Conservative Management of End-Stage Renal Disease without Dialysis: A Systematic Review

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動機

- 病人**接受透析治療到底是「延長痛苦」（prolong suffering）還是「延長生命」（prolong life）？**
  - 中央健保局自2009年9月1日起，新增八類非癌末期疾病包括急慢性腎臟衰竭(預期生命期≦六個月)，納入安寧療護給付範圍內，提供全方位（全人、全家、全程、全隊、全社區）的人性化照護。
  - 老年病人轉介緩和醫療的時機，已經不再是考量其存活期（survival）的長短，而是在於「需求」（need）為何
  - 影響慢性腎臟病病人對於治療方式選擇的因素，包括
    - 與家人、朋友的關係 (例如會對家人造成什麼影響)
    - 對生死抉擇、生活品質的看法 (例如是否能繼續目前的生活方式或工作)
    - 獲得的治療資訊 (例如醫師告知他決定採用之治療方式的資訊，但病人不知道有其他治療選擇；或醫師對病人分析不同治療方式及利弊，並協助病人做決策) (Morton,2010; Murray, 2009)

透析安寧現況

2014年6月腎臟醫學會調查報告(2013年12月31日)

目前罹患ESRD而接受透析治療的人口數已達52萬多人，每年仍有八千人進入透析，其中佔**46.5%是65歲以上的老年末期腎臟病患**。

- 透析病患接受安寧療護者: 180人
- 慢性腎臟病(CKD)病患進展到ESRD, 放棄進入透析治療者:118人
- 其他病況合併急性腎損傷必須接受透析治療, 卻放棄進入透析治療者: 71人
- 透析病患已簽署同意接受安寧療護者:344人
- 尚未透析之CKD病患已簽署同意接受安寧療護者:244人

How Can We Better Manage End-of-life Care ... ?

Conservative Management of End-Stage Renal Disease without Dialysis: A Systematic Review

