cost. (See "Pregnancy" below and see "Cancer" below).

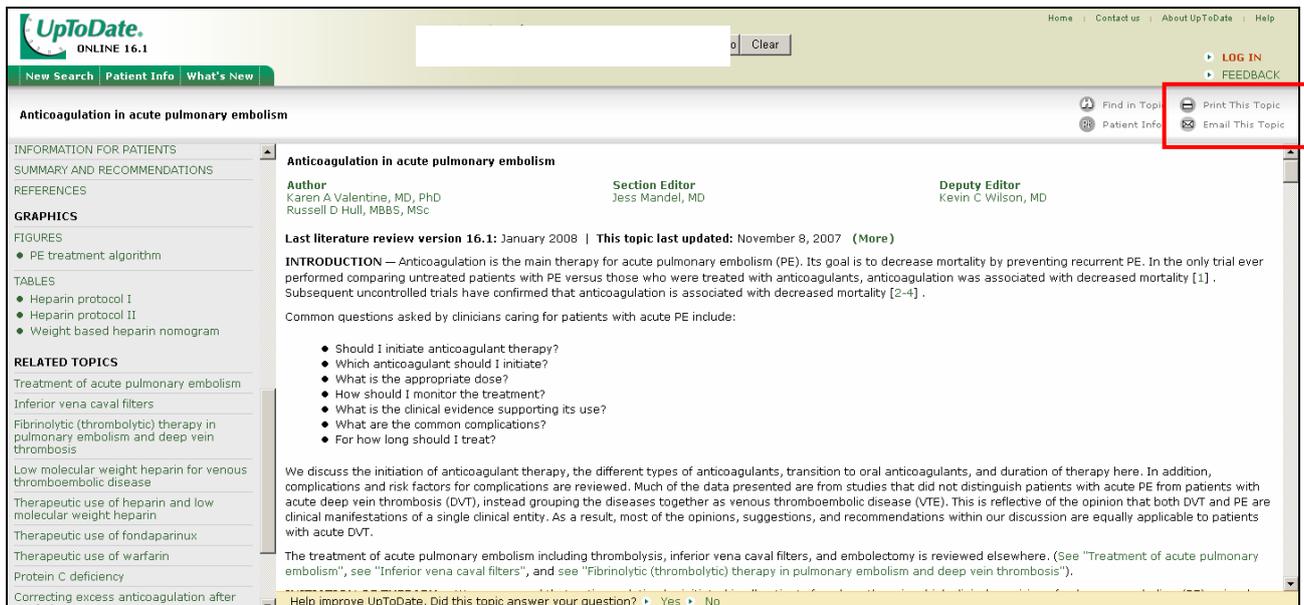
Initiation — Warfarin can be started on the same day or after heparin, but should not be initiated prior to heparin because use of warfarin alone has been associated with a three-fold increased incidence of recurrent PE or DVT [12,45]. This is primarily because, as noted below, full anticoagulation with warfarin requires about five days of treatment. Simultaneous initiation of heparin and warfarin therapy is effective, and shortens hospital stays with major cost-savings [46,47].

Heparin therapy should be overlapped with warfarin for a minimum of five days, and continued until the International Normalized Ratio (INR) has been within the therapeutic range (2.0 to 3.0) for at least two consecutive days [13]. We believe that heparin therapy should be extended in cases of persistent hypotension due to PE (ie, massive PE) or extensive iliofemoral thrombosis.

