



臺北市立萬芳醫院 - 委託臺北醫學大學辦理

Taipei Municipal Wanfang Hospital (Managed by Taipei Medical University)

# 藥師門診在口服抗癌藥物 治療中的價值與挑戰

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# 癌症已是多年我國十大死因之首

## 110年十大死因

死因別	死亡人數 (人)		死亡率 (每十萬人口)		標準化死亡率 (每十萬人口)	
	年增率 (%)		年增率 (%)		年增率 (%)	
所有死亡原因	184,172	6.4	784.8	6.9	405.5	3.8
1.癌症	51,656	3.0	220.1	3.5	118.2	0.7
2.心臟疾病(高血壓性 疾病除外)	21,852	6.8	93.1	7.3	45.6	4.3
3.肺炎	13,549	-1.4	57.7	-0.9	25.3	-4.0
4.腦血管疾病	12,182	3.1	51.9	3.6	25.2	-0.3
5.糖尿病	11,450	11.0	48.8	11.6	23.8	8.1
6.高血壓性 疾病	7,886	17.6	33.6	18.2	15.2	13.2
7.事故傷害	6,775	0.1	28.9	0.6	20.0	-1.4
8.慢性下呼吸 道疾病	6,238	10.3	26.6	10.8	11.7	6.1
9.腎炎、腎病 症候群及腎 病變	5,470	7.3	23.3	7.9	10.9	4.2
10.慢性肝病及 肝硬化	4,065	2.5	17.3	3.0	10.4	0.6

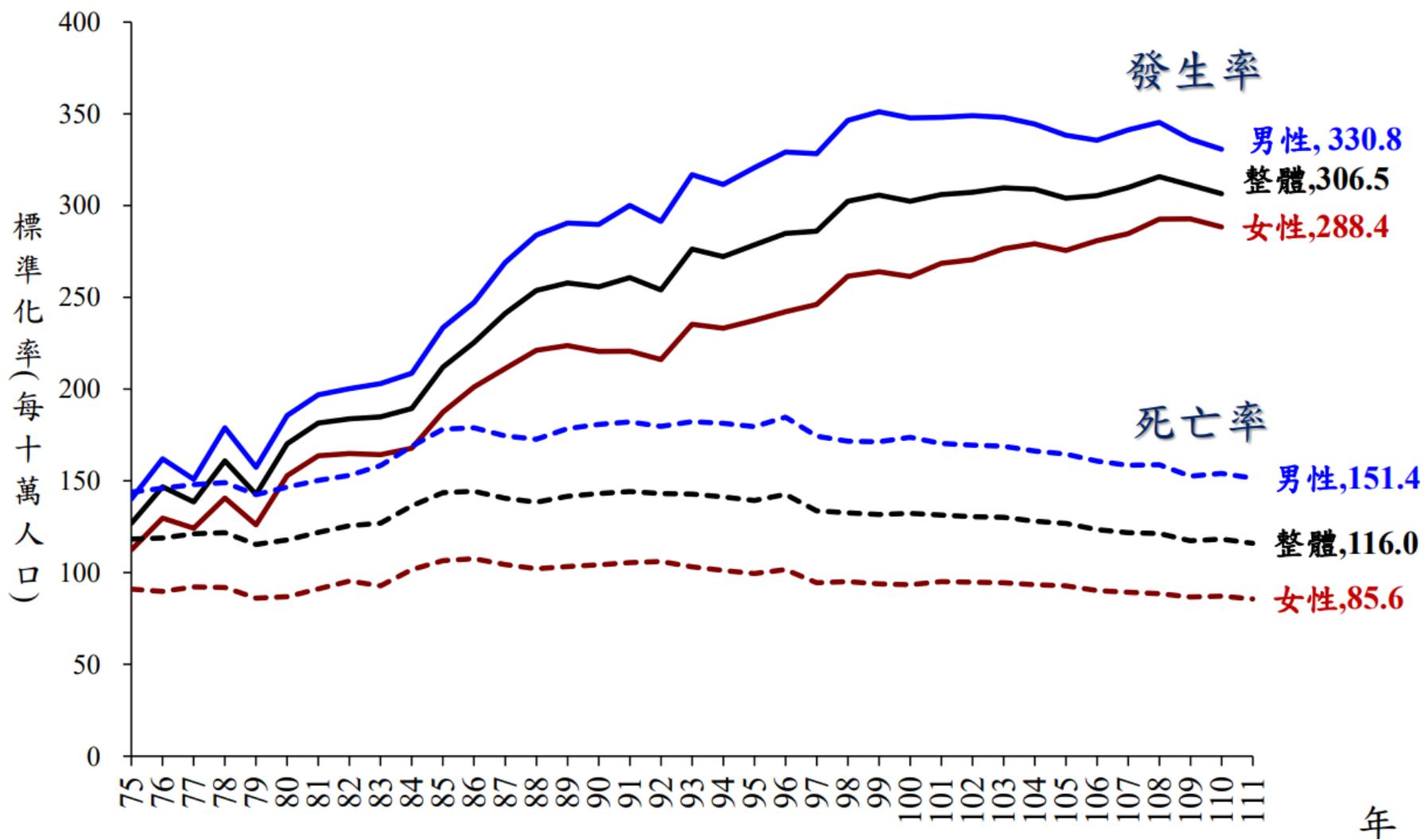
## 111年我國十大死因

死因別	死亡人數 (人)		死亡率 (每十萬人口)		標準化死亡率 (每十萬人口)	
	年增率 (%)		年增率 (%)		年增率 (%)	
所有死亡原因	208,438	13.2	893.8	13.9	443.9	9.5
1.癌症	51,927	0.5	222.7	1.2	116.0	-1.8
2.心臟疾病(高血壓性 疾病除外)	23,668	8.3	101.5	9.0	47.8	4.8
3.嚴重特殊傳染性肺炎 (COVID-19)	14,667	1,536.9	62.9	1,547.4	28.6	1,365.5
4.肺炎	14,320	5.7	61.4	6.4	26.3	3.8
5.腦血管疾病	12,416	1.9	53.2	2.6	25.1	-0.3
6.糖尿病	12,289	7.3	52.7	8.0	24.7	3.7
7.高血壓性 疾病	8,720	10.6	37.4	11.3	16.3	7.2
8.事故傷害	6,953	2.6	29.8	3.3	20.0	0.2
9.慢性下呼吸 道疾病	6,494	4.1	27.8	4.8	11.8	1.6
10.腎炎、腎病 症候群及腎 病變	5,813	6.3	24.9	6.9	11.3	3.5