系統性文獻回顧

步驟１：系統性文獻回顧探討的問題為何？

P: The patient of End-Stage Renal Disease

I: Conservative Management

C: Dialysis

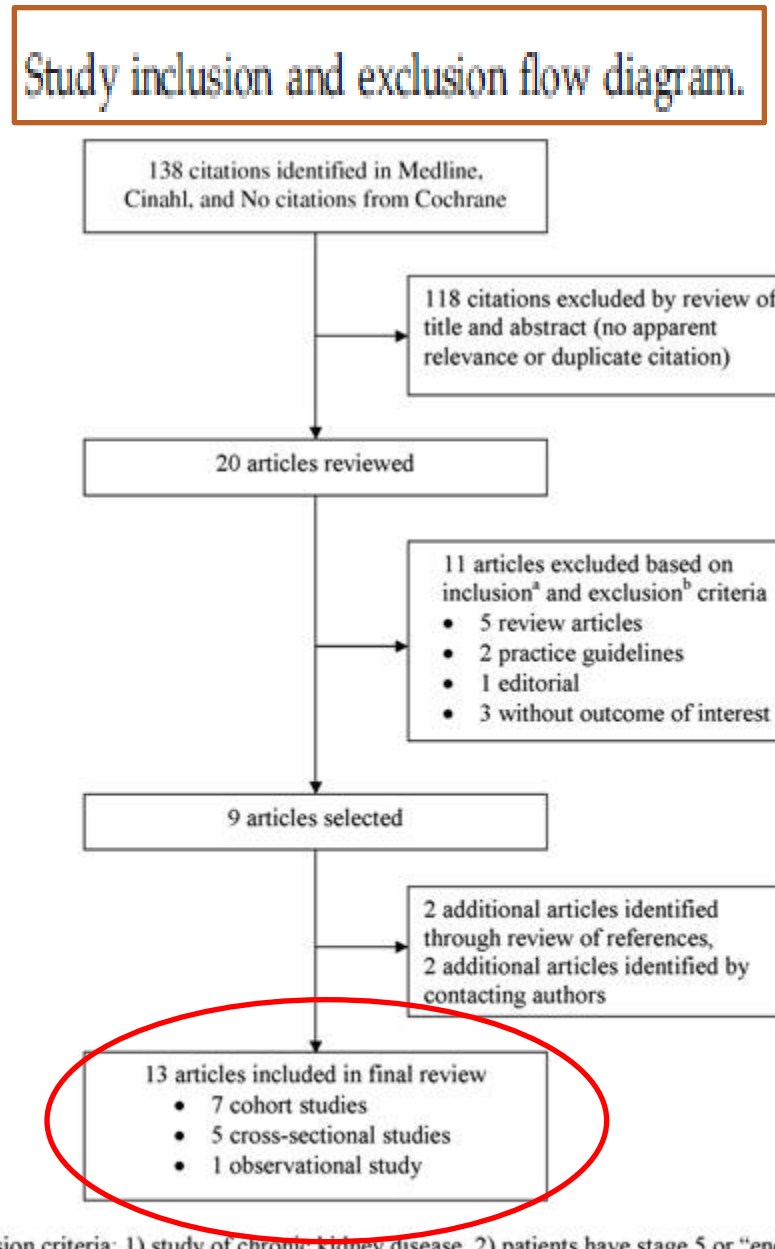
O: prognosis, symptoms, or QOL

步驟 2：系統性文獻回顧的品質如何？(FAITH)

F - 研究是否找到 (Find) 所有的相關證據？

Medline, Cinahl, and the Cochrane Library were searched for records in any language indexed between the beginning of the database and March 1, 2011. Searches combined the following terms: (end-stage renal disease OR end-stage renal failure OR stage 5 CKD OR advanced CKD) AND (nondialytic OR conservative management OR palliative care). "Palliative care" is a Medical Subject Headings (MeSH) term; the other search terms were entered as keywords. For consistency, the same search strategy was used in each database. Given the difficulty in translating our particular research questions into concise search terms, extensive additional strategies were pursued to capture any articles that might have been missed in the database searches. Bibliographies of identified articles were reviewed. Authors of included articles and several academic nephrologists were contacted. Finally, abstracts were reviewed from the most recent meetings of the American Society of Nephrology, the World Congress of Nephrology, the Renal Association, and the British Renal Society.

評讀結果： ■是 □否 □不清楚 **說明：**



[a]Inclusion criteria: 1) study of chronic kidney disease, 2) patients have stage 5 or "end-stage" disease, 3) at least some patients in the study are managed without dialysis, 4) outcomes include prognosis, symptoms, and/or quality of life, 5) original research.
[b]Exclusion criteria: 1) study of acute renal failure, 2) review article, practice guideline, editorial, or letter.

沒有顯而易見的關聯或雙重的引證

步驟 2：系統性文獻回顧的品質如何？(FAITH)

A - 文獻是否經過嚴格評讀 (Appraisal)？

Articles were assessed for quality using the SORT system.[14] This system was chosen because it includes extensive guidelines for cohort and cross-sectional studies, the most common research designs among included articles. It assigns level of evidence 1, 2, or 3 based on study design and specific validity criteria; level of evidence 1 is the highest rating.

評讀結果：　■是　□否　□不清楚　　說明：

步驟 2：系統性文獻回顧的品質如何？(FAITH)

I - 是否只納入 (included) 具良好效度的文章？

> Articles were assessed for quality using the SORT system.[14] This system was chosen because it includes extensive guidelines for cohort and cross-sectional studies, the most common research designs among included articles. It assigns level of evidence 1, 2, or 3 based on study design and specific validity criteria; level of evidence 1 is the highest rating.

