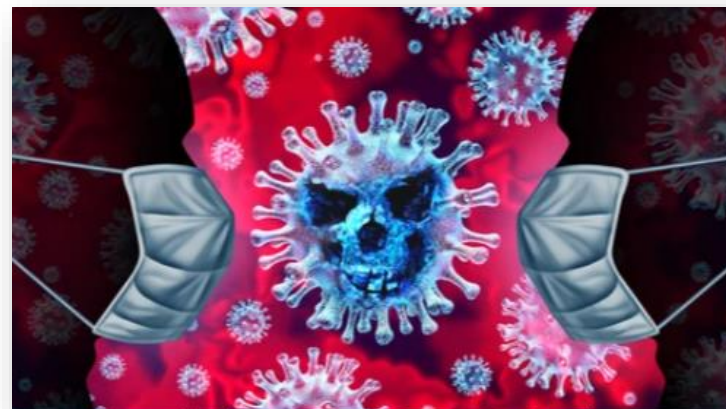


# COVID-19口服抗病毒藥物 使用經驗分享

臺北市立萬芳醫院 彭筠婷藥師

2022年8月20日



# 簡報大綱

1

簡述COVID-19口服病毒藥物

2

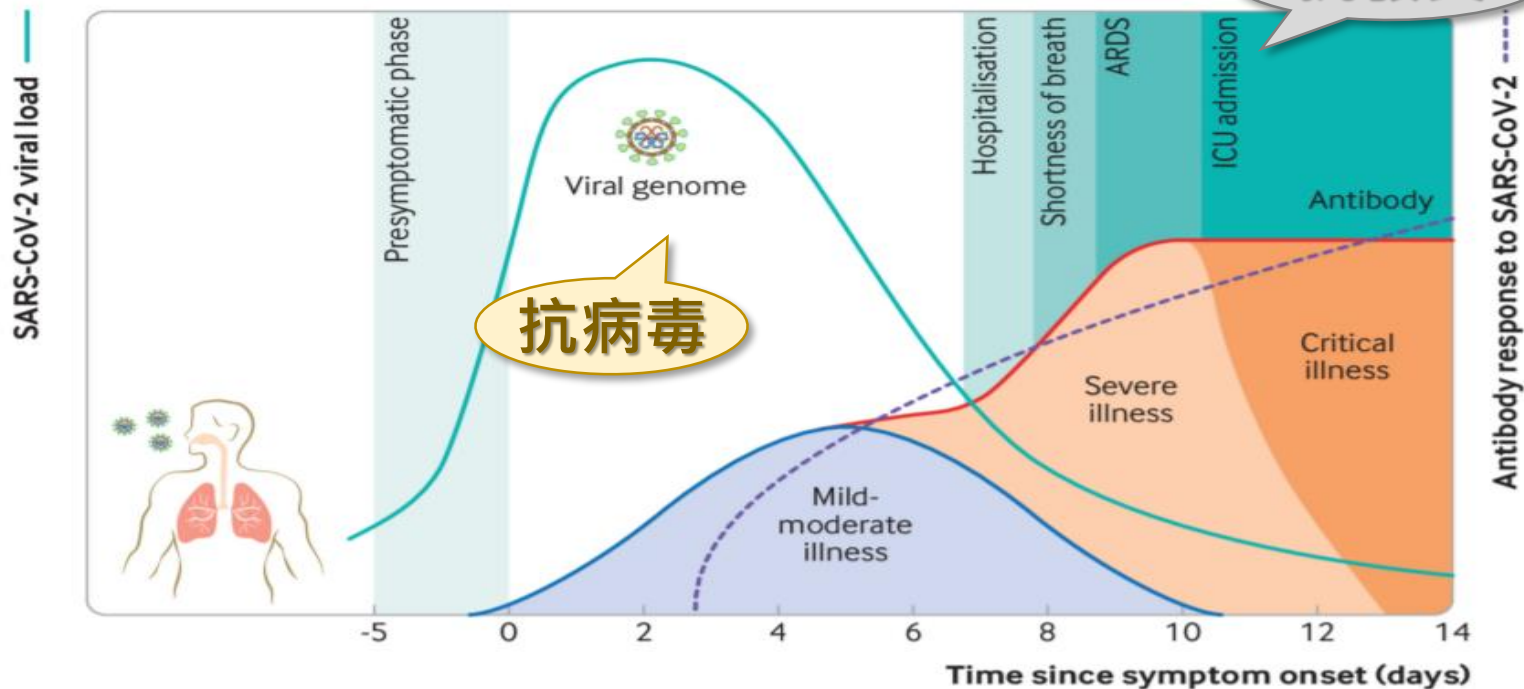
萬芳醫院藥師於COVID-19口服抗病毒藥物

3

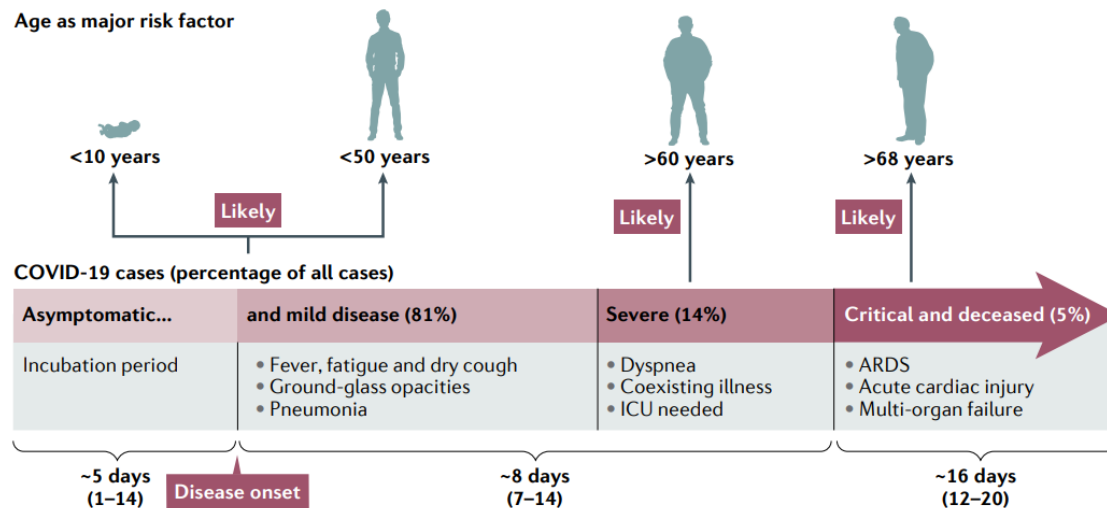
照護/追蹤經驗分享



抗發炎



Age as major risk factor



## THE WHITE HOUSE

NATIONAL  
COVID-19  
PREPAREDNESS  
PLAN

MARCH 2022

Ensure there are enough treatments for every American who needs them.

The U.S. government will procure additional treatments; continue to use an expedited, streamlined process to review treatments for authorization by the FDA; and accelerate research and development into next generation treatments. These efforts will require additional funding and authorities from Congress.

Launch a nationwide **Test to Treat** Initiative so Americans can rapidly access treatment, including by visiting a “one-stop” location to get a free test and free treatment pills.

The Administration will put forth new educational efforts for the public and providers so that Americans can rapidly access treatments. The Administration will establish “One-Stop Test to Treat” locations at pharmacy-based clinics, community health centers, Long-Term Care Facilities, and the U.S. Department of Veterans Affairs (VA) facilities across the country. “One-stop” sites will be operational by March.



Figure 1. Therapeutic Management of Nonhospitalized Adults With COVID-19

## PATIENT DISPOSITION

## PANEL'S RECOMMENDATIONS

Does Not Require Hospitalization or Supplemental Oxygen

All patients should be offered symptomatic management (AIII).  
For patients who are at high risk of progressing to severe COVID-19,<sup>a</sup> use 1 of the following treatment options:

## Preferred Therapies

Listed in order of preference:

- Ritonavir-boosted nirmatrelvir (Paxlovid)<sup>b,c</sup> (AIIa)
- Remdesivir<sup>c,d</sup> (BIIa)

## Alternative Therapies

For use ONLY when neither of the preferred therapies are available, feasible to use, or clinically appropriate. Listed in alphabetical order:

- Bebtelovimab<sup>e</sup> (CIII)
- Molnupiravir<sup>c,f</sup> (CIIa)

The Panel **recommends against** the use of dexamethasone<sup>g</sup> or other systemic corticosteroids in the absence of another indication (AIII).

**Paxlovid 倍拉維**  
(Nirmatrelvir+Ritonavir)

EPIC-HR

EPIC-SR

EPIC-PEP

28 天 住院或死亡率↓88%

**Molnupiravir 莫納皮拉韋**

MOVE-OUT

29 天 住院或死亡率↓31%

Discharged From Hospital Inpatient Setting in Stable Condition and Does Not Require Supplemental Oxygen

The Panel **recommends against** continuing the use of remdesivir (AIIa), dexamethasone<sup>g</sup> (AIIa), or baricitinib (AIIa) after hospital discharge.

Discharged From Hospital Inpatient Setting and Requires Supplemental Oxygen

For those who are stable enough for discharge but who still require oxygen<sup>h</sup>

There is insufficient evidence to recommend either for or against the continued use of remdesivir or dexamethasone.

Discharged From ED Despite New or Increasing Need for Supplemental Oxygen

When hospital resources are limited, inpatient admission is not possible, and close follow-up is ensured<sup>i</sup>

The Panel recommends using dexamethasone 6 mg PO once daily for the duration of supplemental oxygen (dexamethasone use **should not exceed** 10 days) with careful monitoring for AEs (BIII).

Since remdesivir is recommended for patients with similar oxygen needs who are hospitalized,<sup>j</sup> clinicians may consider using it in this setting. As remdesivir requires IV infusions for up to 5 consecutive days, there may be logistical constraints to administering remdesivir in the outpatient setting.