## 112年我國十大死因

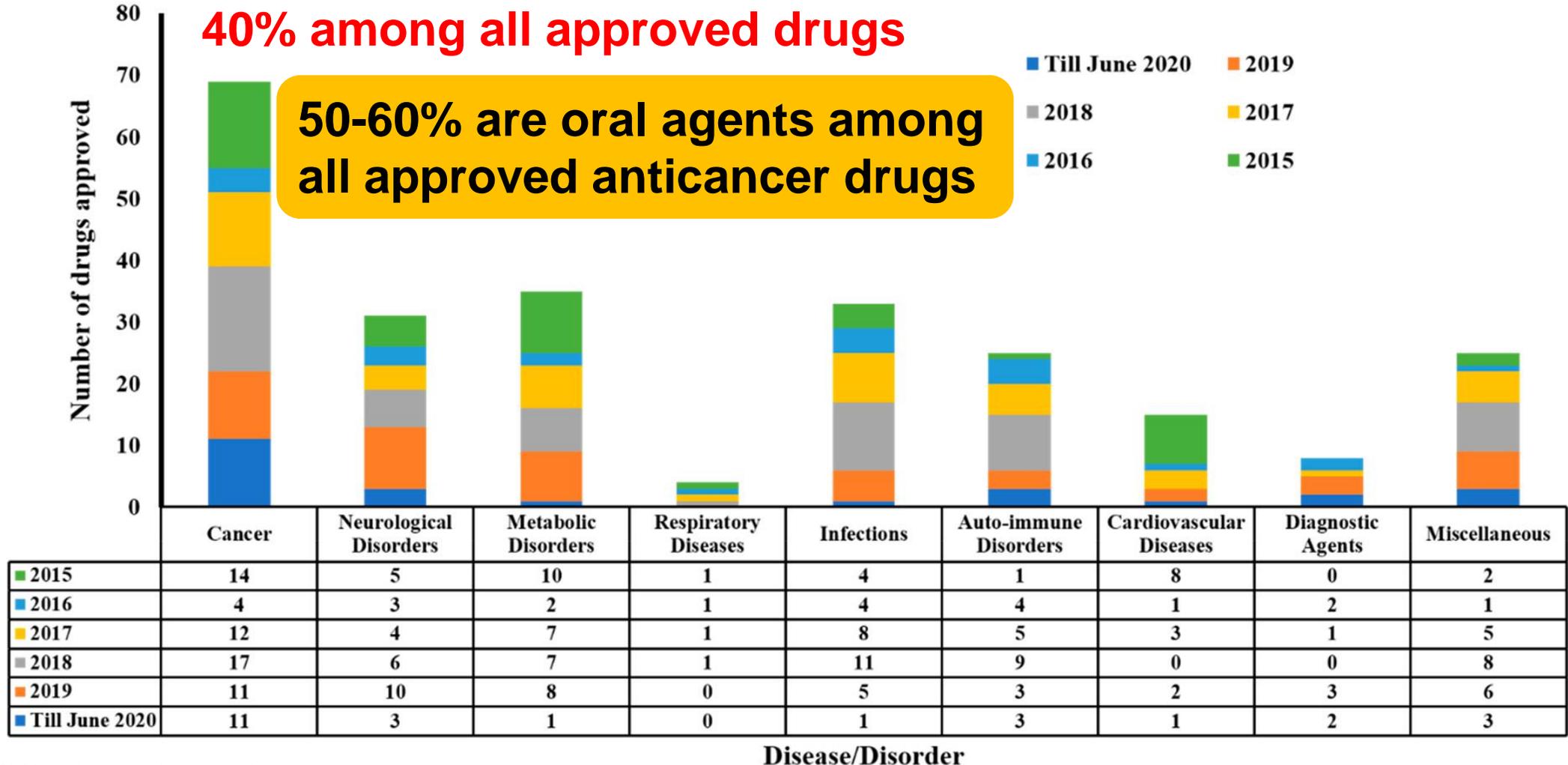
死因別	死亡人數 (人)		死亡率 (每十萬人口)		標準化死亡率 (每十萬人口)	
	年增率 (%)		年增率 (%)		年增率 (%)	
所有死亡原因	205,575	-1.4	880.7	-1.5	429.6	-3.2
1.癌症	53,126	2.3	227.6	2.2	115.4	-0.5
2.心臟疾病(高血壓性 疾病除外)	23,424	-1.0	100.3	-1.1	46.8	-2.1
3.肺炎	16,702	16.6	71.6	16.5	29.9	13.7
4.腦血管疾病	12,371	-0.4	53.0	-0.5	24.6	-2.0
5.糖尿病	11,625	-5.4	49.8	-5.5	22.8	-7.6
6.嚴重特殊傳染性肺炎 (COVID-19)	8,962	-38.9	38.4	-39.0	16.5	-42.2
7.高血壓性 疾病	8,930	2.4	38.3	2.3	16.5	1.3
8.事故傷害	7,063	1.6	30.3	1.5	20.0	0.1
9.慢性下呼吸 道疾病	6,164	-5.1	26.4	-5.2	11.1	-6.6
10.腎炎、腎病 症候群及腎 病變	5,814	0.0	24.9	-0.1	11.1	-1.7

# 癌症發生率逐年上升，但死亡率呈下降趨勢



# 抗癌藥品愈來愈多

Drug approved from year 2015 – June 2020

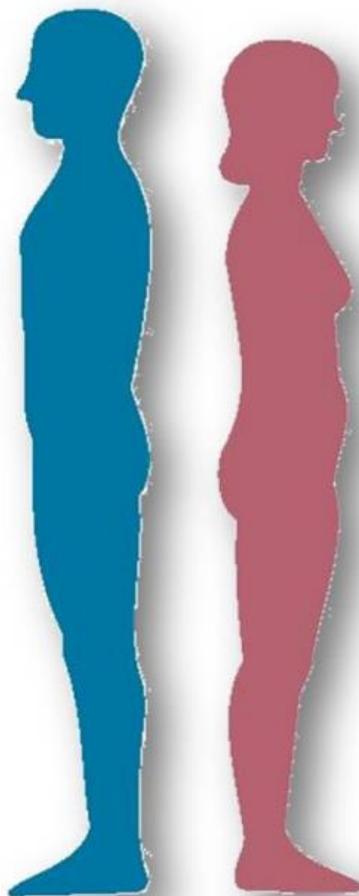


# 口服抗癌藥品在多種癌別都會使用到

## 110年 十大癌症

男性	★	(9,297人)大腸	47.1/10 <sup>5</sup>
★	(8,961人)肺、支氣管及氣管	44.5/10 <sup>5</sup>	
	★	(7,387人)口腔	40.4/10 <sup>5</sup>
★	(7,448人)肝及肝內膽管	37.6/10 <sup>5</sup>	
	★	(7,481人)攝護腺	35.3/10 <sup>5</sup>
		(2,614人)食道	13.7/10 <sup>5</sup>
★	(2,413人)胃	11.8/10 <sup>5</sup>	
★	(2,127人)皮膚	10.3/10 <sup>5</sup>	
★	(1,588人)白血症	10.0/10 <sup>5</sup>	
		(1,727人)非何杰金氏淋巴瘤	9.4/10 <sup>5</sup>
		(12,680人)其他癌症	

