



HCV Elimination in Egypt




World Health
Organization

Prof. Gamal Esmat

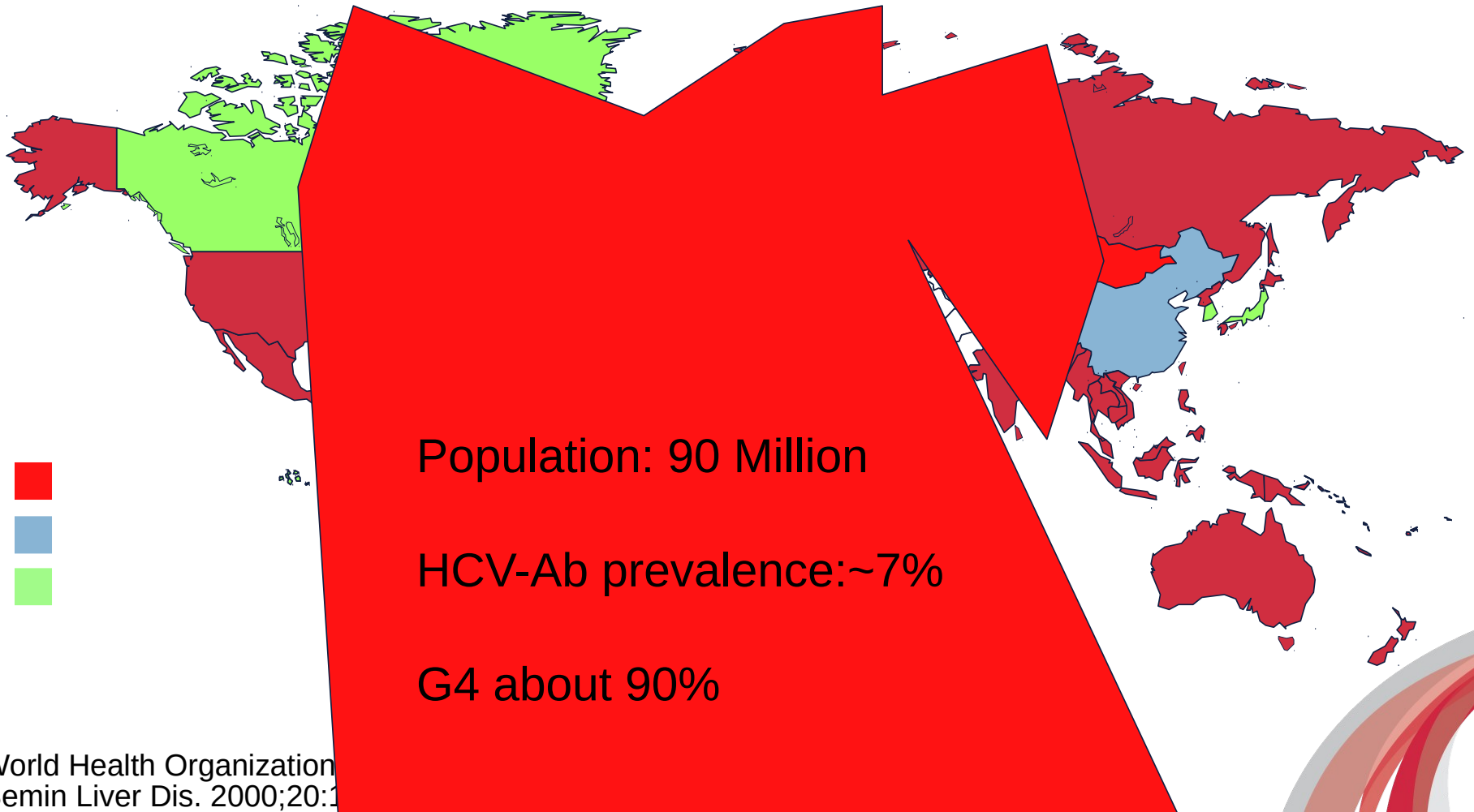
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Disclosure Slide

- ◆ **Advisory Committee Board Member**
 - Merck , Gilead and Bristol-Myers
 - ◆ **Speaking and Teaching Activities**
 - Bristol-Myers, Roche, Merck , Janssen and Glaxo
 - ◆ **Grants and Research Support**
 - Gilead, Roche, Merck, Glaxo, Abbvie and Pharco
- 

