

# 實證醫學病例討論報告

## 麻醉科


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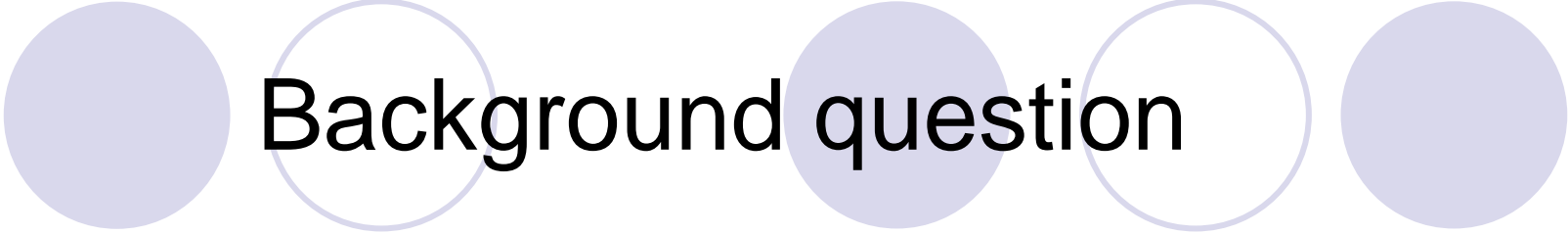


臨床場景 (clinical scenario)

- 
- 一個46歲的女性預定要進入開刀房做腹腔鏡膽囊切除(Laparoscopic Cholecystectomy)的手術，在麻醉術前訪視時，她主訴在之前有開過盲腸炎，曾做過全身麻醉，在手術完之後有噁心嘔吐的情形非常不舒服，她希望在這次的手術後可以避免發生。




Asking (提出臨床問題)

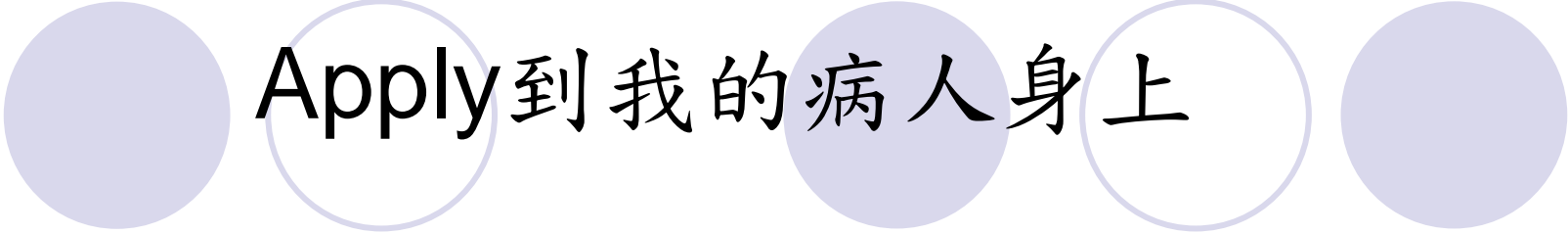


# Background question

- Question 1:What is PONV(Postoperative nausea and vomiting )
- Question 2:The risk factor of PONV

## Question 1 解答


- 資料出處：
- Answer: About **one third** of surgical patients have nausea, vomiting or both after receiving **general anesthesia**. Most research has been directed toward prevention rather than therapy of established symptoms . In a large trial, intravenous doses of 1.25 mg of [droperidol](#) and 4 mg of [dexamethasone](#) within 20 minutes after the start of anesthesia or 4 mg of [ondansetron](#) during the last 20 minutes of surgery each reduced postoperative nausea and vomiting by about 26 percent .