# 新型冠狀病毒 ( SARS-CoV-2 ) 感染臨床處置指引

- Molnupiravir (Lagevrio)

具前述任一重症風險因子<sup>\*</sup>(除懷孕(或產後六週內)外)・未使用氧氣且於發病

五天內之 ≥ 18 歲輕症病患・且無法使用其他建議藥物者・

Rating of Recommendations: A = Strong; B = Moderate; C = Weak

Rating of Evidence: I = One or more randomized trials without major limitations; IIa = Other randomized trials or subgroup analyses of randomized trials; IIb = Nonrandomized trials or observational cohort studies; III = Expert opinion





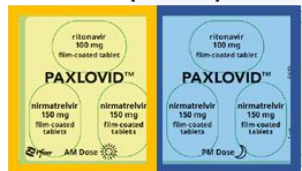
# Paxlovid 倍拉維

(Nirmatrelvir+Ritonavir)

發病5天內, ≥ 12歲, ≥ 40 kg

**Paxlovid 正常劑量=每次3粒(2粉1白)**

eGFR ≥ 60 (CKD-EPI)



早上 晚上

\*紅、藍框內藥品組成是相同的, 均為2N1R\*

1.71公分  
R9 0.91公分  
ritonavir  
3CL 1.76公分  
PFE 0.86公分  
Nirmatrelvir (PF-07321332)

**Paxlovid 腎調量=每次2粒(1粉1白)**

eGFR 30-60(CKD-EPI)



早上 晚上

\*紅、藍框內藥品組成是相同的, 均為1N1R\*

1.71公分  
R9 0.91公分  
ritonavir  
1.76公分  
PFE 0.86公分  
Nirmatrelvir (PF-07321332)

β-D-N4-hydroxycytidine(active)

# Molnupiravir 莫納皮拉韋

均每日兩次(早晚服用), 共5天療程

每次4粒

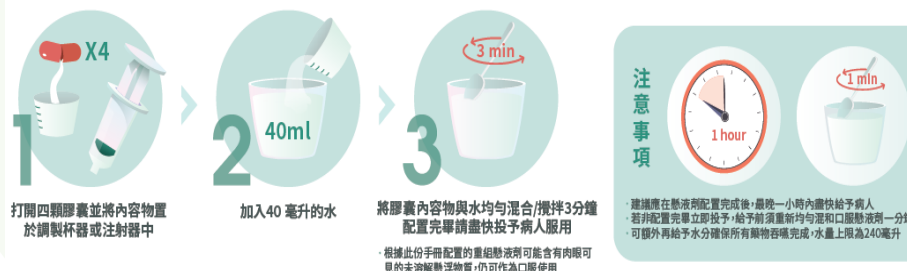


發病5日內, ≥ 18歲

無法口服且有用藥需求之病患, 口服懸浮液配置建議

免責聲明: 利用口服懸浮液方式給予病患molnupiravir的效用並未在臨床試驗中評估; 原始試驗中的投予方式為每12小時口服一次。根據第二期臨床試驗(MOVE-IN/MK-4482-001)的資料, 僅有五位受試者利用鼻胃管/口胃管投予molnupiravir, 且molnupiravir中文說明書中並不推薦該方式給予藥物

以下請詳見臨床試驗(MOVE-IN/MK-4482-001) 中利用鼻胃管/口胃管投予molnupiravir的藥物配置方法:



避免哺乳

→ 哺乳婦女服藥後4天

避孕

→ 孕齡婦女服藥後4天

→ 孕齡男性服藥3個月



整粒吞



CKD-EPI < 30  
不建議



Child-pugh C  
不建議



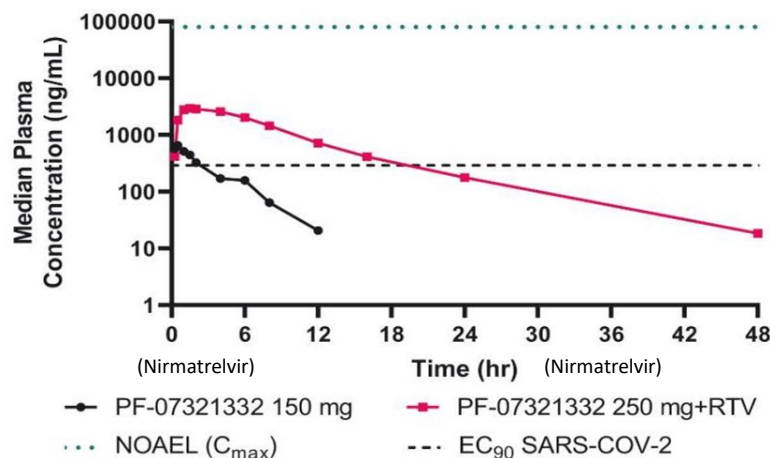
交互作用



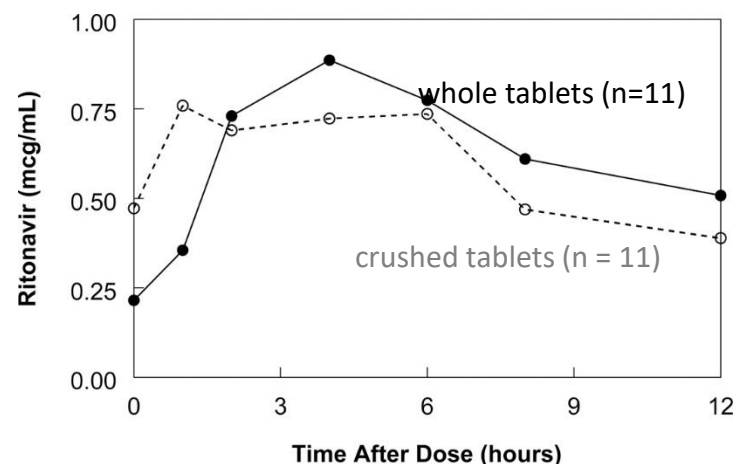
# Paxlovid不建議磨粉



併用ritonavir增加nirmatrelvir血中濃度



磨ritonavir將降低其藥物血中濃度



附註補充

3：磨粉可？考量效果比較為89%VS30%，即使磨粉稍減損，還是可用。黃教授舉例思考萬一99歲有Gastrostomy老父染疫，也要將Paxlovid磨粉服用

## CDC 台北區承辦人員

各位好：

檢送Paxlovid中文說明書(含病人與照顧者說明)，

另提醒此藥物 **不可以磨粉，不可以磨粉，不可以磨粉**，

請轉知並提醒相關用藥同仁，感謝！

PAXLOVID (PF-07321332 和 ritonavir 錠劑) 可與食物併服或不併服 [參見臨床藥理學 (12.3)]。錠劑需整顆吞服，不得咀嚼、分開或壓碎。

註：一人份2萬元，請審慎使用



# 即日起修訂未滿65歲口服抗病毒藥物適用條件

Paxlovid	莫納皮拉韋 (Molnupiravir)
輕度至中度未使用氧氣且發病5天之內之12歲(含)以上且體重40(含)公斤以上病人， <b>並有下列任一情形者</b>	輕度至中度未使用氧氣且於發病5天之內之18歲(含)以上病人， <b>有以下任一情形(不含懷孕)，且無法使用其他建議藥物者</b>

- ◆癌症 ◆糖尿病 ◆慢性腎病
- ◆心血管疾病(不含高血壓) ◆孕婦與產後6週內婦女(僅適用Paxlovid, 不適用莫納皮拉韋)
- ◆慢性肺疾  
(間質性肺病、肺栓塞、肺高壓、氣管擴張、慢性阻塞性肺病)
- ◆結核病
- ◆慢性肝病  
(肝硬化、非酒精性脂肪性肝炎、酒精性肝病與免疫性肝炎)
- ◆失能(注意力不足及過動症、腦性麻痺、先天性缺陷、發展或學習障礙、脊髓損傷)
- ◆精神疾病(情緒障礙、思覺失調症)、失智症
- ◆BMI ≥ 30 (或12-17歲兒童青少年BMI 超過同齡第95百分位)
- ◆影響免疫功能之疾病(HIV感染、先天性免疫不全、實體器官或血液幹細胞移植、使用類固醇或其他免疫抑制劑)

**註：原列入重症高風險因子之「吸菸或已戒菸者」，即日起依專家會議決議自用藥條件移除，「吸菸或已戒菸者」須搭配任一其他風險因子，方符合用藥條件**

目前尚無Paxlovid用於孕婦及產後婦女之臨床資料，若臨床醫師評估使用效益大於風險，經充分告知並獲同意後可使用。

2022/05/23

中央流行疫情指揮中心





# 簡報大綱

1

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2

萬芳醫院藥師於COVID-19口服抗病毒藥物

3

照護/追蹤經驗分享

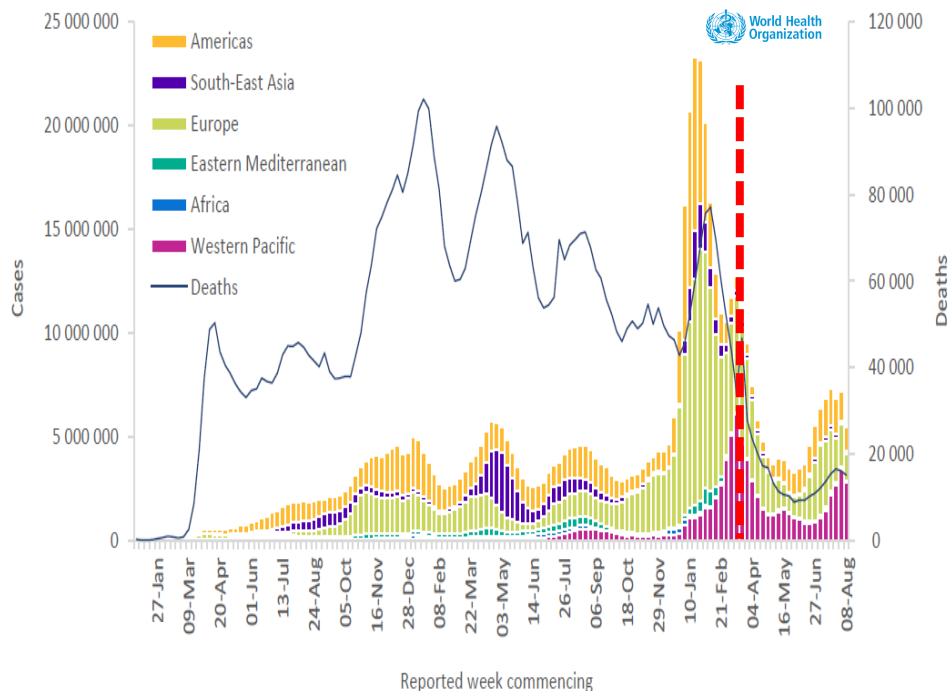
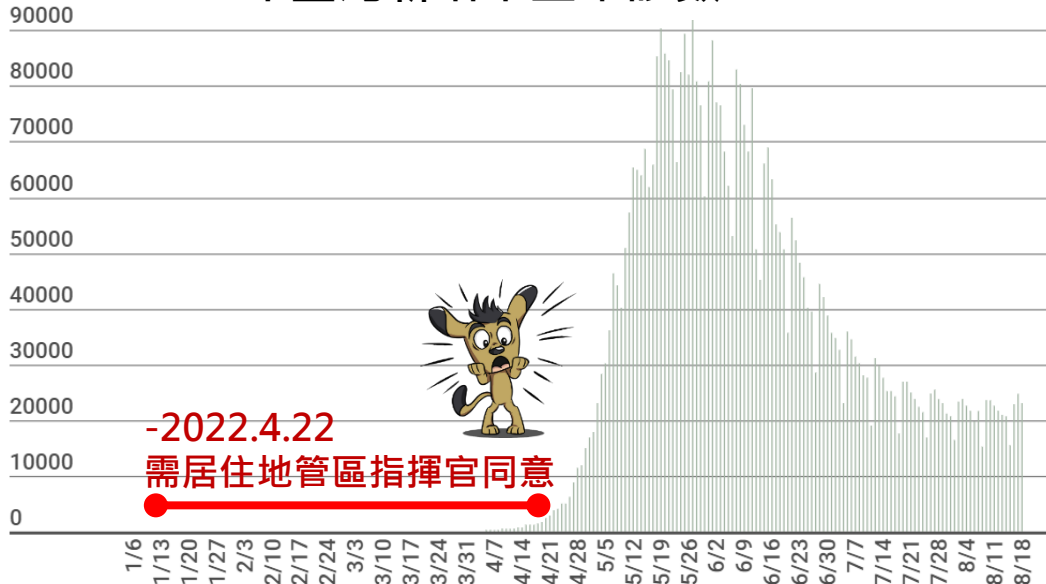