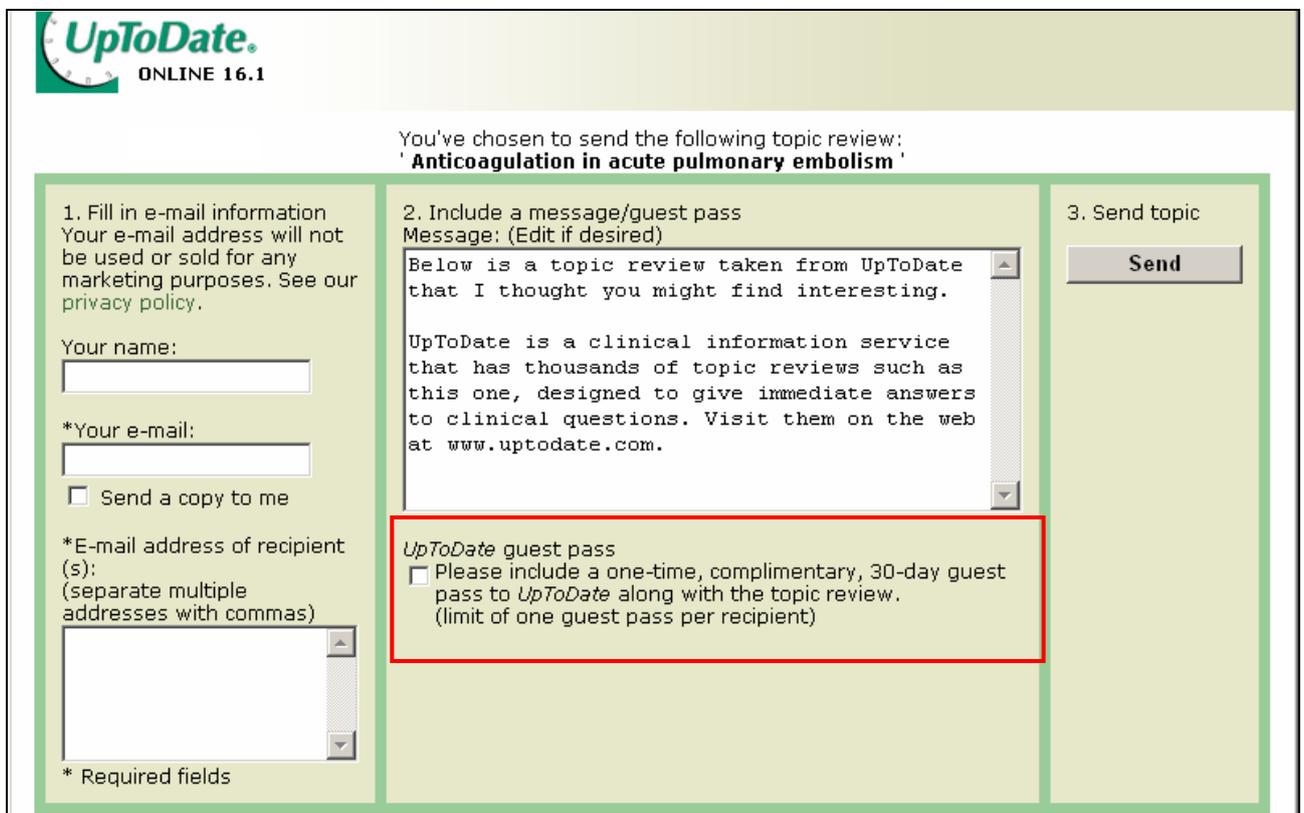
(圖十一)

六、 檢索結果輸出：如（圖十二）、（圖十三）所示。

- (1) Print This Topic：調整 Topic review 呈現畫面，會將所圖表放置於文章之後，再執行印表機功能。
- (2) Email This Topic：email Topic review，包含圖表、參考書目，不包含藥物資訊和 Related Topic。
- (3) UpToDate guest pass：可依據 email 帳號，申請一組 30 天個人之試用帳號密。一組 email 帳號只能申請一次。



(圖十二)