EGYPT



National strategic plan for viral hepatitis

The main goal of the research was tracking the number of hepatitis C patients:

- Total number of HCV patients in year 2014 6,000,000
- Number of HCV patients who are aware of their infection 1,000,000
- Number of yearly new diagnosed cases 120,000
- Number of yearly new infected cases 120,000 - 150,000
- Number of yearly Liver cancer cases caused by HCV 16,000
- Number of yearly death cases caused by HCV 30,000

Our aim

to maintain a disease **Control** (by reaching international prevalence disease rates with **2%** infection rate compared with the current 7% infection rate).

To reach for disease **Elimination**
(disease rate **<1%**)

Elimination of HCV in Egypt Overcoming the Barriers



Decrease incidence
Ideal drug
Mass treatment

Elimination of HCV in Egypt Overcoming the Barriers




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Decrease incidence

- Blood safety.
 - Avoid unneeded injection.
 - Auto destructive syringes.
 - Infection control.
 - Media awareness.
 - Case detection and treatment by Ideal drug.
- 

Can treatment impact HCV spread?

- **Treatment can be a method of prevention if:**
 - Applied early in the course of infection.
R0 of the untreated HCV epidemic in the Egyptian community is 3.50 (95% CI 2.95-4.03).
 - Efficacy >80%
 - Patients contributing most to HCV spread, the so-called «superinjectors», are targeted preferentially (for treatment, and prevention!)

National Plan of Action: conclusions

pour modifier les styles du texte du masque

Deuxième niveau

Troisième niveau

Quatrième niveau

Cinquième niveau
**Plan of Action for the Prevention,
Care & Treatment of Viral Hepatitis,
Egypt
2014-2018**



- Increase policymakers' commitment to supporting the policy change necessary to prevent viral hepatitis transmission.
- **Educate healthcare workers to prevent transmission of viral hepatitis in Egypt.**
- Increase public awareness of viral hepatitis prevention.
- **Promote safe injection practices in the community.**
- Annual treatment of 200-350.000 patients by DAA.in 46 centers in 2015 aiming to reach 100 centers by the end of 2016

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DAAs Battle

Negotiation Phase

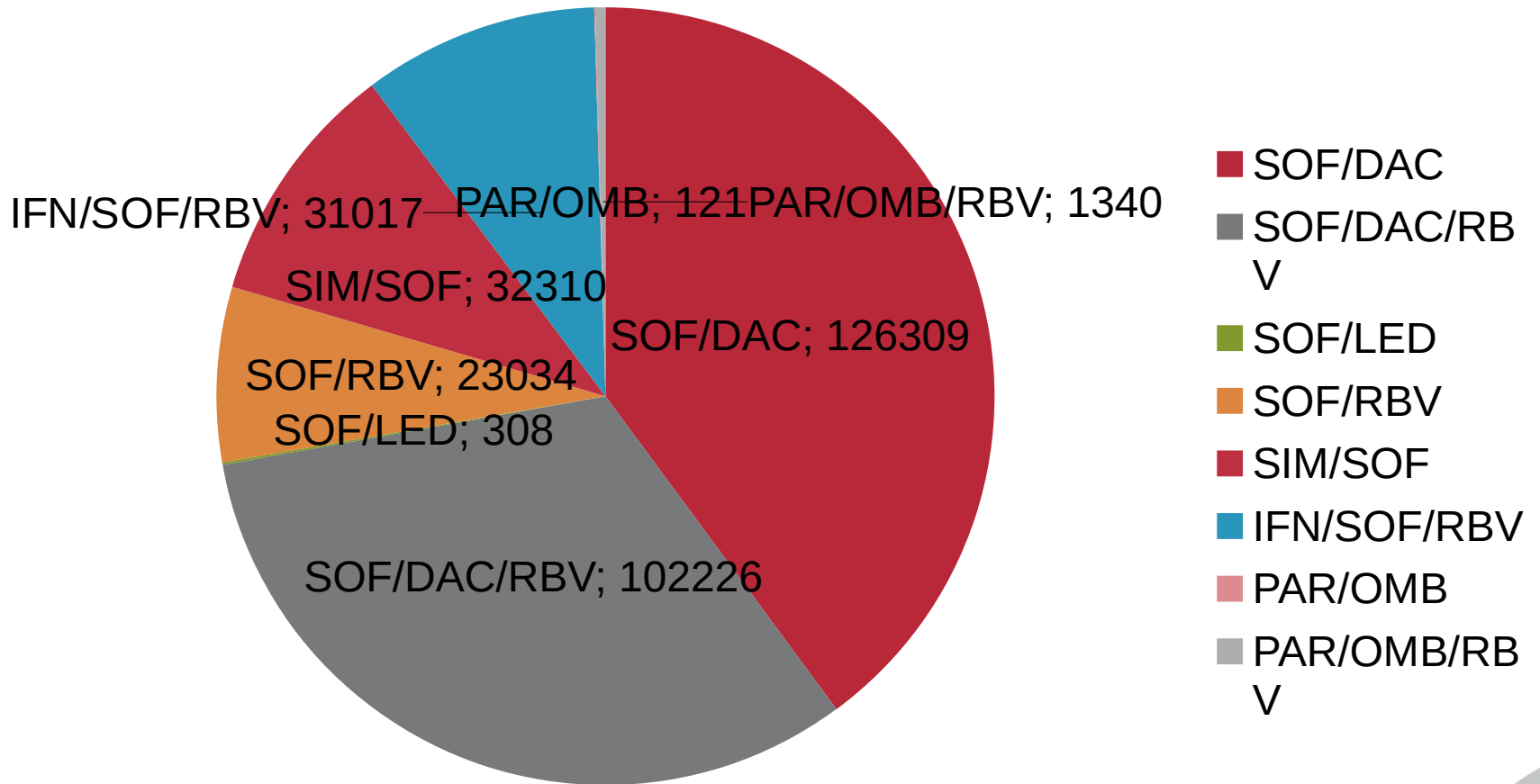
Brands(1% of its USA price)