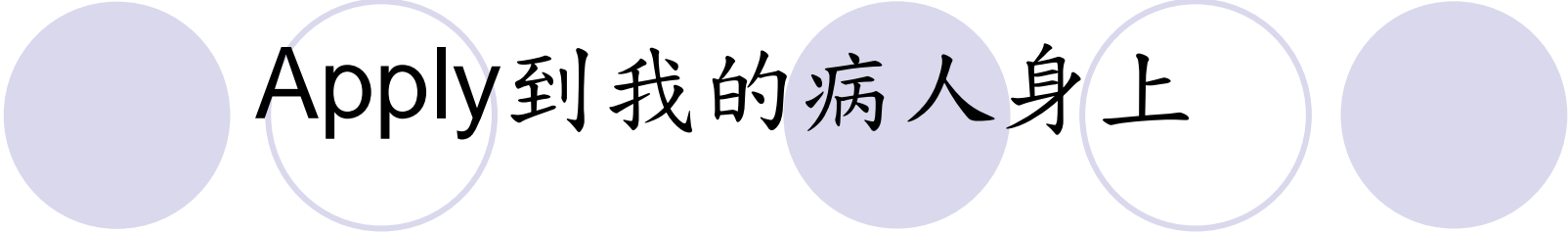


Apply到我的病人身上

- 可以使用1.25 mg of droperidol and 4 mg of dexamethasone 或4 mg of ondansetron來預防此病人的PONV

## Question 2 解答

- 資料出處：
- Answer: Risk factors include **female sex**, **nonsmoker status**, previous **history of postoperative nausea and vomiting** or **motion sickness**, and **unanticipated use of postoperative opioids**