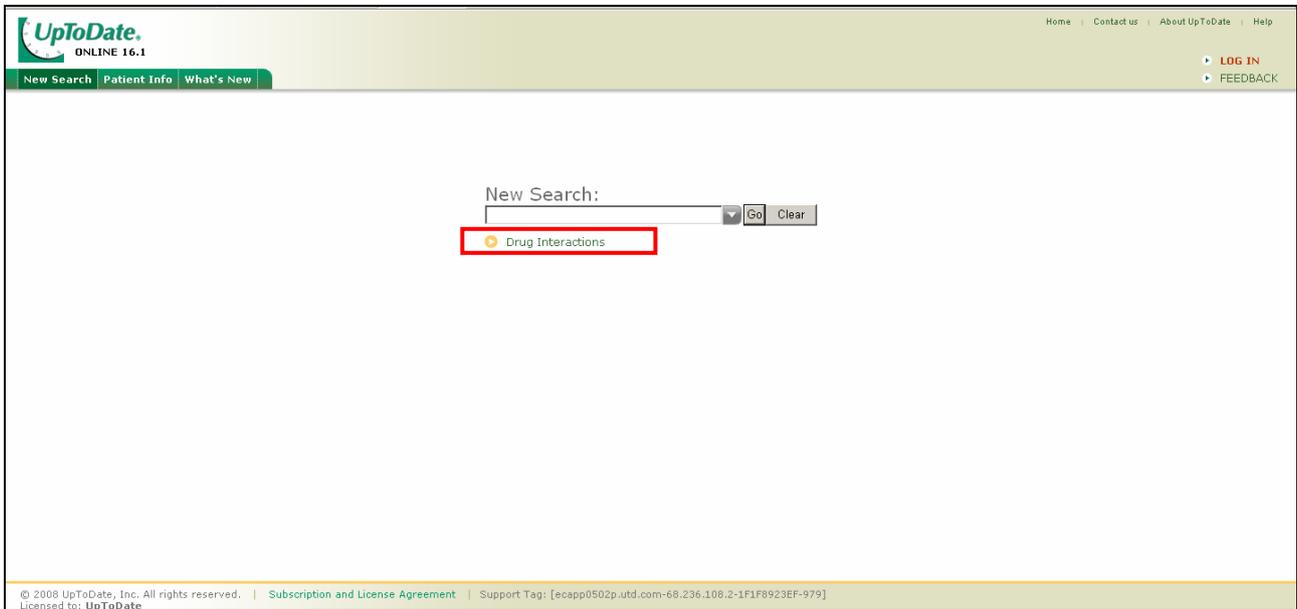


(圖十三)

七、 Drug Interactions : Lexi-Comp 藥物交互作用

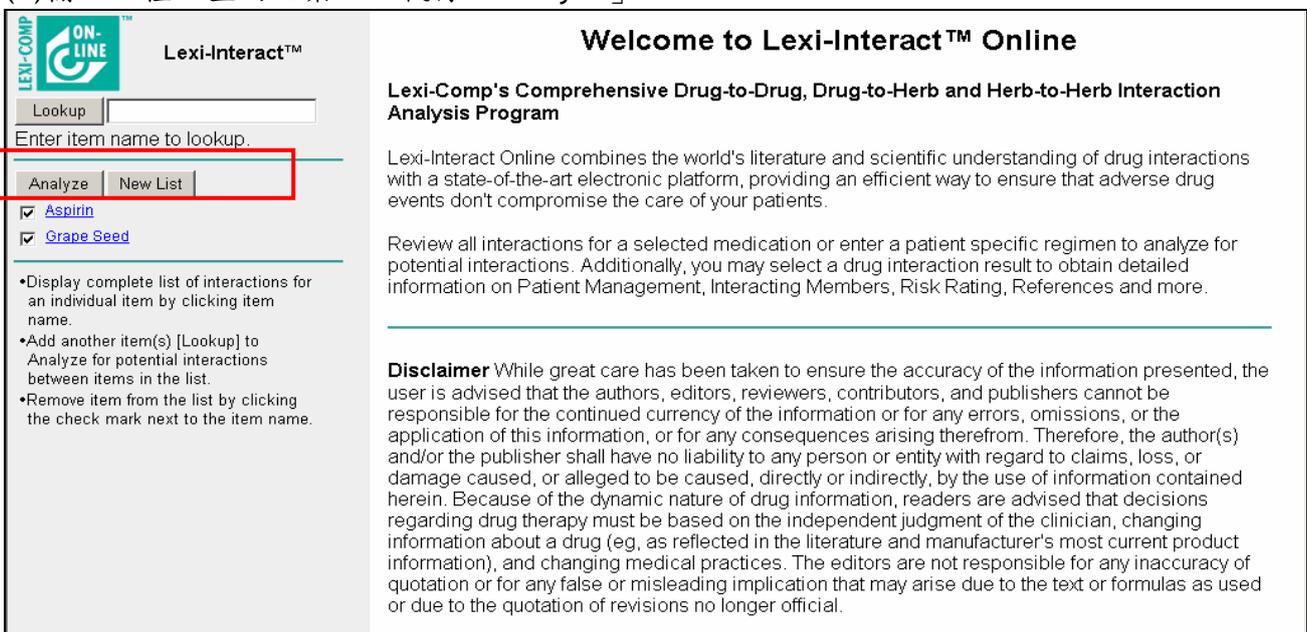
可以輸入二種以上的藥品，包含 drug-to-drug、herb-to-herb、drug-to-herb，執行並產生交互作用的結果，且有標示交互作用的等級。

(1)在主畫面的下方，直接點選：



(圖十四)

(2)輸入二種欲查詢之藥品，執行「Analyze」：



(圖十五)

(3)右邊畫面會出現結果，『risk rating』為交互作用的等級說明：

Lexi-Comp Online™ Interaction Analysis

[Customize Analysis](#)

Only interactions at or above the selected **risk rating** will be displayed. [A: ▾]
View interaction detail by clicking on link.