(63,723人) 總計 330.8/10<sup>5</sup>



82.5/10 <sup>5</sup>	乳房(15,448人)	★	女性
36.0/10 <sup>5</sup>	肺、支氣管及氣管(7,919人)	★	
30.7/10 <sup>5</sup>	大腸(6,941人)	★	
22.1/10 <sup>5</sup>	甲狀腺(3,497人)	★	
17.0/10 <sup>5</sup>	子宮體(3,181人)		
13.6/10 <sup>5</sup>	肝及肝內膽管(3,327人)	★	
10.2/10 <sup>5</sup>	卵巢、輸卵管及寬韌帶(1,793人)	★	
7.3/10 <sup>5</sup>	皮膚(1,827人)	★	
7.2/10 <sup>5</sup>	胃(1,647人)	★	
7.1/10 <sup>5</sup>	非何杰金氏淋巴瘤(1,438人)		
	其他癌症(11,021人)		

288.4/10<sup>5</sup> 總計 (58,039人)

# 口服抗癌藥品的使用有其複雜性



## 用法

- 一天一次，一次2-4顆



## 交互作用

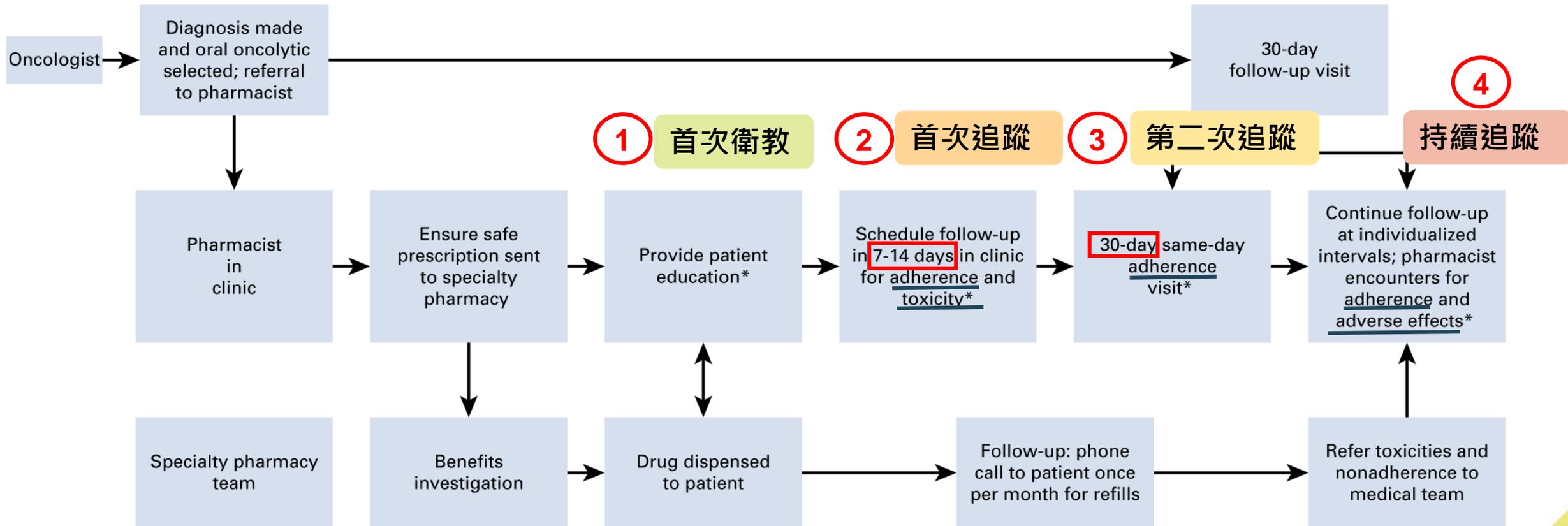
- 搭配低脂飲食
- 禁止併服葡萄柚及CYP3A4抑制劑



## 常見副作用

- 手足症候群、腹瀉、高血壓

# HOPA Pharmacy Standard for Oral Oncolytic Management



# HOPA Pharmacy Standard for Oral Oncolytic Management

## 衛教

Pharmacists should be involved in the development or endorsement of standardized education materials, and education should be consistent across the oncology care team

A separate education visit—in person or over the phone—should occur after the oncologist's initial prescribing visit and before the start of oral oncolytic therapy to supplement and reiterate the information provided during the oncologist visit

Education should be comprehensive (see Education) and focus on patient self-care management of oral oncolytic adverse effects and the importance of medication adherence

An assessment of patient knowledge, confidence to manage adverse effects, and need for follow-up should occur during the education session

Patient caregiver attendance at the education session is encouraged

提供衛教資料

用藥前衛教  
持續性追蹤

自我照護技巧

評估了解程度

照護者共同參與

# HOPA Pharmacy Standard for Oral Oncolytic Management

## 持續追蹤

A consistent process with standardized tools should be used in the oncology clinic setting for monitoring and follow-up

An oncology pharmacist should be involved in the creation of monitoring and follow-up materials and, ideally, in the assessment and monitoring of a patient's symptoms and medication adherence

Initial monitoring of symptoms and adherence, including PROs, should occur between 7 and 14 days after the start of treatment

Ongoing monitoring of symptoms and adherence, including PROs, should occur at each clinical encounter, at least before each refill

Medication reconciliation should occur at each assessment point above, ideally by a pharmacist

Adherence assessment should be user friendly, reliable, cost effective, and practical

Collaborative practice agreements, including laboratory and symptom monitoring, should exist in settings in which clinical oncology pharmacists are part of the interdisciplinary oncology care team

Communication within the oncology team and with the patient's PCP should be ongoing