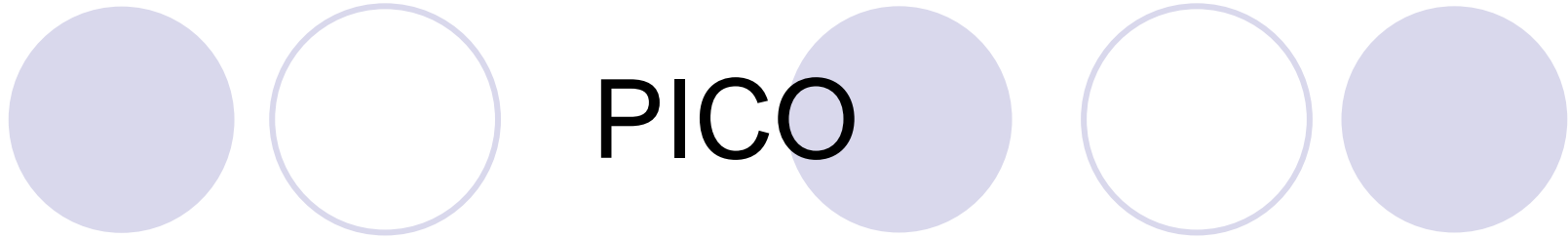


## Apply到我的病人身上

- 這個病人有很大的可能性會發生**PONV**，所以應該以藥物加以預防

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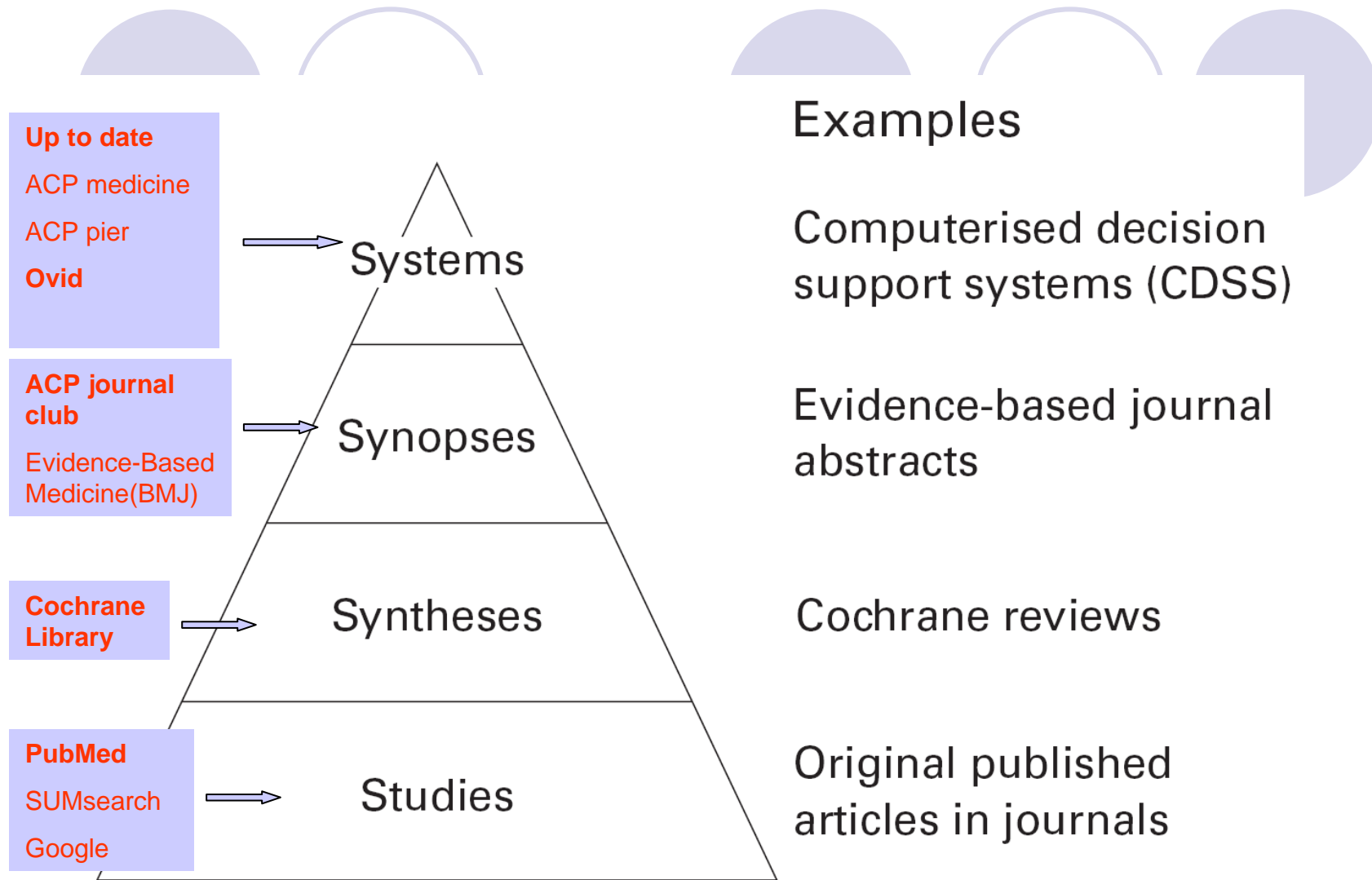
提出 foreground questions



<b>P</b>	Which therapy is better
<b>I</b>	droperidol and dexamethasone
<b>C</b>	ondansetron
<b>O</b>	Prevent PONV, cost-effectiveness

The text is centered and surrounded by seven light purple circles. Two circles are empty outlines, while five are solid. The circles are arranged in two rows: the top row has three circles (left is outline, middle and right are solid), and the bottom row has four circles (left two are solid, right two are outlines).

搜尋最有用的資料



*Figure "4S" levels of organisation of evidence from research.*

# 搜尋 Systems

● 出處：



● Key word: Postoperative nausea and vomiting

● Title: Approach to the adult patient with nausea and vomiting

● **Result:** Combining drugs had an additive effect, and the combination of the inexpensive drugs, droperidol and dexamethasone, was more beneficial than the expensive drug, ondansetron.