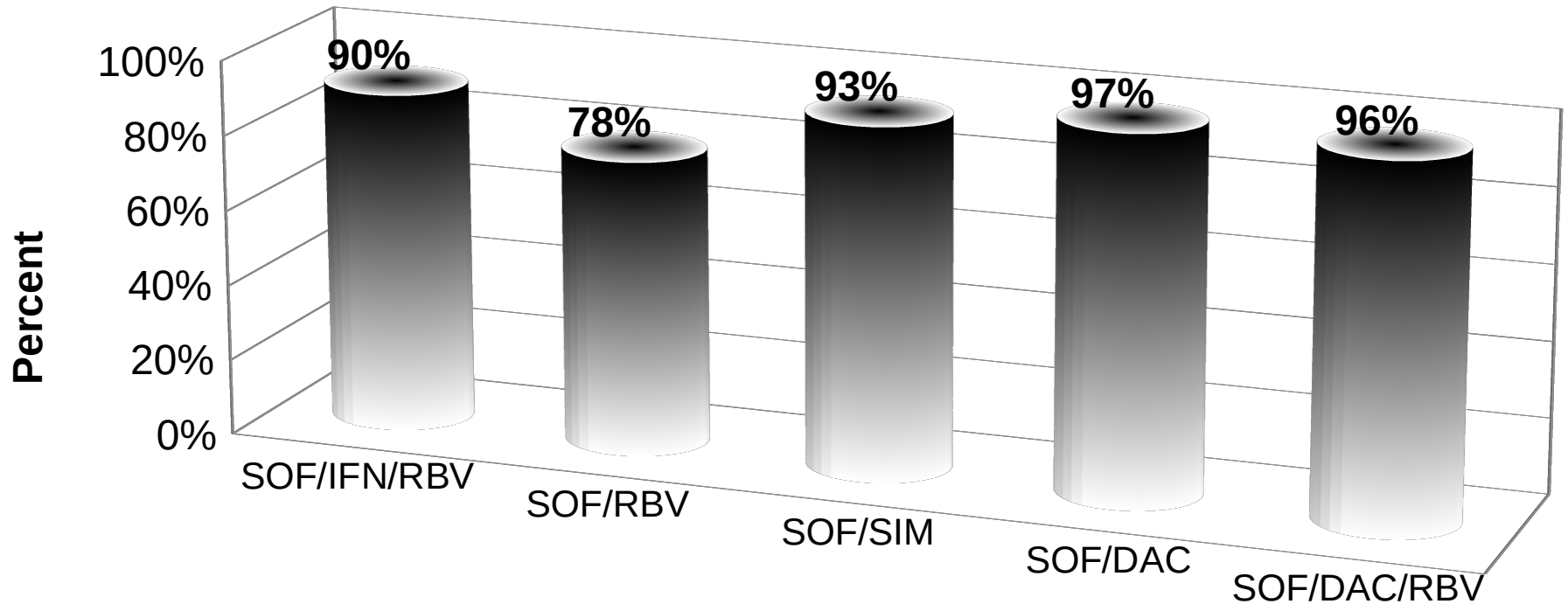
National Victory Phase

Generics(15% of the brands)

Different Protocol for HCV treatment in Egypt



Treatment outcome for the different Protocols (Real Life)



El Sharkawy, ..., Esmat, et. al, Aliment. Pharma. Therap 2017

El Atreby, Esmat, et. al, J. Viral hepat. 2016