# COVID-19 診斷政策異動 隔離政策調整 居家照護啟動

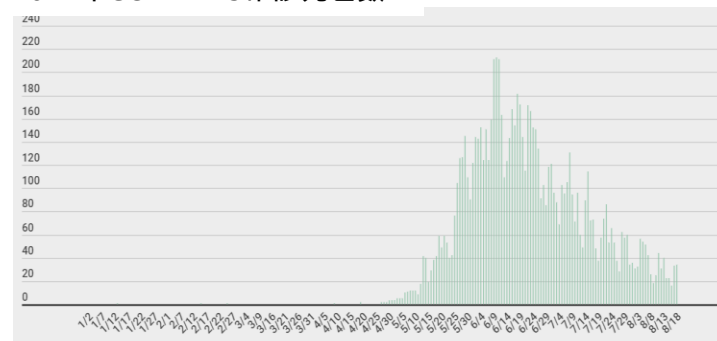
## 口服抗病毒藥物

開立審查機制、申請文件、  
風險因子界定、追蹤表單異動

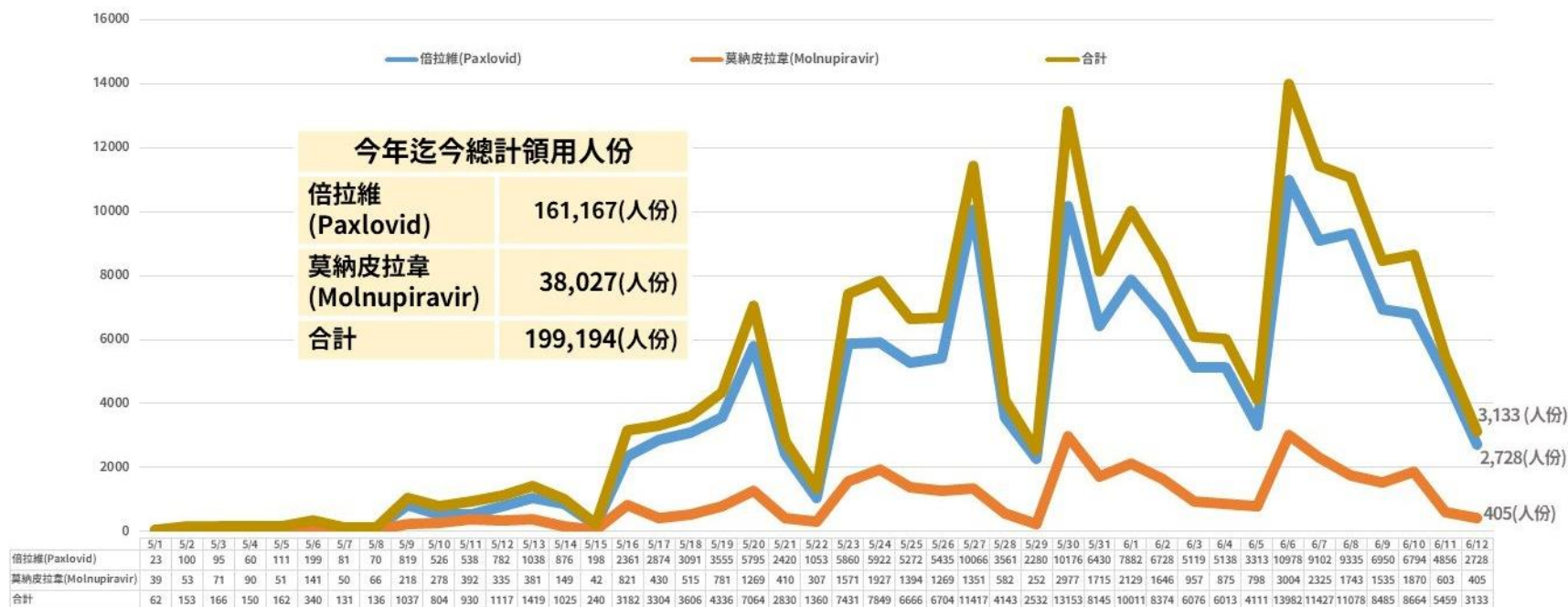
2022年臺灣新增本土確診數



2022年COVID-19確診死亡數



# 口服抗病毒藥物每日領用情形



5/1

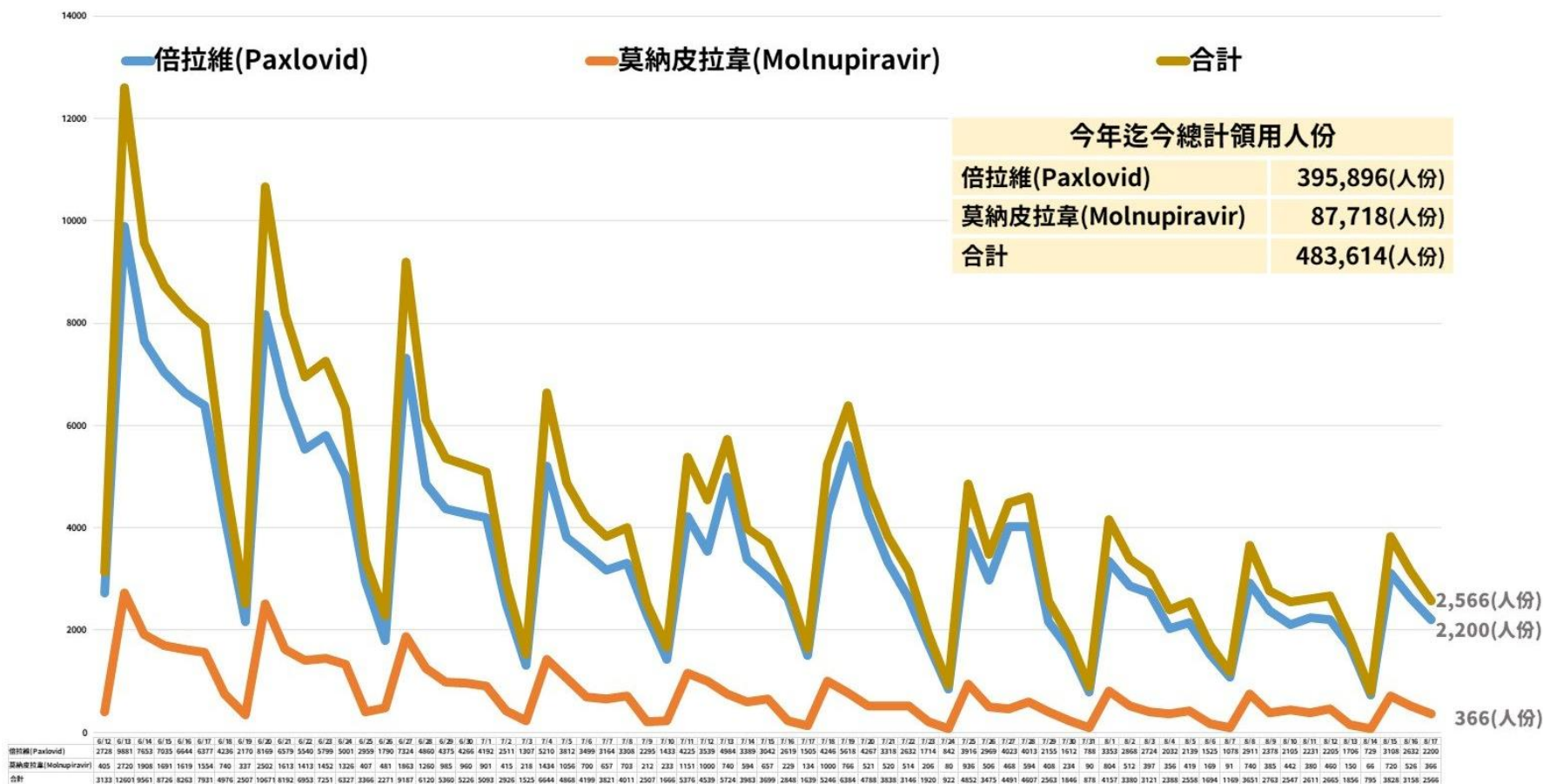
單位(人份)

2022/06/13

中央流行疫情指揮中心



# 口服抗病毒藥物每日領用情形



2022/08/18

單位(人份)

中央流行疫情指揮中心





# 各國口服抗病毒藥物儲備使用情形

我國「確診個案抗病毒藥物使用率」已高過其他主要國家

國家	總採購量(萬)	COVID-19 確診個案數(萬)	口服藥 使用量(人份)	確診個案 藥物使用率
臺灣	102.7	327.6 <small>2022.1.29-2022.6.18</small>	251,252 <small>2022.1.29-2022.6.18</small>	7.67%
美國	2,310.0	3,470.7 <small>2021.12.17-2022.6.12</small>	1,659,708 <small>2021.12.17-2022.6.12</small>	4.78%
日本	360.0	712.0 <small>2022.1.1-2022.5.31</small>	199,783 <small>2022.1-2022.5.31</small>	2.81%
香港	150.0	119.0 <small>2022.2.1-2022.5.1</small>	27,799 <small>2022.2-2022.5.1</small>	2.34%
韓國	207.1	1,409.9 <small>2022.1.14-2022.4.7</small>	187,115 <small>2022.1.14-2022.4.7</small>	1.33%
英國	498.0	1,110.3 <small>2021.12.19-2022.6.12</small>	23,842 <small>2021.12.19-2022.6.12</small>	0.21%
新加坡	10.0	108.5 <small>2022.1.1-2022.6.18</small>	未對外公布	未對外公布