監測症狀及順服性

用藥後一至二週需  
做第一次追蹤

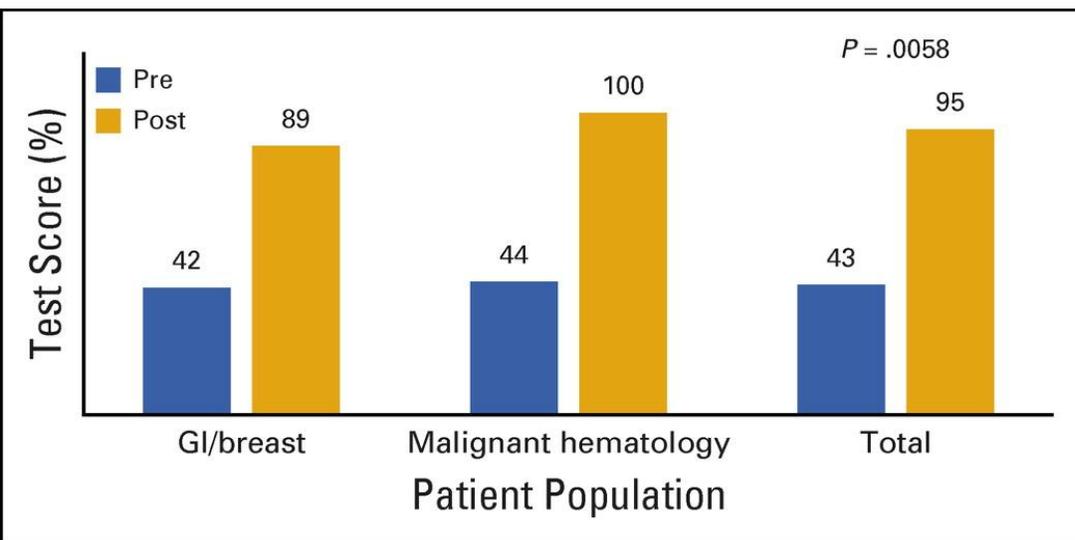
於病人每次回診時  
追蹤

用藥連貫性

檢驗數值及症狀監測

# 美國一機構執行口服抗癌藥事服務成效

## 增加病患用藥知識



## 增加病患用藥順服性

Patient Population	Self Reported Adherence	Medication Possession Ratio
Hem malignancy	94.7%	93.9%
Breast/GU	86%	85%
All Patients	89%	

# 美國一機構執行口服抗癌藥事服務成效

## 增加慢性骨髓性白血病治療效果

Response	Percentage (No.)			P
	Clinical Trial	Preintervention	Postintervention	
100% adherence	41 (36 of 87) <sup>7</sup>	48 (14 of 29)	60 (12 of 20)	.253*
> 90% adherence	74 (64 of 87) <sup>7</sup>	NA	95 (24 of 26)	.104†
EMR (PCR < 10%)	66 <sup>13,14</sup>	54.8 (17 of 31)	88.9 (16 of 18)	.0138*
MMR at 12 months (PCR < 0.1%)	60 <sup>9-12</sup>	57.6 (19 of 33)	83.3 (15 of 18)	.0575*

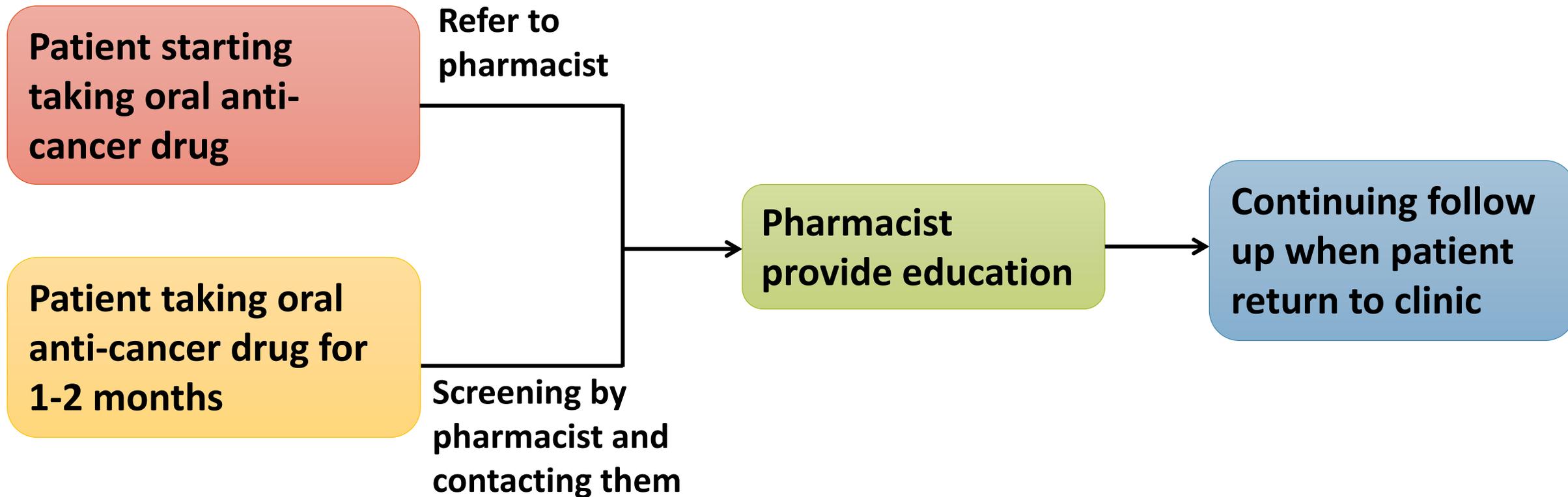
# 萬芳醫院口服抗癌藥事照護門診

- 對象：同時段看診之血液腫瘤科與胸腔內科使用口服標靶藥及較有副作用之化療藥物之癌症病人



	星期一	星期二	星期三	星期四	星期五
早	陳怡姝		郭俊男	忻彥君	
午	陳怡姝	忻彥君	郭俊男	忻彥君	

# 口服抗癌藥事照護門診-流程



# 評估紀錄與用藥建議

## 評估紀錄

醫事服務系統(w\_med\_care)

113/11/13 13:57:16 郭俊男

藥物群組維護 病患追蹤及藥事記錄 病患總表 新增藥事記錄 表單維護

病歷號 [ ] 組別 癌症藥事照護 表單種類 癌症藥事照護 新增

病歷號 [ ] 新增日期 1131113 組別 癌症藥事照護 表單種類 癌症藥事照護 門診序號 [ ] ?