Waked, EASL July 2016

Elimination of HCV in Egypt Overcoming the Barriers



Decrease incidence
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Online Registration

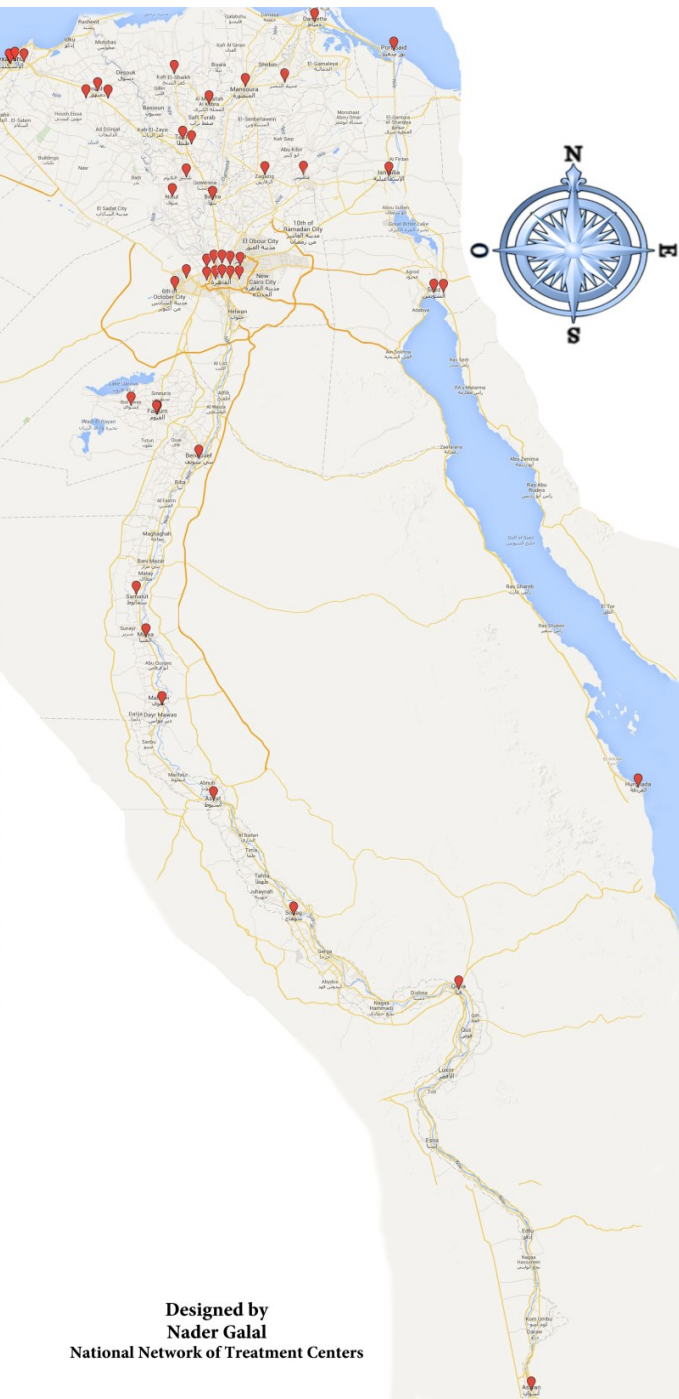
A web-based online registration system website (www.nccvh.org.eg) once the first DAA was registered in Egypt.