TABLE 1. STUDIES INCLUDED IN SYSTEMATIC REVIEW

Reference	*Study design*	*Study follow-up*	*Level of evidence*[a]
Carson et al., 2009[21]	Prospective cohort study of patients with GFR < 30 and age ≥ 70 receiving either CM or dialysis	95.0%	1
Chanda et al., 2010[17]	Retrospective cohort study of patients with GFR < 15 receiving either CM or dialysis	n/a	2
Ellam et al., 2009[19]	Retrospective cohort study of patients with GFR < 15 receiving CM	n/a	2
Joly et al., 2003[20]	Prospective cohort study of patients with CrCl < 10 and age ≥ 80 receiving either CM or dialysis	100%	1
Murtagh et al., 2007[18]	Retrospective cohort study of patients with GFR < 15 and age > 75 receiving either CM or dialysis	n/a	2
Smith et al., 2003[15]	Prospective cohort study of patients with GFR < 15 recommended for CM by multidisciplinary team	100%	1
Wong et al., 2007[16]	Prospective cohort study of patients with GFR < 30 receiving CM	100%	1
DeBiase et al., 2008[29]	Observational study of patients with age > 75 and GFR < 15 recommended for CM	n/a	2
Murphy et al., 2009[25]	Cross-sectional survey of patients with GFR < 30 receiving CM	n/a	2
Murtagh et al., 2007[22]	Cross-sectional survey of patients with GFR < 15 receiving CM	n/a	2
Murtagh et al., 2010[23]	Longitudinal survey of patients with GFR < 15 receiving CM, data presented from the month prior to death	n/a	2
Saini et al., 2006[24]	Cross-sectional survey of patients with GFR < 15 receiving CM; survey also administered to comparison group of patients with terminal malignancy	n/a	2
Yong et al., 2009[28]	Cross-sectional survey of patients with GFR < 15 receiving either CM or dialysis	n/a	2

GFR, glomerular filtration rate; CM, conservative management; CrCl, creatinine clearance; n/a, not applicable.
[a]Based on Strength of Recommendation Taxonomy (SORT) criteria: level of evidence 1 = good-quality, patient-oriented evidence; level of evidence 2 = limited-quality, patient-oriented evidence; level of evidence 3 = other evidence.

評讀結果： □是 □否 ■ 不清楚 **說明：**

步驟 2：系統性文獻回顧的品質如何？(FAITH)

T - 作者是否以表格和圖表「總結」 (total up) 試驗結果？

TABLE 2. PROGNOSIS WITH CONSERVATIVE, NONDIALYTIC MANAGEMENT OF END-STAGE RENAL DISEASE

Reference	*Conservative management group*	*Dialysis group*	*Results*
Carson et al., 2009[21]	median age 83.0 13.8% diabetes mean age-adjusted CCI score 7.4 $n=29$	median age 75.0 29.5% diabetes mean age adjusted CCI score 7.2 $n=173$	median survival from first known date of GFR ≤ 10.8[a]: 13.9 months (range 2–44) with CM 37.8 months (range 0–106) with dialysis $p<0.01$
Chanda et al., 2010[17]	mean age 77.5 68.4% over age 75 35.5% diabetes 49.7% high comorbidity $n=155$	mean age 58.5 11.2% over age 75 34.3% diabetes 17.3% high comorbidity $n=689$	median survival from first known date of GFR< 15: 21.2 months with CM[b] 67.1 months with dialysis[b] $p<0.001$
Ellam et al., 2009[19]	median age 80 38% diabetes 32% ischemic heart disease $n=69$	None	median survival from first known date of GFR< 15: 21 months (range 1–100) with CM
Joly et al., 2003[20]	mean age 84.1 51.4% late referral to nephrology 21.6% diabetes 48.6% ischemic heart disease 43.3% socially isolated $n=37$	mean age 83.2 28.9% late referral to nephrology 6.5% diabetes 42.5% ischemic heart disease 14.7% socially isolated $n=107$	median survival from first day of dialysis or decision not to perform dialysis: 8.9 months (95% CI 4–10) with CM 28.9 months (95% CI 24–38) with dialysis $p<0.0001$
Murtagh et al., 2007[18]	median age 83 23.4% diabetes $n=77$	median age 79.6 25.0% diabetes $n=52$	median survival from first known date of GFR< 15: 18.0 months (range 0.1–73.1) with CM 19.6 months (range 2.2–84.2) with dialysis
Smith et al., 2003[15]	$n=34$[c]	$n=10$[c]	median survival from proposed date of dialysis initiation: 6.3 months (range 0–46) with CM 8.3 months (range 2–20) with dialysis
Wong et al., 2007[16]	median age 79 mean GFR 12 28% diabetes 34% ischemic heart disease $n=73$	None	median survival from decision not to perform dialysis: 23.4 months with CM[b]

CCI, Charlson Comorbidity Index; GFR, glomerular filtration rate; CM, conservative management.
[a]Mean GFR at time of dialysis initiation was 10.8 in the dialysis group, so this was used as the "threshold GFR" from which survival was measured.
[b]Range/confidence interval not reported.
[c]Demographic variables were only reported for conservative management and dialysis groups combined: mean age 71, mean modified Karnofsky Performance Scale score 55, 27% diabetes.