S: A case of NSCLC, s/p adjuvant cisplatin+vinorelbine, tumor recurrence in 113/7, start afatinib since 113/8/5, dose: 40 mg QD->30 mg QD since 9/18  
Diarrhea: (-)  
Acneform rash: mainly on face, under topical clindamycin and doxycycline->add dicloxacillin wash since 10/16 but he felt it is not easy to use it and favored to use topical clindamycin  
Stomatitis: (-)  
Paronychia: (-)  
Scalp pain sometimes. he took Ultraphenat night  
113/11/11 GPT(ALT) 11, TBIL 0.44, CEA\_Alinity 4.93  
113/10/14 GPT(ALT) 8, TBIL 0.39, CEA\_Alinity 6.08  
113/09/18 GPT(ALT) 9, TBIL 0.37, CEA 7.70  
113/08/01 GPT(ALT) 8, TBIL 0.42, CEA 13.10

O: Home medication: exforge, vemlidy, fenolip, famotidine, zolpidem, lyrica, utraphen, actosmet, ankomin, crestor

A: Tolerate afatinib 30 mg QD  
AE: acneform rash grade 2

P: Educate to use dicloxacillin wash (250 mg in 250 mL of clean water once per day) if acne is more severe.  
If scalp pain occurred more frequently, may consider analgesic at daytime  
Keep glutamine, loperamide, and topical clindamycin for symptom control.  
Monitor liver function periodically

用藥建議  送出用藥建議科別 血液腫瘤 問題分類 檢驗數值追蹤 建議分類 追蹤 醫師 郭俊男97294

醫師可看SOAP

儲存

報表 轉XML檔案 代碼維護 取消 E結束

## 用藥建議

醫事服務系統(w\_med\_care)

113/11/13 13:53:51 郭俊男

藥物群組維護 病患追蹤及藥事記錄 病患總表 新增藥事記錄 表單維護

病歷號 [ ] 組別 癌症藥事照護 查詢

就醫/用藥記錄 檢驗資料 藥事記錄

登錄日期	星期	組別	用藥建議	科別	醫師回覆	回覆日期	回覆醫師
1131113	三	癌症藥事照護	<input checked="" type="checkbox"/>	血液腫瘤	<input checked="" type="checkbox"/>	1131113	張家崙
1131016	三	癌症藥事照護	<input checked="" type="checkbox"/>	血液腫瘤	<input type="checkbox"/>		內容
1130918	三	癌症藥事照護	<input checked="" type="checkbox"/>	血液腫瘤	<input checked="" type="checkbox"/>	1131016	張家崙

病歷號 02078085

醫師意見回覆

非病患本人到診

同意用藥建議(提醒:請記得回醫囑中修改)

部分同意

不同意用藥建議

因臨床狀況需:  換藥  停藥  調整劑量  維持原用藥  抽血檢驗

非原處方醫師  其他,說明如下:

S: A case of NSCLC, s/p adjuvant cisplatin+vinorelbine, tumor recurrence in 113/7, start afatinib since 113/8/5, dose: 40 mg QD->30 mg QD since 9/18  
Diarrhea: (-)  
Acneform rash: mainly on face, under topical clindamycin and doxycycline->add dicloxacillin wash since 10/16 but he felt it is not easy to use it and favored to use topical clindamycin  
Stomatitis: (-)  
Paronychia: (-)  
Scalp pain sometimes. he took Ultraphenat night  
113/11/11 GPT(ALT) 11, TBIL 0.44, CEA\_Alinity 4.93  
113/10/14 GPT(ALT) 8, TBIL 0.39, CEA\_Alinity 6.08  
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113/08/01 GPT(ALT) 8, TBIL 0.42, CEA 13.10

O: Home medication: exforge, vemlidy, fenolip, famotidine, zolpidem, lyrica, utraphen, actosmet, ankomin, crestor

A: Tolerate afatinib 30 mg QD  
AE: acneform rash grade 2

刪除本日記錄

確定 列印

報表 轉XML檔案 代碼維護 取消 E結束

# 紀錄呈現於病歷系統

Profile Lab Image Exam Culture Patho Surgery Story ePaper

過濾科別

病歷首頁 Cancer Dashboard 歷史用藥

Vaccine Log

[OPD] 11/13 胸外 張彥俊

[OPD] 11/13 藥劑部 郭俊男

[OPD] 11/13 血液腫瘤 張家崙

10/30 ~ 11/05 胸外 張彥俊

住院醫囑 護理查詢 TPR iTPR 血糖

呼吸治療 跨團隊紀錄 Antibiotic

入院病摘 Progress 出院病摘

[OPD] 10/29 胸外 張彥俊

[OPD] 10/16 血液腫瘤 張家崙

[OPD] 10/16 胸外 張彥俊

[OPD] 10/16 藥劑部 郭俊男

[OPD] 09/18 血液腫瘤 張家崙

[OPD] 09/18 藥劑部 郭俊男

[OPD] 09/04 胸外 張彥俊

[OPD] 09/03 內分泌科 劉漢文

[OPD] 08/28 血液腫瘤 張家崙

[OPD] 08/28 藥劑部 郭俊男

[OPD] 08/19 血液腫瘤 張家崙

[OPD] 08/17 胸外 張彥俊

2024/11/13 藥劑部 郭俊男

### History

A case of NSCLC, s/p adjuvant cisplatin+vinorelbine, tumor recurrence in 113/7, start afatinib since 113/8/5, dose: 40 mg QD->30 mg QD since 9/18

### Subjective

Diarrhea: (-)  
Acneform rash: mainly on face, under topical clindamycin and doxycycline->add dicloxacillin wash since 10/16 but he felt it is not easy to use it and favored to use topical clindamycin  
Stomatitis: (-)  
Paronychia: (-)  
Scalp pain sometimes, he took Utraphenat night  
Rhinitis, under fexofenadine, symptom remained  
Right pleural effusion s/p pigtail

### Objective

113/11/11 GPT(ALT) 11, TBIL 0.44, CEA\_Alinity 4.93  
113/10/14 GPT(ALT) 8, TBIL 0.39, CEA\_Alinity 6.08  
113/09/18 GPT(ALT) 9, TBIL 0.37, CEA 7.70  
113/08/01 GPT(ALT) 8, TBIL 0.42, CEA 13.10  
Home medication: exforge, vemlidy, fenolip, famotidine, zolpidem, lyrica, utraphen, actosmet, ankomin, crestor

### Assessment

C34.11 Malignant neoplasm of upper lobe, right bronchus or lung  
C77.1 Secondary and unspecified malignant neoplasm of intrathoracic lymph nodes