註：1.各國/地區確診數資料來源為各國政府官網、OWID、WHO與JHU網站，惟各國公告數值可能因後續流病資料修正、通報與計算定義、數值增補更新或傳檔等許多因素，使資料來源之確診數值不一定完全相符

2.更新處以藍字標示

2022/06/24

中央流行疫情指揮中心



# 住院照護-如何讓適用個案即時且安全的服藥?

- 行政流程宣達與支援
  - 專責病房主治、住院醫師
- 用藥資訊即時傳遞
- 藥師相互補位



[CDC用藥申請]COVID-19 小瑞, 小P, 小M, 單株抗體 (63) 4



電子表單上線

# Remdesivir: 電子表單



彭妹妹 WFH

4月21日 下午 2:20

CDC用藥申請表及院內流程 111.04.23

Google <https://drive.google.com/...>

藥好查 <https://drug.wanfang.gov.tw/>

= 院外要從OneBot登入: 藥好查/用藥指引/抗生藥管理計畫(ASP)

TW CDC [https://www.cdc.gov.tw/Category/List/RseL-eiUxo\\_EaUnzCz11gQ](https://www.cdc.gov.tw/Category/List/RseL-eiUxo_EaUnzCz11gQ)

\* 所有文件都是要當日送CDC, 懇請大家務必確認提供資訊跟勾選檢核表的一致性\*

= 勾選“BMI>25”, 提供之病摘的BMI就要>25

= 勾選“CXR顯示肺炎”, 提供之病摘不可以寫no pneumonia patch.....

#Remdesivir

(1) 小瑞院內申請表: [...](#)

(2) 院內審核資格醫師#同意

#口服抗病毒藥 (小M、小P) #Paxlovid #Molnupiravir

(1) 院內審核資格醫師同意

(2) 藥師醫師溝通潛在交互作用並有共識使用安全性

\*\*簽名、蓋手印, 如因政策家屬不方便來醫院 請註明解釋人員/何時/方式/跟那位家屬解釋 並蓋醫師章\*\*

#單株抗體-個案居住地的指揮官同意

#審核資格醫師:蘇迎士GSM6000、陳甫翰GSM0003、李枝新GSM6000、歐聰億GSM0008、李文生GSM6000

## 4.21 建立藥師-住院醫師 Line群組



## Oral Antiviral Medicaitons for COVID-19

藥劑部實習生:  
指導老師:



邀約大家5/5 17:00參加藥劑部關於Paxlovid及Molnupiravir的讀書筆記分享-Google Meet

## 5.5 防疫病房醫師讀書會

4.25 住院藥局藥師完成DDI EXCEL查詢檔案、Pharmacy Note Template



病人治療紀錄表

填表日期：111 年 \_\_\_\_ 月 \_\_\_\_ 日

治療用藥	<input type="checkbox"/> Paxlovid <input type="checkbox"/> Molnupiravir				
醫療機構	臺北市立萬芳醫院		病歷號		
科別			主治醫師		
用藥日期	111 年 ____ 月 ____ 日		用法		
個案資料					
性別	<input type="checkbox"/> 男 <input type="checkbox"/> 女	年齡	____ 歲	體重	____ 公斤
懷孕/哺乳	<input type="checkbox"/> 有 <input type="checkbox"/> 無	最近6個月內曾接種COVID-19疫苗： <input type="checkbox"/> 有，已接種____劑 <input type="checkbox"/> 無			
潛在疾病與合併症	<input type="checkbox"/> 有，請描述：_____ <input type="checkbox"/> 無 <input type="checkbox"/> 不明				
過去病史	<input type="checkbox"/> 有，請描述：_____ <input type="checkbox"/> 無 <input type="checkbox"/> 不明				
藥物副作用與過敏史	<input type="checkbox"/> 有，請描述：_____ <input type="checkbox"/> 無 <input type="checkbox"/> 不明				
肝功能障礙	<input type="checkbox"/> 有，請描述：_____ <input type="checkbox"/> 無 <input type="checkbox"/> 不明				
腎功能障礙	<input type="checkbox"/> 有，請描述：_____ <input type="checkbox"/> 無 <input type="checkbox"/> 不明				
最初顯示的臨床症狀	<input type="checkbox"/> 發燒 <input type="checkbox"/> 咳嗽 <input type="checkbox"/> 喉嚨痛 <input type="checkbox"/> 頭痛 <input type="checkbox"/> 肌肉痛 <input type="checkbox"/> 鼻塞 <input type="checkbox"/> 流鼻水 <input type="checkbox"/> 全身倦怠感 <input type="checkbox"/> 腹瀉 <input type="checkbox"/> 嗅味覺喪失 <input type="checkbox"/> 其他，請描述：_____				
治療經過	【第1天】①體溫：____℃ ②臨床症狀有無緩和： <input type="checkbox"/> 有 <input type="checkbox"/> 無 <input type="checkbox"/> 無症狀 (接續下頁)				

【第2天】①體溫：____℃ ②臨床症狀有無緩和： <input type="checkbox"/> 有 <input type="checkbox"/> 無 <input type="checkbox"/> 無症狀
【第3天】①體溫：____℃ ②臨床症狀有無緩和： <input type="checkbox"/> 有 <input type="checkbox"/> 無 <input type="checkbox"/> 無症狀
【第4天】①體溫：____℃ ②臨床症狀有無緩和： <input type="checkbox"/> 有 <input type="checkbox"/> 無 <input type="checkbox"/> 無症狀
【第5天】①體溫：____℃ ②臨床症狀有無緩和： <input type="checkbox"/> 有 <input type="checkbox"/> 無 <input type="checkbox"/> 無症狀
【第6天】①體溫：____℃ ②臨床症狀有無緩和： <input type="checkbox"/> 有 <input type="checkbox"/> 無 <input type="checkbox"/> 無症狀
【第7天】①體溫：____℃ ②臨床症狀有無緩和： <input type="checkbox"/> 有 <input type="checkbox"/> 無 <input type="checkbox"/> 無症狀

誰追蹤？為何而追蹤？  
追蹤內容？  
出院後...

- ◆號稱用藥安全的守護者我們能做什麼？  
◆全世界不只有COVID-19...



● 急診就診人次變多 → PCR確診

- 取得CDC流程許可
- 啟動始於一位輕症HIV長期個管個案確診
  - 4.30 急診開立口服抗病毒藥物
  - HIV個管師協助追蹤



第一天					
Fever	✓	Cough	✓	SoreThroat	✓
Headache		MuscleAche		StuffyNose	
RunnyNose		Fatigue	✓	Diarrhea	
Dizzy/Nausea		TasteChange		BP change	

第二天					
Fever		Cough	✓	SoreThroat	✓
Headache		MuscleAche		StuffyNose	
RunnyNose		Fatigue		Diarrhea	
Dizzy/Nausea		TasteChange		BP change	

第二天					
Fever		Cough	✓	SoreThroat	✓
Headache		MuscleAche		StuffyNose	
RunnyNose		Fatigue		Diarrhea	
Dizzy/Nausea		TasteChange		BP change	

第四天

Fever		Cough	✓	SoreThroat	✓
Headache		MuscleAche		StuffyNose	
RunnyNose		Fatigue		Diarrhea	
Dizzy/Nausea		TasteChange		BP change	
Other					

第五天				
Fever		Cough	✓	SoreThroat
Headache		MuscleAche		StuffyNose
RunnyNose		Fatigue		Diarrhea
Dizzy/Nausea		TasteChange		BP change
Other				

第六天					
Fever		Cough	<input checked="" type="checkbox"/>	SoreThroat	<input checked="" type="checkbox"/>
Headache		MuscleAche		StuffyNose	
RunnyNose		Fatigue		Diarrhea	
Dizzy/Nausea		TasteChange		BP change	
Other					

第七天			
Fever		Cough	SoreThroat
Headache		MuscleAche	StuffyNose
RunnyNose		Fatigue	Diarrhea
Dizzy/Nausea		TasteChange	BP change
Other			

冷痛感 100% 完全 吃止痛药 100% 有效 吃止痛药 100% 有效	【第1天】①体温: $39.5^{\circ}\text{C}$ ②临床症状有: 寒战 <input checked="" type="checkbox"/> 腹痛 <input type="checkbox"/> 咳嗽 <input type="checkbox"/> ③临床症状有: 寒战 <input checked="" type="checkbox"/> 腹痛 <input type="checkbox"/> 咳嗽 <input type="checkbox"/>	时冷时热、寒战
吃止痛药 100% 有效	【第2天】①体温: $39.1^{\circ}\text{C}$ ②临床症状有: 寒战 <input checked="" type="checkbox"/> 腹痛 <input type="checkbox"/> 咳嗽 <input type="checkbox"/>	寒战、时冷时热、咳嗽、寒战、时冷时热、咳嗽
吃止痛药 100% 有效	【第3天】①体温: $38.2^{\circ}\text{C}$ ②临床症状有: 寒战 <input checked="" type="checkbox"/> 腹痛 <input type="checkbox"/> 咳嗽 <input type="checkbox"/>	寒战、时冷时热、寒战、时冷时热、寒战、时冷时热
吃止痛药 100% 有效	【第4天】①体温: $38.1^{\circ}\text{C}$ ②临床症状有: 寒战 <input checked="" type="checkbox"/> 腹痛 <input type="checkbox"/> 咳嗽 <input type="checkbox"/>	寒战、时冷时热、寒战、时冷时热、寒战、时冷时热
吃止痛药 100% 有效	【第5天】①体温: $38.0^{\circ}\text{C}$ ②临床症状有: 寒战 <input checked="" type="checkbox"/> 腹痛 <input type="checkbox"/> 咳嗽 <input type="checkbox"/>	寒战、时冷时热、寒战、时冷时热、寒战、时冷时热
吃止痛药 100% 有效	【第6天】①体温: $38.0^{\circ}\text{C}$ ②临床症状有: 寒战 <input checked="" type="checkbox"/> 腹痛 <input type="checkbox"/> 咳嗽 <input type="checkbox"/>	寒战、时冷时热、寒战、时冷时热、寒战、时冷时热
吃止痛药 100% 有效	【第7天】①体温: $38.0^{\circ}\text{C}$ ②临床症状有: 寒战 <input checked="" type="checkbox"/> 腹痛 <input type="checkbox"/> 咳嗽 <input type="checkbox"/>	寒战、时冷时热、寒战、时冷时热、寒战、时冷时热



# 一切從這裡開始...



- 急診待床多、病房收不下
  - 感染科醫師+藥師至急診評估用藥
    - 抽血項目溝通
    - 確立藥師交班與流程
  - 急診口服藥物處方後之評估與追蹤
    - ⊗ 急診確診者並非本人領藥
    - ⊗ 病人治療紀錄表需繳交

病人姓名： 病歷號： \*\* 每次拿藥請回點剩餘格子 vs. 剩餘實體藥量使否一致\*\*

急診開始給藥	給藥日期/時間							療程共 10 個劑量，不 需要的格子 直接劃掉
	發藥	AM	第一劑					
	請註記 ED or UD	9:00	早上吃					
			這邊開始					
急診開始給藥	給藥日期/時間	PM	第一劑					
	發藥	18:00	下午吃					
	請註記 ED or UD	或	這邊開始					
		21:00						

\* 服藥時間，護理師才至藥局領藥，已發藥/服用=藥師蓋章

\* 如個案辦出院：請發還剩餘療程藥品

\* 如登入院：請急診藥師與病房確認已服用劑量，並請醫師開立剩餘療程住院醫囑

交班病房/居家藥師



# 一切從這裡開始...



## • 居家照護

– 急診

– 門診

– 防疫急門診、視訊診

▪ 支援藥師溝通管道建立

藥師有機會衛教, 但.....