# 將system搜尋的結果應用到我的病人

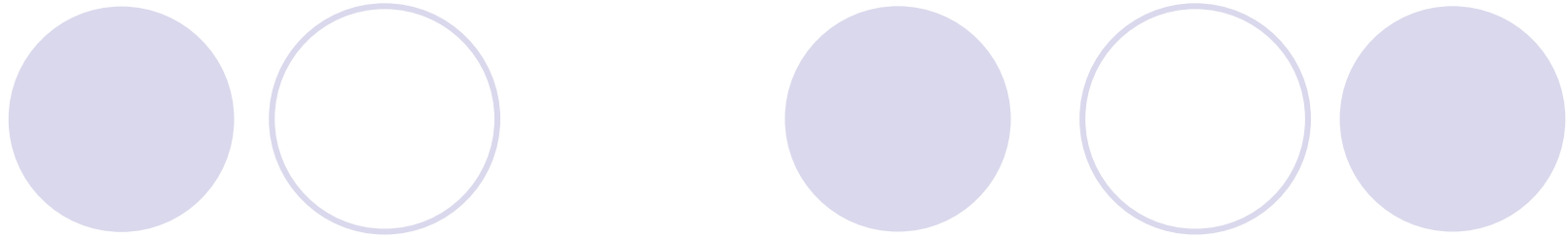
- 使用1.25 mg of droperidol and 4 mg of dexamethasone
- 但是本院沒有droperidol，但有類似藥物haloperidol可以使用

搜尋 Synopses , ACP Journal Club

- Key word: Postoperative nausea and vomiting
- Result: 0篇文章

# 搜尋 syntheses, Cochrane Library

- Key word: Postoperative nausea and vomiting
- Title: Drugs for preventing postoperative nausea and vomiting



- 摘要: There is convincing evidence that eight drugs reduce PONV by a similar amount: cyclizine, droperidol, granisetron, metoclopramide, ondansetron, tropisetron, dolasetron and dexamethasone
- Because of the Funnel plot asymmetry for these comparisons, we cannot draw any conclusion as to whether these drugs differ in their ability to prevent PONV



# 搜尋 Studies, Pubmed

- Key word: Postoperative nausea and vomiting, droperidol, ondansetron, dexamethasone
- 1: ***Antiemetic Prophylaxis for Office-based Surgery--Are the 5-HT3 Receptor Antagonists Beneficial?*** (*Anesthesiology* 2003; 98:293–8)
- 2: **The Utility of Antiemetics in the Prevention and Treatment of Postoperative Nausea and Vomiting in Patients Scheduled for Laparoscopic Cholecystectomy** (*Current Pharmaceutical Design*, 2005, 11, 3173-3183)

# ***Antiemetic Prophylaxis for Office-based Surgery--Are the 5-HT3 Receptor Antagonists Beneficial?***

- The combination of 0.625 mg intravenous droperidol and 4 mg intravenous dexamethasone was highly effective in preventing PONV without the addition of a 5-HT3 antagonist.
- 5-HT3 antagonists are not beneficial for routine antiemetic prophylaxis in the ambulatory setting when a droperidol–dexamethasone combination is used

# The Utility of Antiemetics in the Prevention and Treatment of Postoperative Nausea and Vomiting in Patients Scheduled for Laparoscopic Cholecystectomy

- Serotonin receptor antagonists are highly efficacious, but these drugs are not completely effective, perhaps because most of them act through the blockade of one receptor. The efficacy of a combination of serotonin receptor antagonists and droperidol is superior to monotherapy with a serotonin receptor antagonist or droperidol.
- adding dexamethasone to ondansetron or granisetron improves antiemetic efficacy in PONV



The image features a central arrangement of six circles. The top row consists of three circles: the leftmost is an empty white circle with a thin purple outline, the middle and rightmost are solid light purple circles. The bottom row consists of three circles: the leftmost and middle are solid light purple circles, and the rightmost is an empty white circle with a thin purple outline. The word "Appraisal" is written in a bold, black, sans-serif font, centered horizontally and overlapping the top-left circle.

