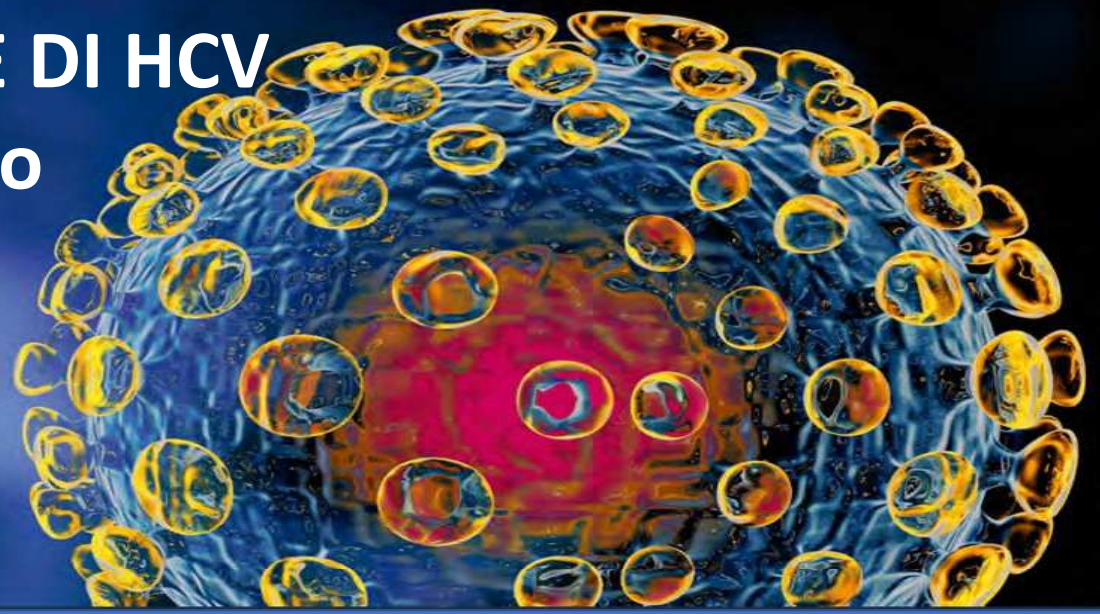
VERSO LA ELIMINAZIONE DI HCV
Il Contributo del Veneto



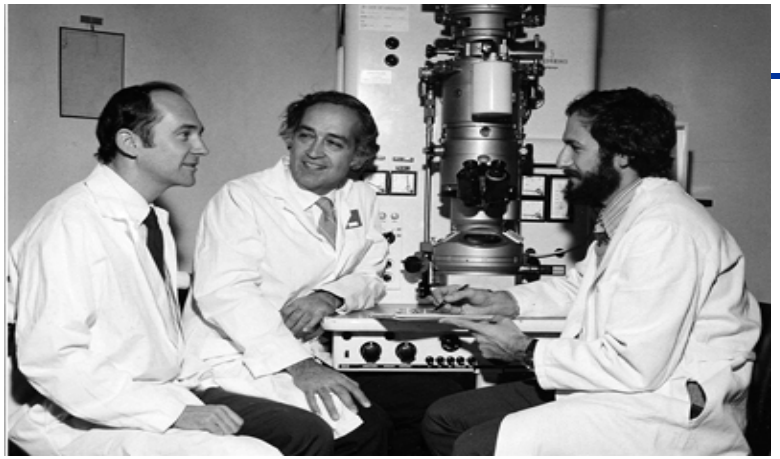
Alfredo Alberti

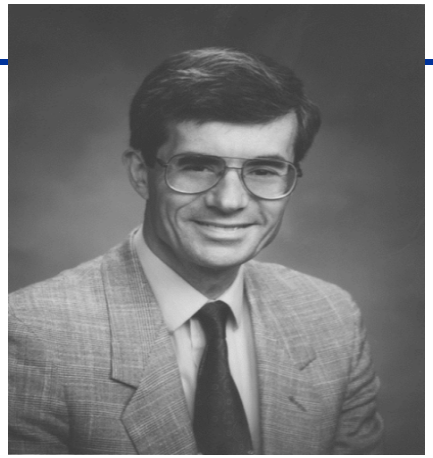
Department of Molecular Medicine

University of Padova

ITALY

1975 NANB HEPATITIS FIRST DESCRIBED IN BLOOD RECIPIENTS





Feinstone SM et al, N Engl J Med 1975;292:767–770

1989 : HCV IDENTIFIED AND DIAGNOSTIC TEST DEVELOPED

SCIENCE, VOL. 244 — 21 APRIL 1989

Isolation of a cDNA Clone Derived from a Blood-Borne Non-A, Non-B Viral Hepatitis Genome