Paxlovid個案

我在醫院感受到尊榮服務，醫師看診40分鐘、藥師衛教20分鐘。可是其實我頭昏腦脹而且藥師麥克風斷斷續續，我聽不清楚。後來不好意思打擾你們，最後我參考FB建議停了長期用藥。

加入好友

417 ▲22

相較於7天前



# 藥事服務@萬芳醫院

機構、非機構 社區篩檢站、機廠

**視訊診** **防疫急門診**



視訊診



**住院** **急診**



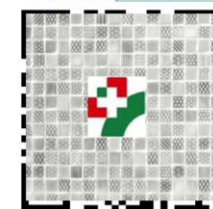
感染科醫師  
個管團隊  
社醫部



Pelacakan Antivirus Pengguna

Wanfang Farmasi LINE

Teks kembali: pasien nama + ID



Apoteker akan menghubungi anda melalui LINE

Dosis dua kali sehari selama 5 hari

Gunakan pengobatan hingga selesai,

jangan di hentikan atas kemauan sendiri



# 簡報大綱

1

簡述COVID-19口服病毒藥物

2

萬芳醫院藥師於COVID-19口服抗病毒藥物

3

照護/追蹤經驗分享





評估適用對象



開立抗病毒藥物  
(併用藥調整)



調劑核發



追蹤1: 使用期間



追蹤2: 療程後



# 61歲男性 75 kg 無接種COVID-19疫苗

## • 4.24 支架

- NSTEMI s/pp PTCA + stent to LCX-P
  - Aspirin+ ticagrelor → aspirin+ clopidogrel
- HbA1c 11.8
- Scr 0.85, CKD-EPI 94; Urine CREA 47.95

## • 6.15 防疫急門

- 居用快篩判COVID-19 (+)、開立症狀緩解藥品
- Runny nose, cough, sore throat, headache, fever

## • 6.16 外院診所視訊看診、外院領藥

- 領用Paxlovid 近期支架~ week 7
- 診所醫師、外院藥師囑停用clopidogrel

## • 6.17 心臟內科夜診

- 開立prasugrel

## • 6.20 電話追蹤 Paxlovid dosing?

- 聯繫社區藥局、聯繫診所處方醫師



Happy  
Birthday



# COVID-19口服抗病毒藥物適用對象



實證資料

使用規範



個案

病史詢問詳實度  
發病時間/接觸史



醫療團隊

團隊共識  
輔助流程

實證、病人安全、個案意願



# 即日起修訂未滿65歲口服抗病毒藥物適用條件

Paxlovid	莫納皮拉韋 (Molnupiravir)
輕度至中度未使用氧氣且發病5天之 12歲(含)以上且體重40(含)公斤以上 病人，並有下列任一情形者	輕度至中度未使用氧氣且於發病5天之18歲 (含)以上病人，有以下任一情形(不含懷孕)，且 無法使用其他建議藥物者

- ◆癌症 ◆糖尿病 ◆慢性腎病
- ◆心血管疾病(不含高血壓) ◆孕婦與產後6週內婦女(僅適用Paxlovid, 不適用莫納皮拉韋)
- ◆慢性肺疾  
(間質性肺病、肺栓塞、肺高壓、氣管擴張、慢性阻塞性肺病)
- ◆結核病
- ◆慢性肝病  
(肝硬化、非酒精性脂肪性肝炎、酒精性肝病與免疫性肝炎)
- ◆失能(注意力不足及過動症、腦性麻痺、先天性缺陷、  
發展或學習障礙、脊髓損傷)
- ◆精神疾病(情緒障礙、思覺失調症)、失智症
- ◆BMI ≥ 30 (或12-17歲兒童青少年BMI 超過同齡第95百分位)
- ◆影響免疫功能之疾病(HIV感染、先天性免疫不全、實體器官或血液幹細胞移植、使用類固醇或其他免疫抑制劑)

註：原列入重症高風險因子之「吸菸或已戒菸者」，即日起依專家會議決議自用藥條件移除，「吸菸或已戒菸者」須搭配任一其他風險因子，方符合用藥條件

目前尚無Paxlovid用於孕婦及產後婦女之臨床資料，若臨床醫師評估使用效益大於風險，經充分告知並獲同意後可使用。

2022/05/23

中央流行疫情指揮中心







1. **Higher risk** for severe COVID-19 outcomes is defined as an underlying medical condition or risk factor that has a published meta-analysis or systematic review or complete the [CDC systematic review process](#). The meta-analysis or systematic review demonstrates good or strong evidence, (depending on the quality of the studies in the review or meta-analysis) for an increase in risk for at least one severe COVID-19 outcome.

Asthma

Cancer

Cerebrovascular disease

Chronic kidney disease\*

Chronic lung diseases limited to:

Interstitial lung disease

Pulmonary embolism

Pulmonary hypertension

Bronchiectasis

COPD (chronic obstructive pulmonary disease)

Chronic liver diseases limited to:

Cirrhosis

Non-alcoholic fatty liver disease

Alcoholic liver disease

Autoimmune hepatitis

Cystic fibrosis

Diabetes mellitus, type 1 and type 2\*‡

Disabilities‡

Attention-Deficit/Hyperactivity Disorder (ADHD)

Cerebral Palsy

Congenital Malformations (Birth Defects)

Limitations with self-care or activities of daily living

Intellectual and Developmental Disabilities

Learning Disabilities

Spinal Cord Injuries

(For the list of all conditions that were part of the review, [see the module below](#))

Heart conditions (such as heart failure, coronary artery disease, or cardiomyopathies)

HIV (human immunodeficiency virus)

Mental health disorders limited to:

Mood disorders, including depression

Schizophrenia spectrum disorders

Neurologic conditions limited to dementia‡

Obesity (BMI  $\geq 30$  kg/m<sup>2</sup> or  $\geq 95$ th percentile in children)\*‡

Primary Immunodeficiencies

Pregnancy and recent pregnancy

Physical inactivity

Smoking, current and former

Solid organ or hematopoietic cell transplantation

Tuberculosis

Use of corticosteroids or other immunosuppressive medications



# 1. Higher Risk

## 2. Suggestive higher risk

Cohort, case-control, cross-sectional studies

- Overweight (BMI  $\geq 25$  kg/m<sup>2</sup>, but  $< 30$  kg/m<sup>2</sup>)
- Sickle cell disease
- Substance use disorders
- Thalassemia

## 3. Mixed evidence

Has a published SR or MA or CDC SR process  
=> inconclusive

- Alpha 1 antitrypsin deficiency
- Bronchopulmonary dysplasia
- Hepatitis B
- Hepatitis C
- Hypertension\*

Footnotes:

\* indicates underlying conditions for which there is evidence for pregnant and non-pregnant people

‡ underlying conditions for which there is evidence in pediatric patients.





The prioritization table below should be used **only** when logistical or supply constraints limit the availability of therapies.

Tier	Risk Group
1	<ul style="list-style-type: none"><li>• <b>Immunocompromised individuals</b> not expected to mount an adequate immune response to COVID-19 vaccination or SARS-CoV-2 infection due to their underlying conditions, regardless of vaccine status; or</li><li>• <b>Unvaccinated</b> individuals at the highest risk of severe disease (anyone aged <math>\geq 75</math> years or anyone aged <math>\geq 65</math> years with additional risk factors).</li></ul>
2	<ul style="list-style-type: none"><li>• <b>Unvaccinated</b> individuals not included in Tier 1 who are at risk of severe disease (anyone aged <math>\geq 65</math> years or anyone aged <math>&lt; 65</math> years with clinical risk factors)</li></ul>
3	<ul style="list-style-type: none"><li>• <b>Vaccinated</b> individuals at high risk of severe disease (anyone aged <math>\geq 75</math> years or anyone aged <math>\geq 65</math> years with clinical risk factors)</li></ul>
4	<ul style="list-style-type: none"><li>• <b>Vaccinated</b> individuals at risk of severe disease (anyone aged <math>\geq 65</math> years or anyone aged <math>&lt; 65</math> years with clinical risk factors)</li></ul>

Note: Vaccinated individuals who have not received a COVID-19 vaccine booster dose are likely at higher risk for severe disease; patients within this tier in this situation should be prioritized for treatment.