Aspirin
[D] [Grape Seed](#) (Herbs (Anticoagulant/Antiplatelet Properties))

Grape Seed
[D] [Aspirin](#) (Salicylates)

Date August 16, 2005

Disclaimer Readers are advised that decisions regarding drug therapy must be based on the independent judgment of the clinician, changing information about a drug (eg, as reflected in the literature and manufacturer's most current product information), and changing medical practices.

(圖十六)

(4) 『Risk Rating』說明如下：

Risk Rating 分成五個等級，分別是：A、B、C、D、X。

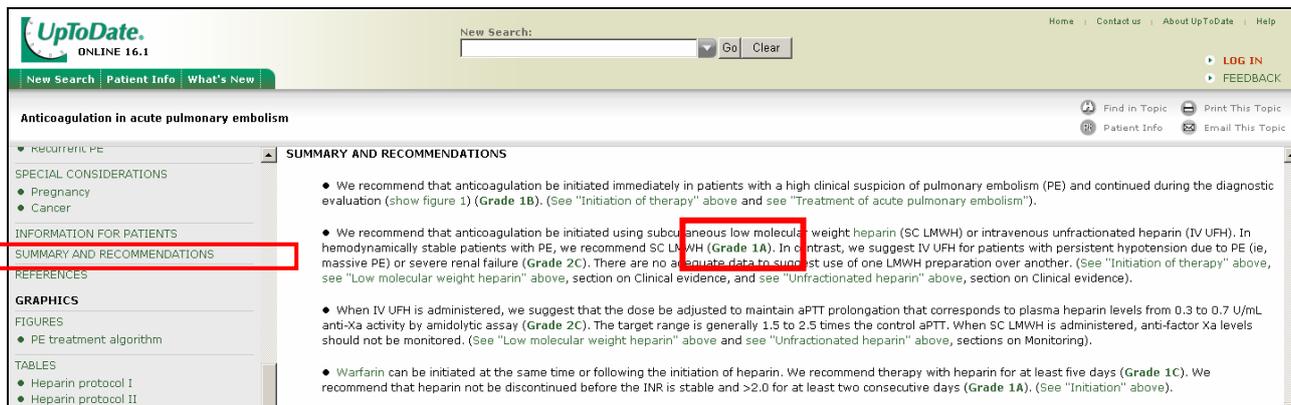
Risk Rating: Rapid indicator regarding how to respond to the interaction data. Each Interact monograph is assigned a risk rating of A, B, C, D, or X. The progression from A to X is accompanied by increased urgency for responding to the data. In general, A and B monographs are of academic, but not clinical concern. Monographs rated C, D, or X always require the user's attention. The text of the Patient Management section of the monographs will provide assistance regarding the types of actions that could be taken. The definition of each risk rating is as follows:

Risk Rating	Action	Description
A	No Known Interaction	Data have not demonstrated either pharmacodynamic or pharmacokinetic interactions between the specified agents
B	No Action Needed	Data demonstrate that the specified agents may interact with each other, but there is little to no evidence of clinical concern resulting from their concomitant use.
C	Monitor Therapy	Data demonstrate that the specified agents may interact with each other in a clinically significant manner. The benefits of concomitant use of these two medications usually outweigh the risks. An appropriate monitoring plan should be implemented to identify potential negative effects. Dosage adjustments of one or both agents may be needed in a minority of patients.
D	Consider Therapy Modification	Data demonstrate that the two medications may interact with each other in a clinically significant manner. A patient-specific assessment must be conducted to determine whether the benefits of

(圖十七)