Symptoms or QOL

TABLE 3. S… …IENT

Reference	CM group	Comparison group	Symptoms in CM group	Other outcomes
DeBiase et al., 2008[29]	mean age 81.5 mean GFR 11.2 mean number of comorbidities 5.7 $n=11$	mean age 79.4 mean GFR 9.0 mean number of comorbidities 2.6 $n=5$ (*dialysis patients*)	not reported	similar quality of life between groups[a]
Murphy et al., 2009[25]	mean age 82 mean GFR 12.75 $n=55$	none	weakness 75% poor mobility 75% poor appetite 58% pain 56% pruritus 56% dyspnea 49%	mean number of symptoms 6.8 (range 1–14)
Murtagh et al., 2007[22]	mean age 82 mean GFR 11.2 $n=66$	none	lack of energy 76% pruritus 74% drowsiness 65% dyspnea 61% edema 58% pain 53% dry mouth 50% muscle cramps 50% restless legs 48% lack of appetite 47% poor concentration 44% dry skin 42% sleep disturbances 41%	mean number of symptoms 11.58 (range 0–22)
Murtagh et al., 2010[28]	mean age 80.9 mean GFR 11.0 $n=49$	none	lack of energy 86% pruritus 84% drowsiness 82% dyspnea 80% poor concentration 76% pain 73% poor appetite 71% swelling 71% dry mouth 69% constipation 65% nausea 59%	median number of symptoms 16.6 (range 6–27)
Saini et al., 2006[24]	median age 67 median GFR 11.4 median KPS 90 $n=11$	median age 63 median GFR 81.3 median KPS 80 $n=11$ (*patients with terminal malignancy*[b])	lack of energy 100% dyspnea 82% difficulty sleeping 82% swelling 73% pain 64% numbness/tingling 64% food taste changes 55% pruritus 55% lack of appetite 55% changes in skin 55%	median number of symptoms: 17 (range 11–24) in CM group; 15 (range 5–23) in malignancy group similar quality of life between groups[c]
Yong et al., 2009[28]	mean age 73.1 mean CCI score 8.5 $n=45$	mean age 58.2 mean CCI score 6.1 $n=134$ (*dialysis patients*)	cold aversion 78% fatigue 69% pruritus 58% lower torso weakness 58% difficulty sleeping 49% pain 49% dyspnea 47%	mean number of symptoms ± SD: 8.2 ± 3.9 with CM 9.3 ± 4.7 with dialysis similar quality of life between groups[a]

weakness, lack of energy, poor appetite, pruritus, drowsiness, dyspnea, pain, edema, and difficulty sleeping

評讀結果：■是 □否 □不清楚 說明：

步驟 2：系統性文獻回顧的品質如何？(FAITH)

H - 試驗的結果是否相近 - 異質性 (Heterogeneity)？

Data was then abstracted independently by two authors (NO and PK). The data abstraction was cross-checked by both authors, and any differences were resolved by discussion and consensus. Meta-analysis was not performed due to wide variability in study populations and different methods of measuring outcomes. The articles were therefore analyzed descriptively with an emphasis on trends.

評讀結果：　□是　■ 否　□不清楚　　說明：

如何應用於臨床

STEP 1: Begin at time of Diagnosis

(1)辨識合適的病患

停止透析治療的臨床狀況

(美國腎臟科醫師協會共同決策 **適當開始與停止治療透析指引**2010)

對於以下情形患者，可考慮不予或終止透析治療:

1.病人無法配合洗腎，例如dementia會自拔針

2.病人透析狀況不穩定，如透析過程嚴重低血壓

3.其他非腎臟病原因造成的生命末期狀態:如末期心臟、肺臟、肝臟疾病，嚴重不可逆神經病變等

4.75歲以上慢性腎臟病第5期病人且預後不良，符合2項標準以上:

(1)驚訝問題:病人在一年內死亡，照護團隊病不驚訝(2)多重嚴重共病症

(3)明顯生活功能不良(4)嚴重慢性營養不良，如血清白蛋白<2.5g/dl

台大醫院金山分院安寧緩和照護需求評估表

姓名：　　出生日期（西元）：　/　/　　身分証字號：

性別：男 / 女　　住院日期（西元）：　/　/　　已簽署過DNR：　是 / 否　（簽署日期：　　年　　月）

A. 本次住院與安寧緩和主要相關病症	每項計2分	B. 次要共病症(a-c項不與A組重複)	每項計1分
a. 癌症末期（轉移、復發），不選擇抗癌治療。		a. 原發癌症	
b. 末期 COPD（平時休息時會喘）		b. 中度COPD(日常活動會喘)	
c. 末期肝病(如黃疸、腹水、重複性、腹腦炎、肝昏迷、胃食道靜脈出血等)		c. 肝硬化	
d. 洗腎病患(65歲以上且洗腎超過2年)		d. 其它洗腎病患	
e. 末期心臟病（平時休息時會喘或端坐呼吸）		e. 中度心衰竭（運動性呼吸困難）	
f. 嚴重失能之神經性疾病(如中風、昏迷、失智等病患致長期臥床者)		f. 其他複雜性疾病（慢性傷口、重大傷病、多重外傷等）	
g. 其他可能致死之急性疾病 （如ARDS、敗血症、多重器官衰竭等）			
A組得分		B組得分	

C. 目前功能狀態	C組得分
1. 完全活躍，能夠從事生病前的各種活動（計0分）	
2. 無法負擔費力的工作，但能夠行走且從事輕度的工作（計0分）	
3. 無法從事任何工作，但可以行走且自我照顧（計1分）	
4. 僅能在床上或輪椅上從事有限度的自我照顧（計2分）	
5. 完全失去自我照顧的能力（計3分）	

D. 其他狀況（每項計1分）	每項計一分
1. 團隊/病人/家屬 在做出複雜的決策和確定照顧目標時需要幫助	
2. 病人有無法忍受的疼痛	
3. 病人有無法緩解的心、靈或社會上的問題	
4. 病人在過去30天內，因相同診斷重複到急診就醫	
5. 病人在過去30天內，因相同診斷重複住院	
6. 病人由加護病房轉出	
7. 病人在加護病房住院且預後不佳	
8. 病人住院超過30天	
D組得分	

A+B+C+D=總分	總分
1. 若此病患在未來一年內死亡，您是否會覺得驚訝：①是 ②否	
2. 您覺得此病患：①需安寧照護 ②不需安寧照護	

主治醫師意見：若此病患在未來一年內死亡，您是否會覺得驚訝：①是　②否 _____

您認為此病患 ①需安寧照護 ②不需安寧照護：_____

若病患尚未簽署DNR，經評估過後 ①是　②否 簽署：_____

評估者簽章 / 日期　　主治醫師簽章

1
2
1
3
7
2
1
1

台大醫院金山分院
對每一位住院病患
及每一位門診洗腎
病患routinely進行
安寧緩和照護需求
評估

如何應用於臨床

STEP 2: Continues throughout patients' Life

(1)評估病人的意識與完整判斷能力

(2)確定是否已有預立醫囑或醫療委任代理人

(3)評估是否存在可矯正的因子 (treat / hold)

– chronic debility(慢性衰弱), depression, pain, muscle cramp, repeat vascular access failure…

(4)多專業團隊評估

(5)家庭會議共同決策(shared decision-making)

CKD衛教師的
角色與功能

CKD與透析族群的教育

1.宣導安寧緩和醫療的觀念
2.建立全員共識將“不透析的內科治療”視為 ESRD患者治療的第四種選擇
3.提倡預立醫囑之觀念: advance care planning (ACP)
   – Health care proxy / decision maker
   – DNR / do not intubate (DNI) / allow natural death (AND)
   – POLST (Physician orders for life-sustaining treatment)
4.健保卡註記

Family meeting: 4 topics method

1.治療方案的臨床適應症	2.病人意願與喜好

• 病人的年齡(根據其生活功能判斷)
• 病人是健壯、脆弱(vulnerable)或虛弱(frail)？
• 有哪些透析病患的存活率數據可以參考？
• 有哪些老化敏感因子(geriatric susceptibility factors)?
• 護理之家病人是否不同？
 	