我不嚴重，需要  
吃病毒藥嗎

我有打疫苗了！  
不用吃病毒藥物

近期支架、糖尿病  
為什麼醫師沒開抗病毒藥物



# Paxlovid於孕婦：利>弊，充分告知風險

- Pregnancy is included among the conditions that put individuals at high risk for clinical progression. This makes pregnant patients, including those with pregnancy as their only risk factor, eligible to receive outpatient oral SARS-CoV-2 protease inhibitor therapy, according to the EUA
- Obstetric care clinicians may consider the use of the oral SARS-CoV-2 protease inhibitor for the treatment of non-hospitalized COVID-19 positive pregnant individuals with **mild to moderate symptoms**, particularly if **one or more additional risk factors are present (eg body mass index >25, chronic kidney disease, diabetes mellitus, cardiovascular disease)**. Clinicians should weigh the available data against the individual risks of COVID-19 in pregnancy in each situation.
- Obstetric care clinicians should be aware that the concomitant use of PAXLOVID and certain other drugs (including medications used in obstetric settings such as **nifedipine, methylergonovine, fentanyl, midazolam, or betamethasone**) may result in potentially significant drug interactions. Prescribing clinicians should consult the full prescribing information prior to and during treatment for potential drug interactions



# 陽性、具風險因子= 開藥?

- 6.10 視訊診
  - 診所依居用快篩判訂陽性
  - 視訊診醫師開立Paxlovid
- 門診藥師發現個案於4.30有確診紀錄  
→ 聯繫診所醫師

指揮中心公布針對已解除隔離之確診個案

## COVID-19重複感染之定義及個案處置原則

	於發病日或採檢日 1至3個月內	於發病日或採檢日 間隔至少3個月後
重複感染 之定義	<ul style="list-style-type: none"> <li>● 症狀惡化 以及</li> <li>● PCR陽性(Ct值&lt;27) 或抗原/核酸快篩陽性</li> </ul>	PCR陽性(Ct值<30)或抗 原/核酸快篩陽性
個案處置 原則	<ul style="list-style-type: none"> <li>● 醫師可進行法定傳染病 通報，並先比照確定病 例處理</li> <li>● 後續由疾管署各區管制 中心研判是否為新的確 定病例並啟動相關防疫 措施</li> </ul>	<ul style="list-style-type: none"> <li>● 經醫師評估可能為重複 感染個案後，應進行法 定傳染病通報</li> <li>● 依確定病例處理原則， 啟動相關防疫措施及醫 療處置</li> </ul>

註：於發病日或採檢日3個月內，除症狀惡化等特殊情況外，建議無需再進行SARS-CoV-2檢驗

2022/07/01

中央流行疫情指揮中心



# 交互作用評估與建議



## 實證資料

資料是否存在  
文獻等級



## 個案

病史詢問詳實度



## 醫療團隊

機構內跨科別/醫師  
跨院個案照顧

為了落實照護紀錄、避免爭議、交班等目的，**紀錄**溝通內容相對重要！



# 交互作用評估與建議

A	B	C	D	E	F	G
Risk Rating	Effect on Concentration	Clinical Comments	中文建議(讀到X, D)	參考	更新日期	
Abacavir	A	No interaction was expected	Continue HIV treatment			
Abemaciclib	D	Increase the serum concentration of abemaciclib	Reduce abemaciclib dose to 100mg or 50mg twice daily; resume prior abemaciclib dose after 3-5 half-lives after last Paxlovid dose	Abemaciclib 減量為 100mg 或 50mg BID，待 Paxlovid 療程結束 3 至 5 半衰期後再服	111.5.26	
Aciclovir	X	Increase the serum concentration of aciclovir	Avoid co-administration—interrupt aciclovir therapy shortly	停服 Aciclovir，待 Paxlovid 療程結束後再服	111.5.26	
Acyclovir	-	No interaction was expected				
Afluzosin	X	Increase the serum concentration of afluzosin	Avoid co-administration—stop or replace afluzosin	避免併用，停藥後可服用 Paxlovid	111.5.26	
Allopurinol	-	No interaction was expected				
Alprazolam	D	Increase the serum concentration of alprazolam	Reduce the alprazolam dose by 50%	Alprazolam 減量 50%，密切觀察作用		
Amlodipine	-	No interaction was expected				
Aminophylline	B	Decrease the serum concentration of aminophylline	No dose adjustment is recommended			



## Management of Drug Interactions With Nirmatrelvir/Ritonavir (Paxlovid®): Resource for Clinicians

IDSA  
Infectious Diseases Society of America

TREATMENT AND MANAGEMENT GUIDELINE PANEL ON BEHALF OF  
INFECTIOUS DISEASES SOCIETY OF AMERICA

2022- Version 1.1\*

### 治療口服抗病毒藥物 Paxlovid 之禁忌藥物：

素能受體拮抗劑：alfuzosin

bethidine、piroxicam、propoxyphene

藥：ranolazine

整藥：amiodarone、dronedarone、flecainide、



## Paxlovid™ (倍拉維) 與常見用藥交互作用

Liverpool Drug Interactions Group

## Interactions with Essential M

Charts produced 8 March 2022

Please check ww



## nnavir (NMV/r)

Page 1 of 2



# 交互作用-中草藥品

「臺灣清冠一號」為中醫師處方用藥，須由中醫師診斷開立處方後使用

清冠一號和 Paxlovid 或 Molnupiravir 可以併用嗎？



從作用機轉來看，Paxlovid是抑制3CL蛋白酶，而Molnupiravir則是抑制RdRp (RNA-dependent RNA polymerase)來阻止病毒複製，達到抗病毒的效果。

清冠一號3個主要作用機轉，就已經包含了抑制3CL蛋白酶以阻止病毒複製，另外又可藉由抑制病毒棘蛋白與ACE2受器結合來阻止病毒入侵細胞。因此在學理上，**患者擇一使用即可達到治療效果，清冠一號不需要與Paxlovid或Molnupiravir併用。**

15



衛生福利部國家中醫藥研究所

## 清冠一號動態表

<https://bit.ly/3G5vChg>



<https://www.nricm.edu.tw/p/406-1000-6518,r61.php?Lang=zh-tw>

[公告]: 臺灣清冠一號民眾「Q&A問答區」

若民眾有任何清冠一號的使用問題要查詢，請點選如下「民眾Q&A問答區」

- 清冠一號**民眾**Q&A問答區

若醫師有任何清冠一號的使用問題要查詢，請點選如下「醫師Q&A問答區」

- 清冠一號**醫師**Q&A問答區





# 61歲男性 75 kg 無接種COVID-19疫苗

## • 4.24 支架

- NSTEMI s/pp PTCA + stent to LCX-P
  - Aspirin+ ticagrelor → **aspirin+ clopidogrel**
- HbA1c 11.8
- Scr 0.85, CKD-EPI 94; Urine CREA 47.95

## • 6.15 防疫急門診 醫師評估症狀不嚴重僅開立症狀緩解藥品

- 居用快篩判COVID-19 (+)
- Runny nose, cough, sore throat, headache, fever

## • 6.16 外院診所視訊看診、外院領藥

- 領用Paxlovid 近期支架~ week 7
- 診所醫師、外院藥師囑停用**clopidogrel**

## • 6.17 心臟內科夜診

- 開立prasugrel

## • 6.20 電話追蹤 Paxlovid dosing?

- 聯繫社區藥局、聯繫診所處方醫師





# 吃對了嗎?!

7/8 (五)

請問這藥物劑量與體重有關係? 0:01

經過思考~已經打過第四劑,目前症狀也很輕,服用清冠一號即可 0:04



已讀 0:09

您好,您今日是領用Paxlovid嗎?這個藥品主要會需要依照腎功能調整服用劑量,跟體重關聯性較小

是, paxlovid 0:13

經過思考~已經打過第四劑,目前症狀也很輕,服用清冠一號即可? 0:1

Paxlovid跟清冠一號皆與抑制病毒複製相關, Paxlovid研究主要是降低發生中重症的可能!

根據衛生福利部國家中醫藥研究所公告建議,從機轉上來看, Paxlovid 和清冠一號均可來阻止病毒複製,不需要重複併用Paxlovid與清冠一號~

➡原則上我們會建議初期能先服用Paxlovid,但如果評估希望能使用清冠一號治療,就不要併服Paxlovid,且建議能夠有中醫師評估體質狀況是否合適~

已讀 0:15

我今早迷迷糊糊的吃了兩份早上的Paxlovid怎麼辦?

14:49

外傭 搞錯了 每次只泡兩顆在40ml的溫開水 怎麼辦?晚上開始正常泡四顆

17:07

中醫師建議繼續吃清冠一號,不服用Paxlovid,亦無轉換心臟科藥品的問題

那我就繼續吃新冠一號好了

11:39

11:38

已讀 0:21

上面是中醫藥主管機關對於清冠一號資訊提供您使用參考😊

如果最後不選擇服用Paxlovid,因為是屬於抗病毒藥物,所以要請您將藥物帶到藥房醫院或者到社區藥局檢收~

...

了解 0:27



0:28

好的,感謝您的更新!請問今日是服用第一個劑量嗎?還是已服用第二劑了呢?

...

抗病毒藥物Paxlovid是建議"發病五天內"服用才能達到原先期待降低發展至重症的可能性,供您參考~

無論選擇哪種藥品,這段期間都要有足夠的水分補充、適當休息、儘可能保持營養均衡,讓自己有足夠免疫力能繼續接手機感染後身體持續修復。

已讀 9:17



第二劑

10:20

昨天中午12:00及晚上10:00  
今天早上9:00,晚上8:00 (以後固定此時間服藥)

10:22



# Paxlovid倍拉維

(Nirmatrelvir+Ritonavir)

## CDC同意書

肝臟問題 (食慾、黃疸、皮膚發癢、腹部疼痛..)

對HIV產生耐藥性

其他 (味覺改變、腹瀉、高血壓、肌肉痠痛)

## 民眾回饋

常見!!! (口苦)

疾病or藥物 (腹瀉、無力、食慾差、血壓異常)

特殊其他 (潮紅、疹子、盜汗、噁心嘔吐)

# Molnupiravir莫納皮拉韋

## CDC同意書

腹瀉問題 噁心 暈眩等

可能發生嚴重和非預期副作用

## 民眾回饋

疾病or藥物 (腹瀉、無力、食慾差)

7/6 (三)

已讀  
11:57

您好，請問服用Paxlovid目前感覺如何？有出現什麼不適的狀況嗎？(口苦？影響食慾？腹瀉？.....)

都有



11:58

已讀  
12:03

食物嘗試少量多餐~ 要記得補充水分！  
針對苦味，或許可嘗試服用甜或酸的水果/食物，或者有個案反應檸檬水或蜂蜜水可能稍微有幫忙..... 但這個有點因人而異.....

檸檬水有幫助 雖然只有吞下的瞬間有而已🙄

12:20

已讀  
13:26

好的..... 要再忍耐幾天了.....