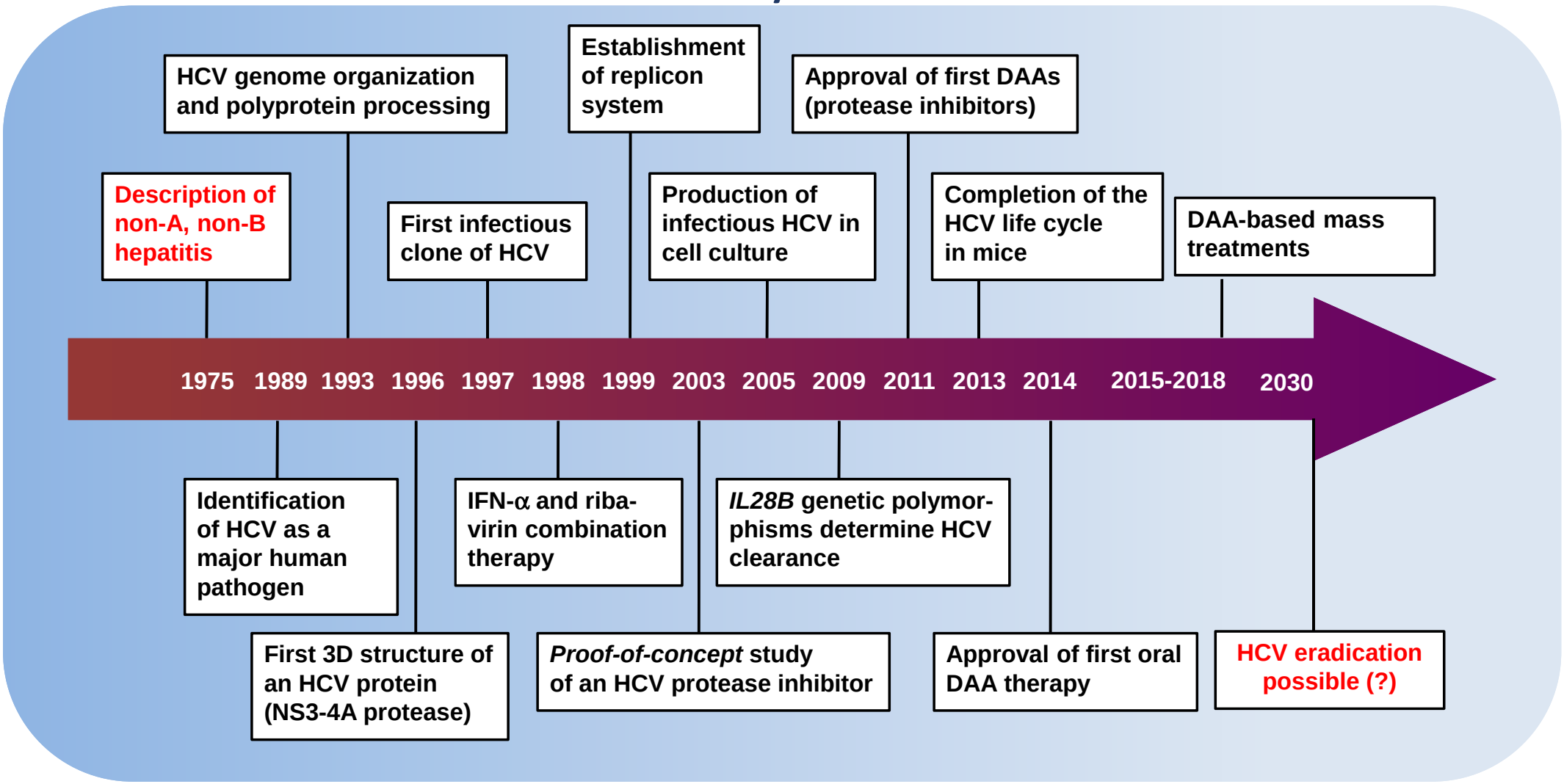
QUI-LIM CHOO, GEORGE KUO, AMY J. WEINER, LACY R. OVERBY, DANIEL W. BRADLEY, MICHAEL HOUGHTON