八、 Evidence Grading：證據等級

位於 Topic review 目次中的 Recommendations 的這個段落裡：如（圖十八）所示。



（圖十八）

亦可點選 Evidence Grading，如上圖所示之 (Grade 1A) 或 (Grade 2C)，會跳出說明視窗，如（圖十九）所示。

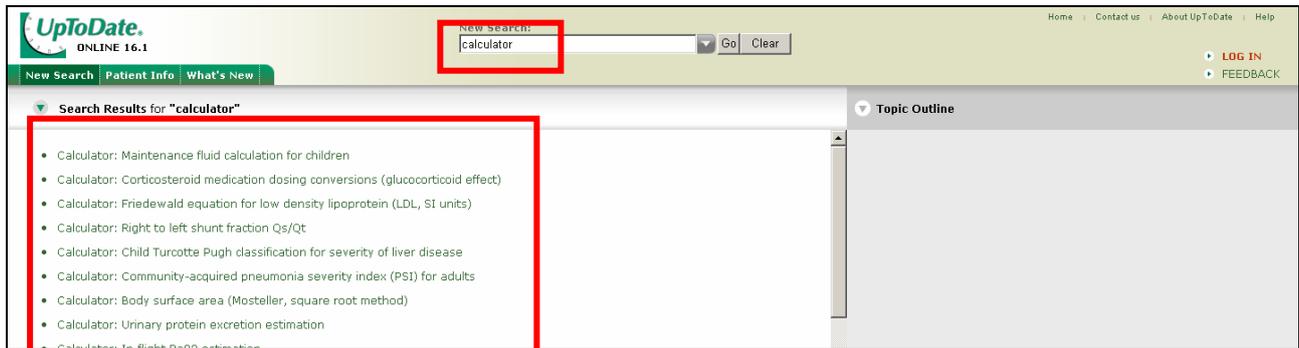


（圖十九）

註：目前並未全部都有 Evidence Grading

九、 Calculators：試算表

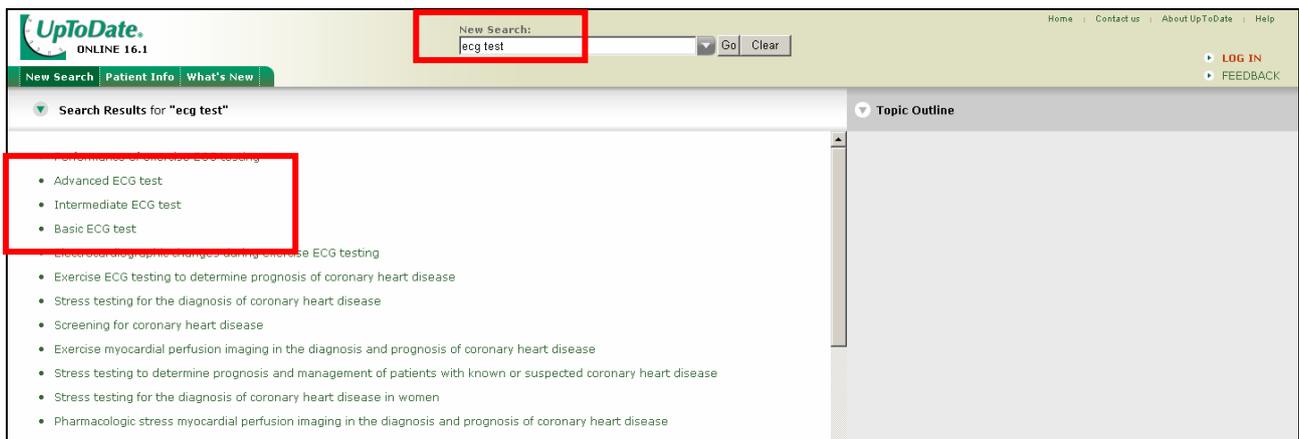
UpToDate 目前提供了 60 種的試算表，只需要在檢索區裡鍵入 Calculator，就會將 60 種的試算表列出，如（圖二十）所示：



（圖二十）

十、 ECG Test：心電圖自我測驗

UpToDate 目前提供了 3 級的自我測試，分別為初級、中級、高級，只需要在檢索區裡鍵入 ECG Test，檢索結果裡第二（Advanced ECG test）、第三（Intermediate ECG test）和第四筆（Basic ECG test）即為心電圖自我測試，如（圖二十一）所示：



（圖二十一）