### Plan

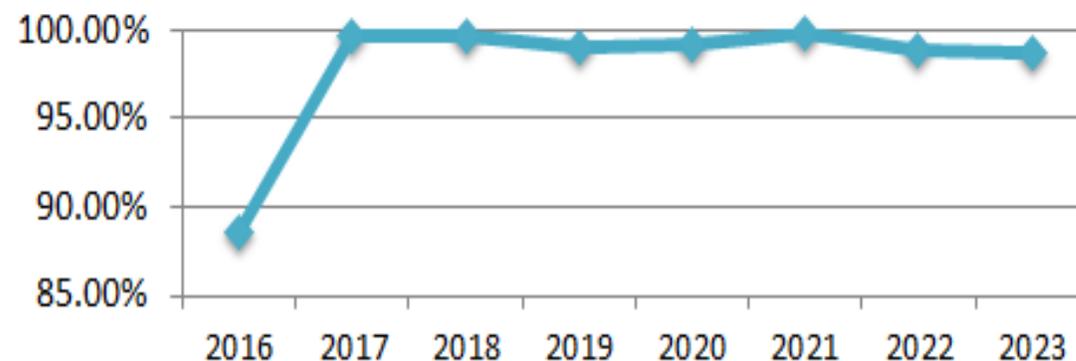
Tolerate afatinib 30 mg QD  
AE: acneform rash grade 2  
Educate to use dicloxacillin wash (250 mg in 250 mL of clean water once per day) if acne is more severe.  
If scalp pain occurred more frequently, may consider analgesic at daytime

# 服務人次量與醫師接受率

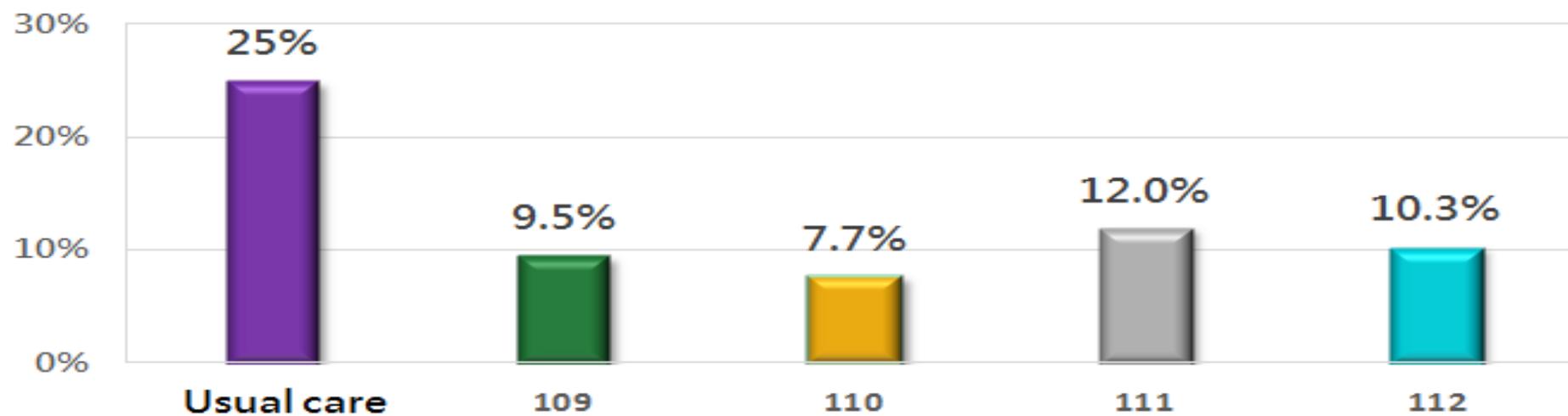
## 服務人次量



## 醫師接受率



# 用藥中斷比例



# 成效分享

## Effectiveness of pharmacist-managed oncology ambulatory care for patients with non-small cell lung cancer in Taiwan

Ding-Cheng Liu <sup>a</sup>, Chuan-Lun Hung <sup>a</sup>, Yi-Wen Chen <sup>b</sup>, Chun-Nan Kuo <sup>a,b,\*</sup>

<sup>a</sup> School of Pharmacy, College of Pharmacy, Taipei Medical University, Taiwan

<sup>b</sup> Department of Pharmacy, Wan Fang Hospital, Taipei Medical University, Taiwan

# 研究流程

## Patients with advanced NSCLC

- Initiate erlotinib, gefitinib, afatinib during Jan 2017 to Dec 2020
- Treatment duration > 1 month
- Monotherapy
- Without other cancer