**Appraisal**

# 證據等級

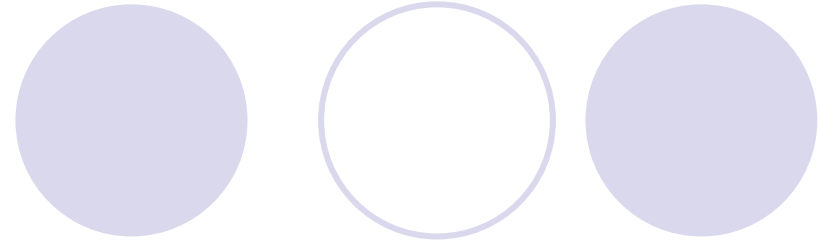
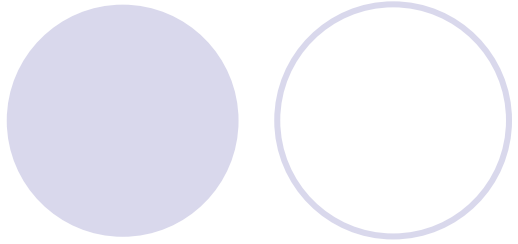
## Oxford Centre for Evidence-based Medicine Levels of Evidence (May 2001)

Level	Therapy/Prevention, Aetiology/Harm	Prognosis	Diagnosis	Differential diagnosis/symptom prevalence study	Economic and decision analyses
1a	SR (with <u>homogeneity*</u> ) of RCTs	SR (with <u>homogeneity*</u> ) of inception cohort studies; <u>CDR†</u> validated in different populations	SR (with <u>homogeneity*</u> ) of Level 1 diagnostic studies; <u>CDR†</u> with 1b studies from different clinical centres	SR (with <u>homogeneity*</u> ) of prospective cohort studies	SR (with <u>homogeneity*</u> ) of Level 1 economic studies
1b	Individual RCT (with narrow <u>Confidence Interval‡</u> )	Individual inception cohort study with ≥ 80% follow-up; <u>CDR†</u> validated in a single population	Validating** cohort study with good‡‡‡ reference standards; or <u>CDR†</u> tested within one clinical centre	Prospective cohort study with good follow-up****	Analysis based on clinically sensible costs or alternatives; systematic review(s) of the evidence; and including multi-way sensitivity analyses
1c	<u>All or none§</u>	All or none case-series	Absolute SpPins and SnNouts‡‡	All or none case-series	Absolute better-value or worse-value analyses ‡‡‡
2a	SR (with <u>homogeneity*</u> ) of cohort studies	SR (with <u>homogeneity*</u> ) of either retrospective cohort studies or untreated control groups in RCTs	SR (with <u>homogeneity*</u> ) of Level >2 diagnostic studies	SR (with <u>homogeneity*</u> ) of 2b and better studies	SR (with <u>homogeneity*</u> ) of Level >2 economic studies
2b	Individual cohort study (including low quality RCT; e.g., <80% follow-up)	Retrospective cohort study or follow-up of untreated control patients in an RCT; Derivation of <u>CDR†</u> or validated on split-sample§§§ only	Exploratory** cohort study with good‡‡‡reference standards; <u>CDR†</u> after derivation, or validated only on split-sample§§§ or databases	Retrospective cohort study, or poor follow-up	Analysis based on clinically sensible costs or alternatives; limited review(s) of the evidence, or single studies; and including multi-way sensitivity analyses
2c	"Outcomes" Research; Ecological studies	"Outcomes" Research		Ecological studies	Audit or outcomes research
3a	SR (with <u>homogeneity*</u> ) of case-control studies		SR (with <u>homogeneity*</u> ) of 3b and better studies	SR (with <u>homogeneity*</u> ) of 3b and better studies	SR (with <u>homogeneity*</u> ) of 3b and better studies
3b	Individual Case-Control Study		Non-consecutive study; or without consistently applied reference standards	Non-consecutive cohort study, or very limited population	Analysis based on limited alternatives or costs, poor quality estimates of data, but including sensitivity analyses incorporating clinically sensible variations.
4	Case-series (and <u>poor quality cohort and case-control studies§§</u> )	Case-series (and <u>poor quality prognostic cohort studies***</u> )	Case-control study, poor or non-independent reference standard	Case-series or superseded reference standards	Analysis with no sensitivity analysis
5	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"	Expert opinion without explicit critical appraisal, or based on physiology, bench research or "first principles"	Expert opinion without explicit critical appraisal, or based on economic theory or "first principles"

Produced by Bob Phillips, Chris Ball, Dave Sackett, Doug Badenoch, Sharon Straus, Brian Haynes, Martin Dawes since November 1998.