This portal was designed for registration of patients with HCV and scheduling appointments at the treatment centres. Inputs from patients' registry include their national ID, residence and a simple question for validation.

Patients registered online for appointments till end of 2016



>150 Treatment centers affiliated to HCV National Treatment Program in Egypt



In 2007, the NCCVH established its first specialized centres for treatment of viral hepatitis within MOHP healthcare facilities. Centres were planned to be **geographically distributed** in the most populous areas. **Training the healthcare professionals (hepatologists, infectious disease specialists, physicians)** to deliver an efficient counseling, care and treatment programme for patients with chronic HCV in accordance with the updated **national guidelines**.

Mass Treatment

**To reach 2% Infection Rates in 2025
and less than 1% in 2030:**

Treatment with 90% curing rate or higher
should be applied.

Number of yearly cured cases should exceed
from 65,000 case in 2014 to 150,000 case in
2015(>300.000), then to 275,000 case in
2016(>600.000), then to 350.000 from 2018.



HCV patients treated by DAA in Egypt(11/2014 to12/20166)

Adherence during treatment >95%

942.000 Patients



Egypt was the first country all over the world to reimburse DAA treatment for HCV patients regardless of fibrosis starting from May 2015

The coast of 3 months treatment(sofo+dacla) per patient Brand vs Generic(1\$=18 EP)



Money Saved Over 12 Months(600.000 Patients)

600,000
patients

306,000,000
0
US\$

5,359,200,000 EP

Availability of the generic drugs in a reduced price encourage people to take medication from private sector (200.000 patients)

Curing of **3,750,000** patients should be considered to reach **2%** infection rates.

Curing of **5,000,000** patients to reach less than **1%** infection rate, during selected period of time.



Screening for HCV in Egypt (Targeted Screen)

1. Families of HCV patients.

- Healthcare providers.
- Prisoners
- Students admitted to universities
- Patients attending intervention procedures in hospitals.

3. Universities students

- Any one asking for a service in a medical facility.
- Before ID or driving license,
- Governmental employs.

5. Everyone



Table 3

Summary of current treatment protocols in 2013 and strategies to minimise HCV morbidity and mortality by 2030.

	2013	2030		
		Base case	Increase efficacy only	Increase efficacy and treatment
Treated (annual)	65,000	65,000	65,000	325,000 (2018)
Treatment rate	1.1%	1.1%	1.1%	7.1%
Average SVR	48%	48%	90% (2014)	90% (2014)
Newly diagnosed (annual)	125,000	125,000	125,000	340,500 (2020)
% Treatment eligible	50%	50%	90% (2016)	90% (2014)
Common treatment age	15–59	15–59	15–59	15–74
Treated stages	≥F2	≥F2	≥F2	≥F0
<i>Impact</i>				
# Total infected	6,000,000	4,420,000	4,045,000	280,000
Change from 2013 (%)		-26%	-32%	-95%
# Compensated cirrhosis	630,000	610,000	507,000	76,000
Change from 2013 (%)		-2%	-19%	-88%
# Decompensated cirrhosis	138,000	136,300	110,000	17,000
Change from 2013 (%)		-0.6%	-21%	-87%
# HCC	16,000	18,500	16,000	2,400
Change from 2013 (%)		+15%	0%	-85%
# HCV related mortality	33,000	36,500	30,700	7,500
Change from 2013 (%)		+10%	-7%	-77%

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Endorsement of success



Egypt [+ Add to myFT](#)

Egypt combats hepatitis C epidemic with state-run scheme

Two-year-old programme treats 1m patients following outbreak sparked by dirty needles



About 7 per cent of Egypt's 90m population have the hepatitis C virus © AFP



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Comment

End-stage liver disease in eastern Europe and central Asia

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Articles

Infliximab vs ciclesporin for acute severe ulcerative colitis (CONSTRUCT trial)

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Review

Pathogenesis and novel treatment options for non-alcoholic steatohepatitis

See page 55

From Land Of History

We will Make HCV a History



THANK YOU



Nile River in Cairo