## Intervention group

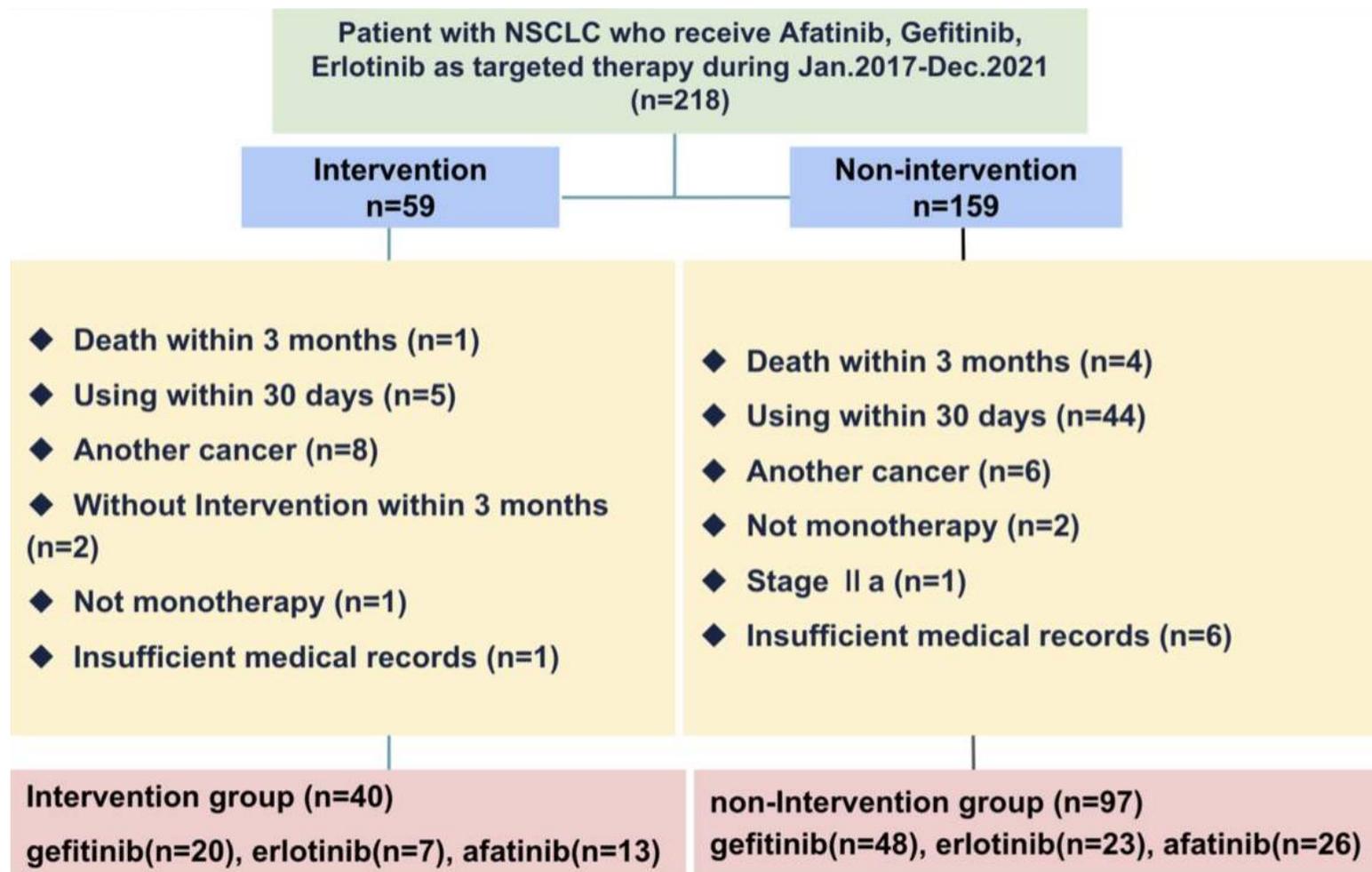
- Visit pharmacy clinic  $\geq$  2 times within 3 months

## Non-intervention group

## Outcome

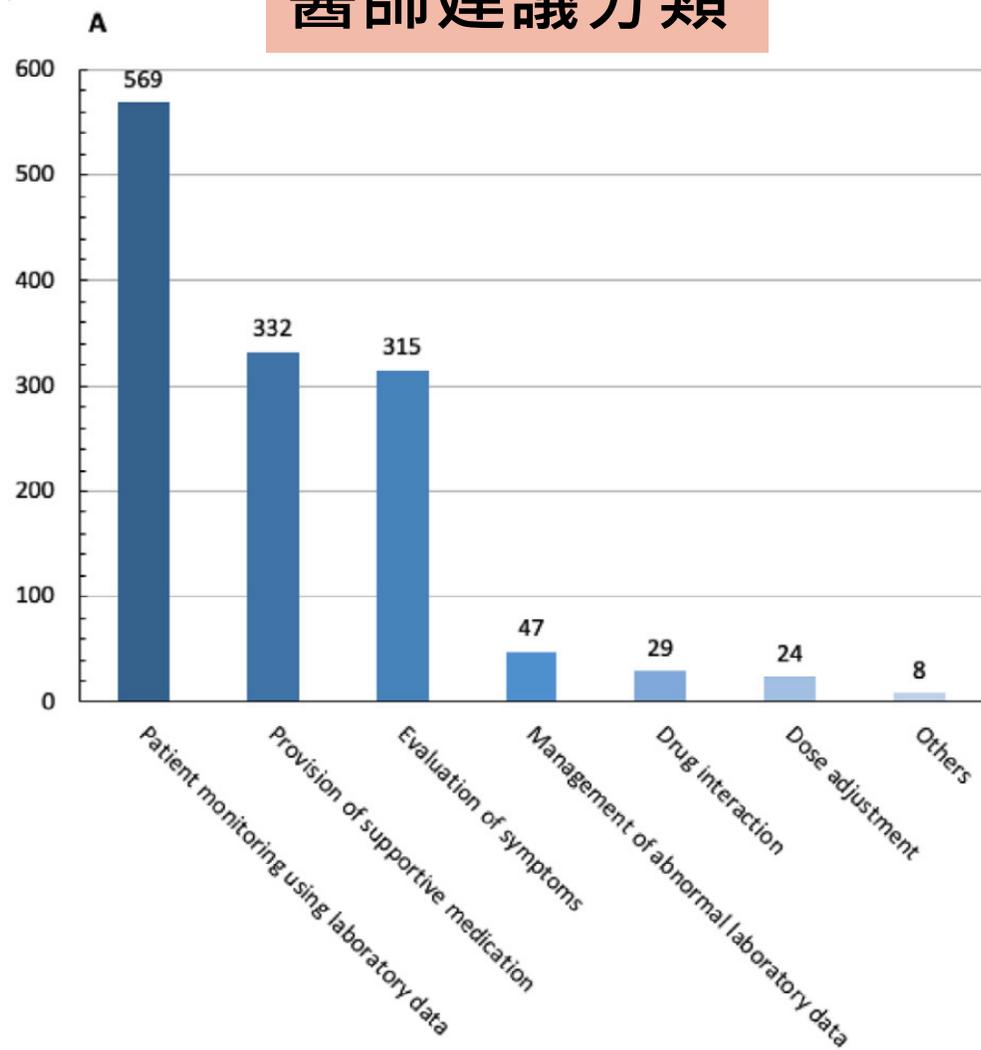
- Safety
- Hospital visit and costs
- Medication use