# Grades of Recommendation

<b>A</b>	consistent level 1 studies
<b>B</b>	consistent level 2 or 3 studies <i>or</i> extrapolations from level 1 studies
<b>C</b>	level 4 studies <i>or</i> extrapolations from level 2 or 3 studies
<b>D</b>	level 5 evidence <i>or</i> troublingly inconsistent or inconclusive studies of any level



● 1:level 1b Grade A

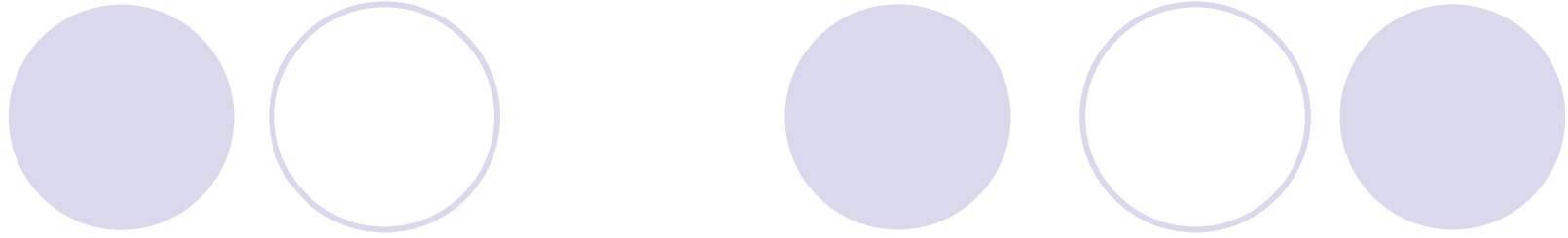
● 2:level 1a Grade A



Apply

結合醫學倫理方法

將study的結果應用在病人身上

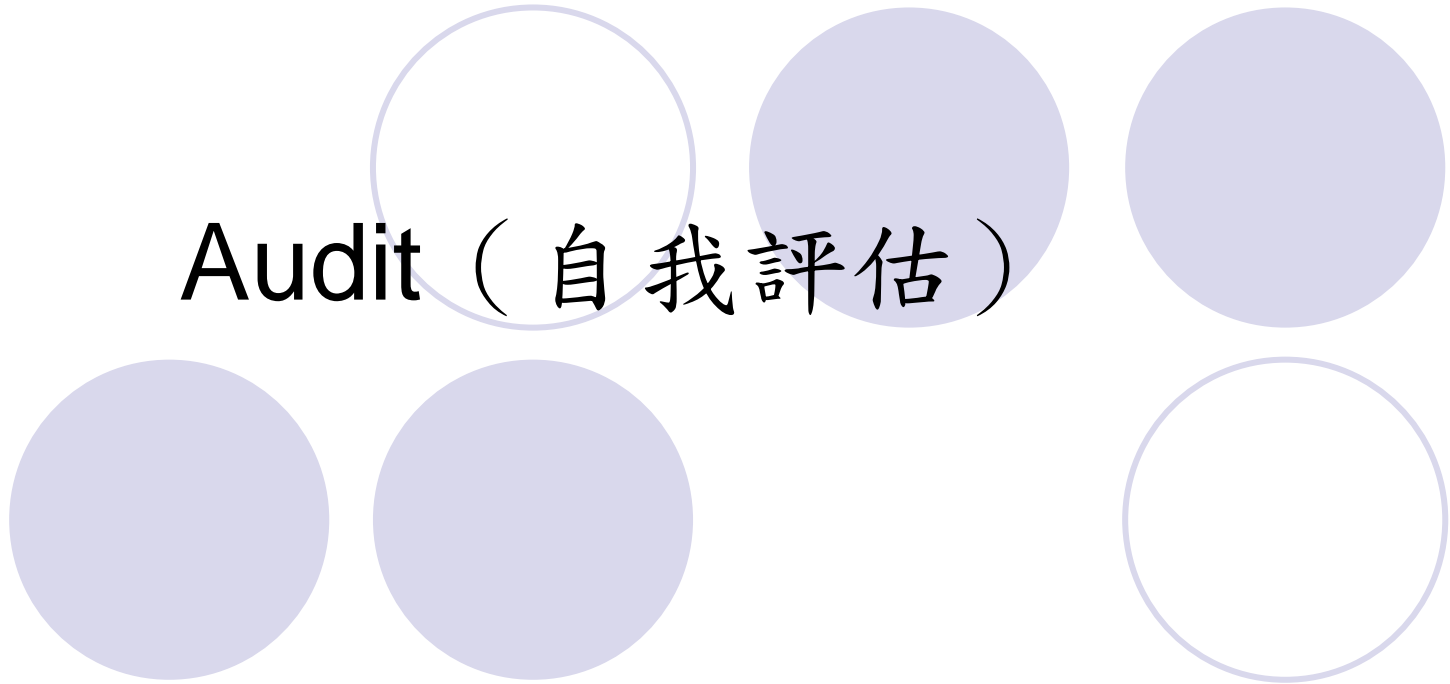


- 使用Haloperidol 及 dexamethasone來預防此病人的PONV 是有效而且比較有經濟效益的作法



# 總結與討論

Audit (自我評估)



# 在「提出臨床問題」方面的自我評估

- 我提出的問題是否具有臨床重要性？ **yes**
- 我是否明確的陳述了我的問題？ **yes**
  - 我的foreground question 是否可以清楚的寫成PICO？
  - 我的background question是否包括what, when, how, who等字根？