根據以上項目評估病人是否適合進行透析或不透析治療處置？
 	
Physicians must advise patients and guide them away from unwise decisions.
	建立生活藍圖（例如「無病痛生活」、能待在家中、活得越久越好…）
	• 發掘病人的過去事蹟來講故事(narrative)
	• 家屬的參與
	  ▸ 認知功能障礙與無決定能力是普遍存在的
	  ▸ 醫療代理決定的狀況很常發生 **scenario**
	• 應做好以下準備:
	  ▸ 個人喜好可能因時間與新事件的發生而改變
	  ▸ 有些病人無法自己做決定或表達其喜好
	  ▸ 有些病人想要得到有限的資訊或不想要資訊，由別人來代為決定

3.生活品質	**4.社會經濟文化因素**
• 沒有統一的標準 • 個人價值判斷 • 有些客觀評斷因素，但家屬可能並未想到，如:末期失智症、惡病質、晚期癌症） • 明顯沉重的症狀負擔 • 在生活品質可以接受的範圍下進行有限度的透析	• 家屬是否支持病人的決定? • 家屬之間是否存在意見分歧? • 對病人願望(wishes)的描述是否一致 • 有何文化、倫理與宗教信仰背景? • 醫療照護提供者之間或是與家屬之間是否意見分歧或有訊息不整合的情況

NephSAP 2011;**10**:67-78

如何應用於臨床

STEP 3: Team Commitment & build-up caring Capabilities

(團隊的承諾與建立照護的能力)

1.Simultaneous care model.

2.**Time-limited trial of dialysis**.

3.Withdraw dialysis.

TIME-LIMITED TRIALS OF DIALYSIS

限時透析治療嘗試

- 合適對象：

1.需要透析，但預後不確定或暫時無法決定者，於尋求衝突解決過程或緊急情況時，先緊急透析。

2.選定1到3月並事前決定觀察指標及評估參數。

3.不論是腎臟科醫師、病人，委任醫療代理人，或在病人授權下參與的家屬，都需取得共識。

4.於此期間親自經歷透析治療的利益與負擔，以便在觀察期結束時，根據指標判定透析治療對病人的利弊及是否應繼續透析治療之決策參考 。

如何應用於臨床

停止透析後的症狀舒緩照護 (comfort care)

1.存活期中位數 – 存活期中位數: 8~10天

– 常見症狀: pain, agitation, dyspnea, anxiety, myoclonus, fever, edema,pruritus, diarrhea, dysphagia, and nausea

2.病患與家屬心理宗教與心靈的支持

3.家屬的悲傷輔導與調適 家屬的悲傷輔導與調適

4.社區型的安寧緩和居家照護系統

腎臟照護團隊照護流程介紹

末期腎臟病治療

腎臟照護團隊

主治醫師 | 個管師 | 營養師 | 社工師

腎臟照護團隊介入、評估

1.依個案個別性給予衛教
2.腎臟病團體衛教
3.舉辦透析體驗營
4.個案經驗分享
5.多媒體教材使用

腎臟照護團隊與個案、家屬共同討論決定治療方式

腹膜透析

腹部植管

- 傳統植管 → 透析訓練 → 居家透析 → 病況改變或腹膜功能失效
- 預先植管 → 個案追蹤

血液透析

建置透析通路

醫院常規透析

病況改變或瘻管功能失效

腎臟移植

一般外科門診

器官捐贈小組
收案及追蹤

安寧緩和

- 有共識
  - 協助與安寧相關門診
    簽署相關文件
    (EX:DNR)
  - 安寧收案(CKD結案)
    討論後續照護模式
  - 腎內門診
- 無共識
  - 先建立透析通路
    原科症狀與控制
    再評估與溝通
  - 安寧相關門診
  - 安寧病房 ↔ 安寧居家

提問

- 針對CKD第五期未進入透析之個案，或已進入透析之病人，以美國腎臟科醫師協會共同決策「適當開始與停止治療透析指引2010」為依據，訂定「透析安寧照護需求評核表」、並制定照護流程？

不同意

再評估

同意

25人同意

1人再評估

謝謝聆聽　敬請指教