# 研究流程

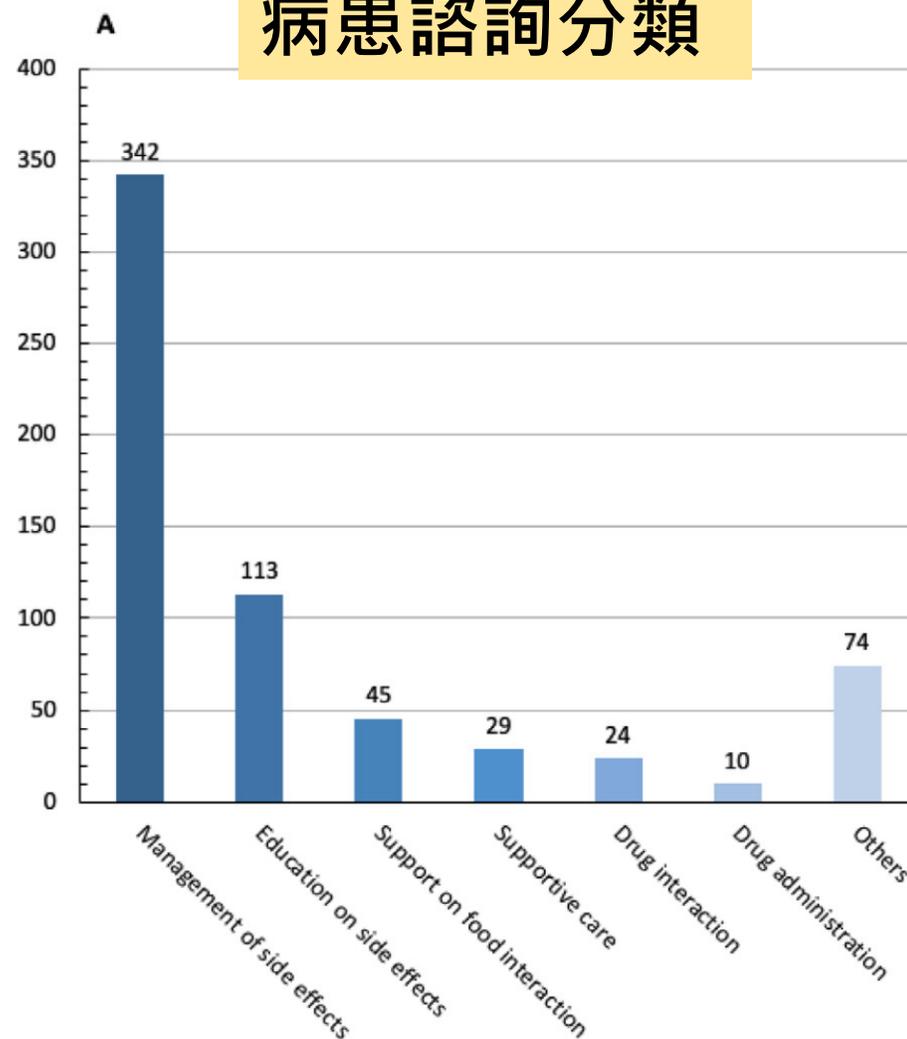


# 藥事服務類型

## 醫師建議分類



## 病患諮詢分類



# 副作用比例

	Intervention (n = 40)	Nonintervention (n = 97)	p value	Intervention (n = 40)	Nonintervention (n = 97)	p value
Event	Any grade			Grade $\geq 3$		
All events	40 (100)	88 (91)	0.046	1 (3)	3 (3)	0.807
Skin-related adverse events, no. (%)						
Acneiform rash	30 (75)	47 (49)	0.004	1 (3)	3 (4)	0.709
Mucositis	16 (40)	20 (21)	0.021	1 (3)	1 (1)	0.545
Dermatitis	12 (30)	9 (9)	0.002	1 (3)	1 (1)	0.502
Paronychia	34 (85)	27 (28)	0.000	—	—	—
Skin itching	9 (23)	12 (12)	0.135	—	—	—
Skin reaction	14 (35)	40 (41)	0.497	2 (6)	8 (8)	0.607
Hand-foot syndrome	9 (23)	18 (19)	0.598	—	—	—
Gastrointestinal adverse events, no. (%)						
Nausea	7 (18)	19 (20)	0.777	2 (5)	3 (3)	0.585
Diarrhea	31 (78)	50 (52)	0.005	5 (13)	2 (2)	0.017
Vomiting	3 (8)	14 (14)	0.263	1 (3)	2 (2)	0.901
Adverse events related to the liver and kidneys, no. (%)						
Elevated creatinine	19 (48)	33 (34)	0.139	1 (3)	1 (1)	0.515
Abnormal liver function	19 (48)	43 (47)	0.979	2 (5)	3 (3)	0.639



# 就醫次數及醫療費用

	Intervention (n = 40)	Nonintervention (n = 97)	p value
Hospital visits (times/month)			
Hospitalization	0.13 ± 0.20	0.22 ± 0.36	0.062
Emergency department visits	0.04 ± 0.08	0.17 ± 0.40	0.005
Outpatient department visits	2.77 ± 1.46	2.93 ± 1.70	0.609
Unexpected outpatient department visits	0.15 ± 0.24	0.34 ± 0.68	0.017
Cost, NT\$/month (mean ± SD)			
Outpatient department	48,848.55 ± 25,315.39	70,694.21 ± 13,721.48	0.134
Emergency department	230.71 ± 339.17	782.44 ± 1,992.57	0.01
Hospitalization	105,795.02 ± 153,794.72	101,341.06 ± 209,669.21	0.903
Supportive medications	202.89 ± 144.41	224.19 ± 398.01	0.743

# 口服標靶藥使用情形

	Intervention (n = 40)	Nonintervention (n = 97)	p value
Dose adjustment, no. (%)	10 (25)	18 (19)	0.395
Reason, no. (%)			
Intolerance	3 (30)	13 (72)	0.031
Disease progression	2 (20)	4 (22)	
Other	5 <sup>a</sup> (50)	1 (6)	
Dose interruption, no. (%)	7 (18)	23 (24)	0.424
Reason, no. (%)			
Intolerance	6 (86)	18 (78)	0.666
Other	1 (14)	5 (22)	
Permanent discontinuation, no. (%)	25 (68)	66 (76)	0.166
Reason, no. (%)			
Intolerance	1 (4)	14 (21)	0.048
Disease progression	22 (88)	41 (62)	
Death	0 (0)	8 (13)	
Other	2 (8)	3 (5)	
Treatment duration (mean ± SD)	17.3 ± 2.1	12.8 ± 1.3	0.078
Relative dose intensity (mean ± SD)	0.938	0.956	0.637

# 口服抗癌藥事服務挑戰

服務地點

WHERE?

WHY?

藥師誘因  
病人誘因

WHEN?

服務時段

WHAT?

藥師資格  
病人族群

WHO?

1. 症狀評估
2. 服務內容  
廣度深度

# 總結

- 癌症病患及口服抗癌藥與日俱增，藥師需更加關注這個族群。
- 口服抗癌藥事服務價值
  - 美國經驗：可增加病患用藥知識及順服性。
  - 萬芳經驗
    - 減少就醫次數
    - 減少醫療費用
    - 減少不耐受而調整劑量或停藥
- 挑戰：需整合多層面因素，以提升此藥事服務模式之規模及量能。





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