19:13

寶寶目前都正常喔

腹瀉微微  
但苦味真的揮之不去🙄

在嘴巴裡怎麼刷牙都還在

17:09

小P有把壞東西拉出來的感覺  
早上吃藥 中午排便, 下午吃藥 睡前排便



# Paxlovid反彈 (Paxlovid rebound)

## This is an official CDC HEALTH ADVISORY

Distributed via the CDC Health Alert Network  
May 24, 2022, 9:00 AM ET  
CDCHAN-0467

### COVID-19 Rebound After Paxlovid Treatment

#### Summary

The Centers for Disease Control and Prevention (CDC) is issuing this Health Alert Network (HAN) Health Advisory to update healthcare providers, public health departments, and the public on the potential for recurrence of COVID-19 or "COVID-19 rebound." **Paxlovid continues to be recommended for early-stage treatment of mild to moderate COVID-19 among persons at high risk for progression to severe disease.** Paxlovid treatment helps prevent hospitalization and death due to COVID-19. COVID-19 rebound has been reported to occur between 2 and 8 days after initial recovery and is characterized by a recurrence of COVID-19 symptoms or a new positive viral test after having tested negative. **A brief return of symptoms may be part of the natural history of SARS-CoV-2 (the virus that causes COVID-19) infection in some persons, independent of treatment with Paxlovid and regardless of vaccination status.** Limited information currently available from case reports suggests that persons treated with Paxlovid who experience COVID-19 rebound have had mild illness; there are no reports of severe disease. There is currently no evidence that additional treatment is needed with Paxlovid or other anti-SARS-CoV-2 therapies in cases where COVID-19 rebound is suspected.

Regardless of whether the patient has been treated with an antiviral agent, risk of transmission during COVID-19 rebound can be managed by following [CDC's guidance on isolation](#), including taking other precautions such as masking.

Staying [up to date](#) with COVID-19 vaccination lowers the risk of getting COVID-19 and helps prevent serious outcomes of COVID-19, such as severe illness, hospitalization, and death.

#### Recommendations for Healthcare Providers

For patients with COVID-19 rebound

- There is currently no evidence that additional treatment for COVID-19 is needed for COVID-19 rebound. Based on data available at this time, patient monitoring continues to be the most appropriate management for patients with recurrence of symptoms after completion of a treatment course of Paxlovid.
- Advise people with COVID-19 rebound to follow [CDC's guidance on isolation](#) and take precautions to prevent further transmission. Patients should re-isolate for at least 5 days. Per CDC guidance, they can end their re-isolation period after 5 full days if fever has resolved for 24 hours (without the use of fever-reducing medication) and symptoms are improving. The patient should wear a mask for a total of 10 days after rebound symptoms started.
- Consider clinical evaluation of patients who have COVID-19 rebound and symptoms that persist or worsen.
- Healthcare providers are encouraged to report cases of COVID-19 rebound to Pfizer after Paxlovid treatment using the following online tool: [Pfizer Safety Reporting](#) and to FDA MedWatch. Complete and submit a [MedWatch form](#), or complete and submit FDA Form 3500 (health professional) by fax (1-800-FDA-0178). Call [1-800-FDA-1088](#) for questions.

6/1 (三)

已讀  
21:43

您好，想請問完成療程後一週多，整體狀況是否有比較輕鬆或者症狀有什麼變化嗎？

主要是服用Paxlovid，美國CDC有提醒停藥後1-2週能特別留意症狀變化，如果有特別異常，請跟我們說😊

已讀  
21:44

原先長期服用藥品也記得按時服用~



身體恢復的差不多了  
卡痰比較嚴重咳嗽症狀還是有容易喘

22:28

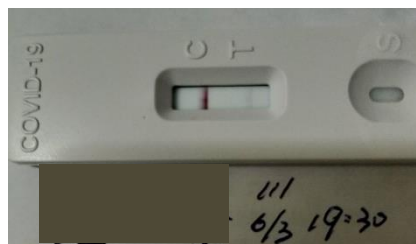
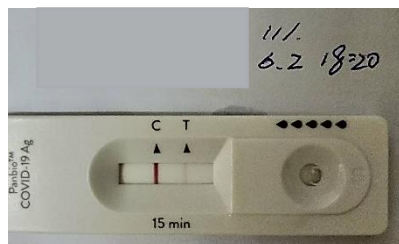






5.26 車來速 SARS-CoV-2 PCR (+)

5.27 防疫急門診領用molnupiravir



64歲 女性  
全身性紅斑性狼瘡

2022.05.13 莫德納

2021.11.13 莫德納

2021.08.11 莫德納

6.03 居用快篩 (+)

6.16 致電關心

= “依照乾燥FB群組自行停用常規藥品，預計一個月”

6.20 反映出現”破嚟”狀況

6.22 感染科就診 SARS-CoV-2 (+) CT 15.1

5.31 居用快篩 (+)

開立Paxlovid

6.10 反映出現喉嚨不適、流鼻水

6.13 感染科就診

SARS-CoV-2 PCR CT 14.37

# 只有用Paxlovid才會Rebound?

## COVID COMEBACK

People who receive the antiviral Paxlovid for COVID-19 can feel better and then experience a rebound in symptoms and viral levels. A study of untreated people finds that many experience a symptom rebound; a smaller fraction experience a viral rebound.

247 people studied

Symptom rebound after initial improvement

27%



95 people studied

Viral rebound after initial improvement

12%



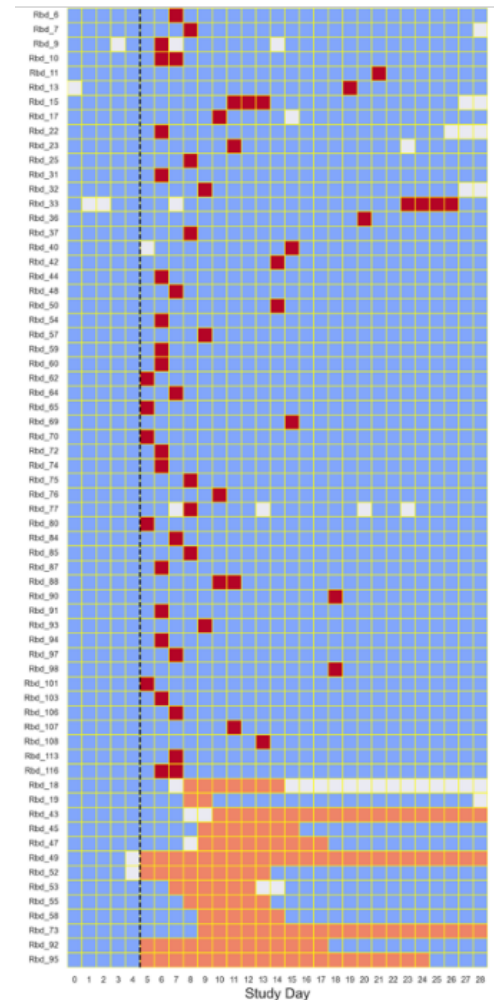
93 people studied

Viral and symptom rebound after improvement

4%



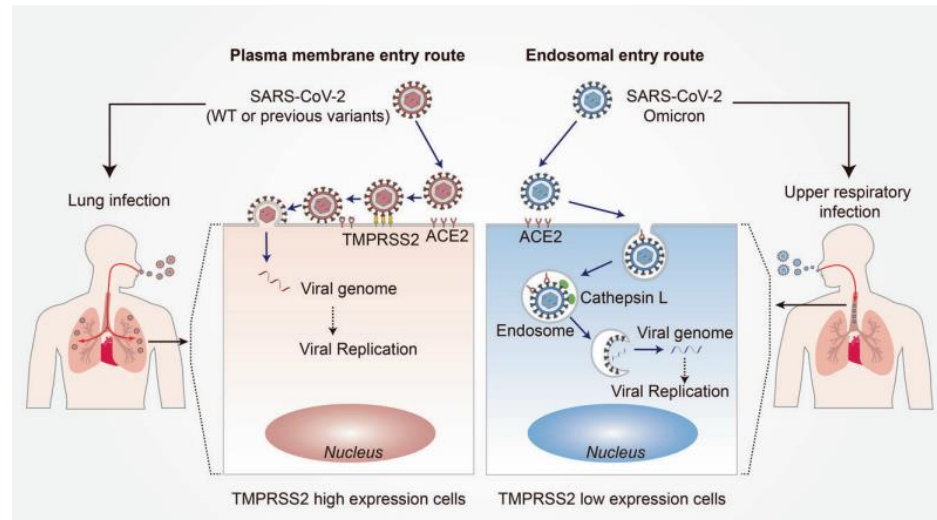
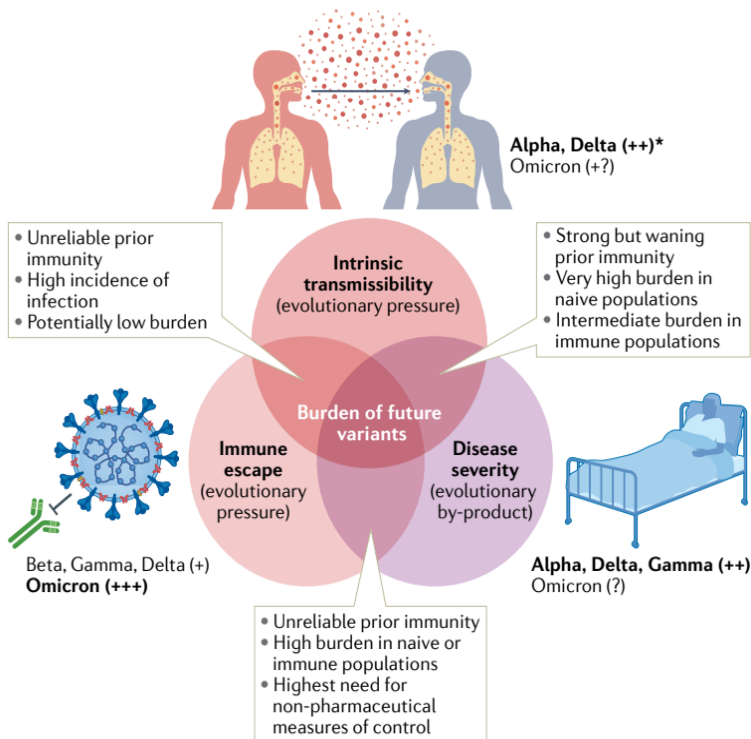
©nature