- 我是否清楚的知道自己問題的定位？ **yes**（亦即可以定位自己的問題是屬於診斷上的、治療上的、預後上的或流行病學上的），並據以提出問題？
- 對於無法立刻回答的問題，我是否有任何方式將問題紀錄起來以備將來有空時再找答案？

# 在「搜尋最佳證據」方面的自我評估

- 我是否已盡全力搜尋？
- 我是否知道我的問題的最佳證據來源？
- 我是否從大量的資料庫來搜尋答案？
- 我工作環境的軟硬體設備是否能支援我在遇到問題時進行立即的搜尋？
- 我是否在搜尋上愈來愈熟練了？
- 我會使用「斷字」、布林邏輯、同義詞、MeSH term，限制 (limiters) 等方法來搜尋？
- 我的搜尋比起圖書館人員或其他對於提供病人最新最好醫療有熱情的同事如何？

## 關於「嚴格評讀文獻」方面的自我評估

- 我是否盡全力做評讀了？
- 我是否了解Number need to treat 的意義？
- 我是否了解Likelihood Ratios的意義？
- 我是否了解worksheet每一項的意義？
- 評讀後，我是否做出了結論？

## 關於「應用到病人身上」的自我評估

- 我是否將搜尋到的最佳證據應用到我的臨床工作中？
- 我是否能將搜尋到的結論如NNT, LR用病人聽得懂的方式解釋給病人聽？
- 當搜尋到的最佳證據與實際臨床作為不同時，我如何解釋？

# 改變「醫療行為」的自我評估

- 當最佳證據顯示目前臨床策略需改變時，我是否遭遇任何阻止改變的阻力？
- 我是否因此搜尋結果而改變了原來的治療策略？做了那些改變？



## 效率評估

- 這篇報告，我總共花了多少時間？
- 我是否覺得這個進行實證醫學的過程是值得的？
- 我還有那些問題或建議？