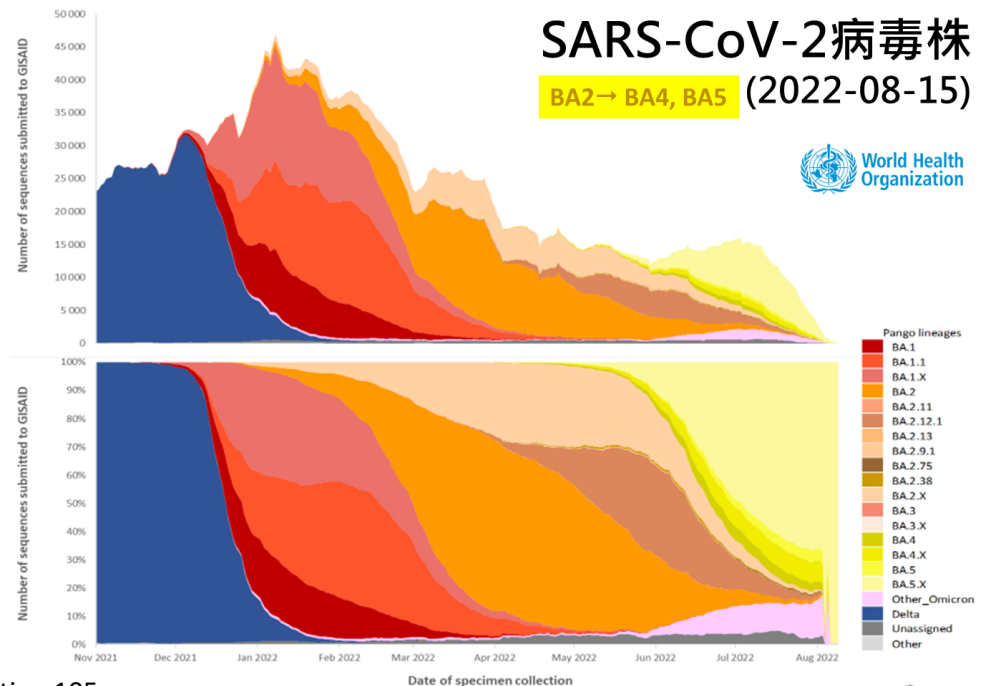
Non-hospitalized

Hospitalized

# Omicron時代



## SARS-CoV-2病毒株 BA2→ BA4, BA5 (2022-08-15)



# Omicron

Public health domain of impact	Omicron (B.1.1.529)	Omicron sublineages			
	Omicron (B.1.1.529)	BA.1	BA.2	BA.4	BA.5
<b>Transmissibility</b>	Growth advantage and increased transmissibility compared to Delta <sup>4</sup>	Lower growth rate compared to BA.2 <sup>1</sup> , BA.4 and BA.5 <sup>3</sup>	Lower growth rate compared to BA.4 and BA.5 <sup>1,2</sup>	Growth advantage compared to BA.2 <sup>2</sup>	Growth advantage compared to BA.4 <sup>2</sup>
<b>Disease severity</b>	Overall evidence suggests lower severity compared to Delta despite contrasting evidence. Earlier studies reported lower severity. <sup>4-10</sup> However, more recent studies report lower <sup>11</sup> or similar severity. <sup>12,13</sup>	No difference in disease severity compared to BA.2, BA.4 and BA.5 <sup>12</sup>	There is evidence, both in favor of lower severity <sup>14</sup> compared to BA.5 and in support of similar disease severity compared to BA.4 and BA.5 <sup>12</sup>	Currently available evidence does not suggest a difference in disease severity compared to BA.2 and BA.5 <sup>12</sup>	There is one preliminary study suggesting increased severity <sup>14</sup> compared to BA.2 while other studies suggests similar disease severity compared to BA.2 and BA.4 <sup>12</sup> . More evidence is needed to understand the disease severity
<b>Risk of reinfection</b>	Reduced risk of Omicron reinfection among individuals previously infected with a different SARS-CoV-2 variant compared to naïve individuals <sup>15,16</sup>	Reduced risk of reinfection with BA.1 after infection with BA.2 <sup>16</sup>	Reduced risk of reinfection following infection with BA.1 <sup>16</sup>	Varying evidence regarding risk of reinfection. One study reported protection against infection following previous BA.2 infection <sup>17</sup> while another reported reduced protection from reinfection. <sup>12</sup>	Varying evidence regarding risk of reinfection. One study reported protection against infection following previous BA.2 infection <sup>17</sup> while another reported reduced protection from reinfection.
<b>Impact on antibody responses</b>	Reduction in neutralizing activity reported as compared to other VOCs <sup>18-20</sup>	Lower neutralizing antibody titers compared to the index virus <sup>20</sup>	Lower neutralizing antibody titers compared to the index virus <sup>20</sup>	Lower neutralizing antibody titers compared to BA.1 <sup>21,22</sup>	Lower neutralizing antibody titres compared to BA.1 <sup>21-23</sup>
<b>Impacts on diagnostics</b>	PCR assays that include multiple gene targets maintain their accuracy to detect Omicron <sup>24</sup> ; S gene target failure/positivity (SGTF) may be a proxy for screening. Limited to no impact on sensitivity of Ag-RDTs observed <sup>25-28</sup>	S gene target failure	The majority will be S gene target positive	S gene target failure.	S gene target failure.
<b>Impact on treatments</b>	No difference in the effectiveness of antiviral agents (polymerase and protease inhibitors) against the Omicron variant <sup>29</sup> . Conserved neutralizing activity for three broadly neutralizing monoclonal antibodies (sotrovimab, S2X259 and S2H97) and a reduced effectiveness of other monoclonal antibodies <sup>30-33</sup>	Reduced efficacy of cilgavimab <sup>34</sup> and casirivimab-imdevimab <sup>35</sup>	Reduced neutralizing activity of sotrovimab, bamlanivimab, casirivimab, etesevimab, imdevimab and tixagevimab <sup>36</sup>	Reduced neutralizing activity of sotrovimab, bamlanivimab, casirivimab, etesevimab, imdevimab and tixagevimab. Increased resistance to cilgavimab compared to BA.2 <sup>36</sup>	Reduced neutralizing activity of sotrovimab, bamlanivimab, casirivimab, etesevimab, imdevimab and tixagevimab. Increased resistance to cilgavimab compared to BA.2 <sup>36</sup>
<b>Impact on vaccination</b>	Results of vaccine effectiveness (VE) studies should be interpreted with caution because estimates vary with the type of vaccine administered and the number of doses and scheduling (sequential administration of different vaccines). For further information, see the section Interpretation of the results of the VE for the Omicron variant				

目前並無顯示Omicron病毒株對於口服抗病毒藥物感受性下降



# 抗病毒藥物與各病毒株敏感性

**Table 1.** Efficacy of Monoclonal Antibodies and Antiviral Drugs against Omicron Subvariants in Vitro.\*

Subvariant	Mean Neutralization Activity of Monoclonal Antibody†								Susceptibility to Antiviral Drug‡		
	Imdevimab	Casirivimab	Tixagevimab	Cilgavimab	Sotrovimab Precursor	Bebtelovimab	Imdevimab+ Casirivimab	Tixagevimab+ Cilgavimab	Remdesivir	Molnupiravir	Nirmatrelvir
	ng per milliliter								μmol		
Reference§	7.4	6.1	6.1	7.0	95.1	2.5	3.4	6.3	1.7	2.8	2.7
BA.1	>50,000	>50,000	1552.7	2916.9	40727.1	5.8	>10,000	351.1	1.9	7.5	4.8
BA.1.1	>50,000	>50,000	603.5	>50,000	3769.2	3.9	>10,000	1296.8	2.0	6.0	3.9
BA.2	329.0	>50,000	2756.6	16.9	>50,000	3.3	835.1	34.6	5.9	8.7	6.9
BA.2.12.1	238.1	>50,000	335.2	21.0	>50,000	4.0	452.7	38.1	0.5	3.2	1.8
BA.4	132.6	>50,000	>50,000	53.6	>50,000	2.9	459.1	37.8	1.2	3.3	2.9
BA.5	583.4	>50,000	>50,000	56.8	>50,000	3.3	1093.1	192.5	2.0	4.1	4.4

\* The antibodies that were used in this analysis are listed by their commercial names for readability although they were produced in the authors' laboratories in their generic formulations. Omicron subvariants of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) are listed according to the World Health Organization labels for the Pango lineage.

† Individual monoclonal antibodies were tested at a starting concentration of 50,000 ng per milliliter on 50% focus reduction neutralization testing. The monoclonal antibody combinations were tested at a starting concentration of 10,000 ng per milliliter for each antibody.

‡ The susceptibility to antiviral drugs was measured as the 50% inhibitory concentration of the mean micromole value of triplicate reactions. GS-441524 is the main metabolite of remdesivir and EIDD-1931 is the active form of molnupiravir, both of which are RNA-dependent RNA polymerase inhibitors. Nirmatrelvir (PF-07321332) is a protease inhibitor.

§ The reference strain was SARS-CoV-2/UT-NC002-1T/Human/2020/Tokyo.

評估適用對象

初始用藥建議  
藥物交互作用評估

開立抗病毒藥物  
(併用藥調整)

調劑核發

追蹤1: 使用期間

停用藥品提醒  
交互作用、副作用監測

追蹤2: 療程後

復藥提醒  
Rebound議題、(Long COVID)  
防疫措施提醒  
疫苗資訊



# 不同時期任務界定！團隊的重要性！

- 瞭解自己的限制
  - 時間、授權業務範圍
- 臨床評估全面性
  - 瞭解自己的限制
    - 做不該做？該說不該說？
  - 跨團隊的連結溝通
- 藥師專業
  - 實證知識即時更新 (預防、治療)
  - 藥物使用狀況追蹤/分析
  - 法規權限
    - 如：處方藥、非處方藥
  - 藥品保存、廢棄藥物檢收衛教

6/8 (三)



我昨晚吃完paxlovid出現紅疹  
這樣正常嗎？

8:45

6/23 (四)



謝謝彭藥師這陣子的關心  
昨天看完蘇醫生的門診  
我的身體狀況都算正常  
慢慢恢復中  
再次感謝萬芳醫院  
醫護人員❤️🍎🍎

12:10

昨日有詢問蘇醫師，他有說您恢復的狀況很好，很感恩聽到這樣的消息。  
疫情仍然持續著，防護措施個人的免疫維持都一樣重要：)  
雖然無法代表整個團隊，但謝謝你的肯定囉！

已讀  
12:16

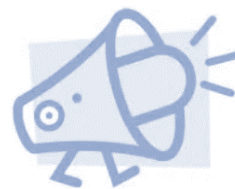


# SAFE USE

感謝~

*To all the pharmacists in our hospital and whom I reached out for any consultations!*

*To the clinicians that I worked with these days with the same goal- taking better care of patients!*



謝謝聆聽!

101353@w.tmu.edu.tw

DIE KANGURU-COMICS



Fig. 1 A comical view of the history of COVID-19. A few translations: "vorhersehbar"=predictable and "war ja klar"=obviously or sure or of course. Reproduced with permission (Mira Nagel)

Hum Genomics. 2022 Jun 1;16(1):19

PREPARING FOR  
HEALTHCARE'S  
NEW NORMA