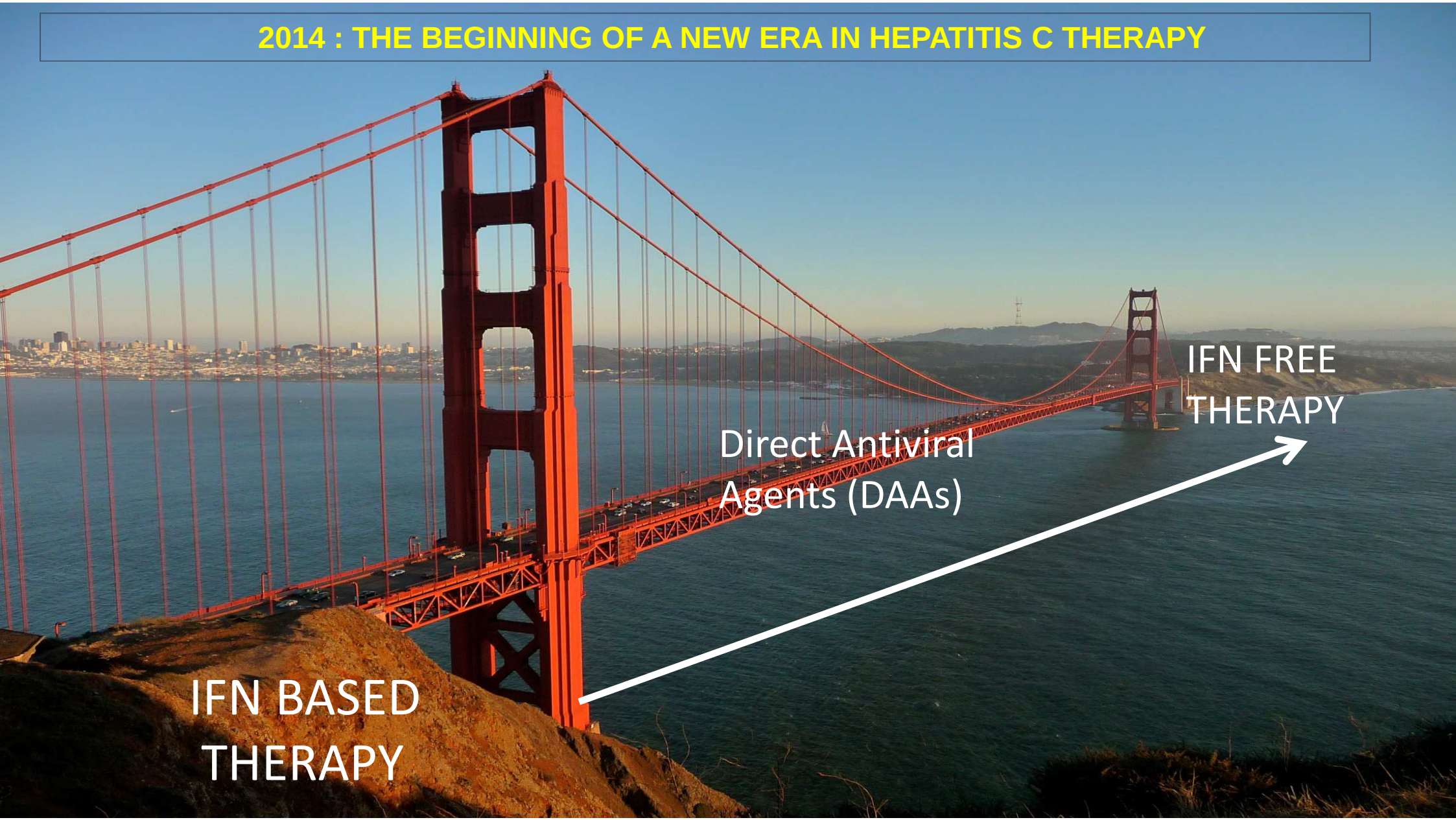
21 APRIL 1989 — SCIENCE, VOL. 244

An Assay for Circulating Antibodies to a Major Etiologic Virus of Human Non-A, Non-B Hepatitis

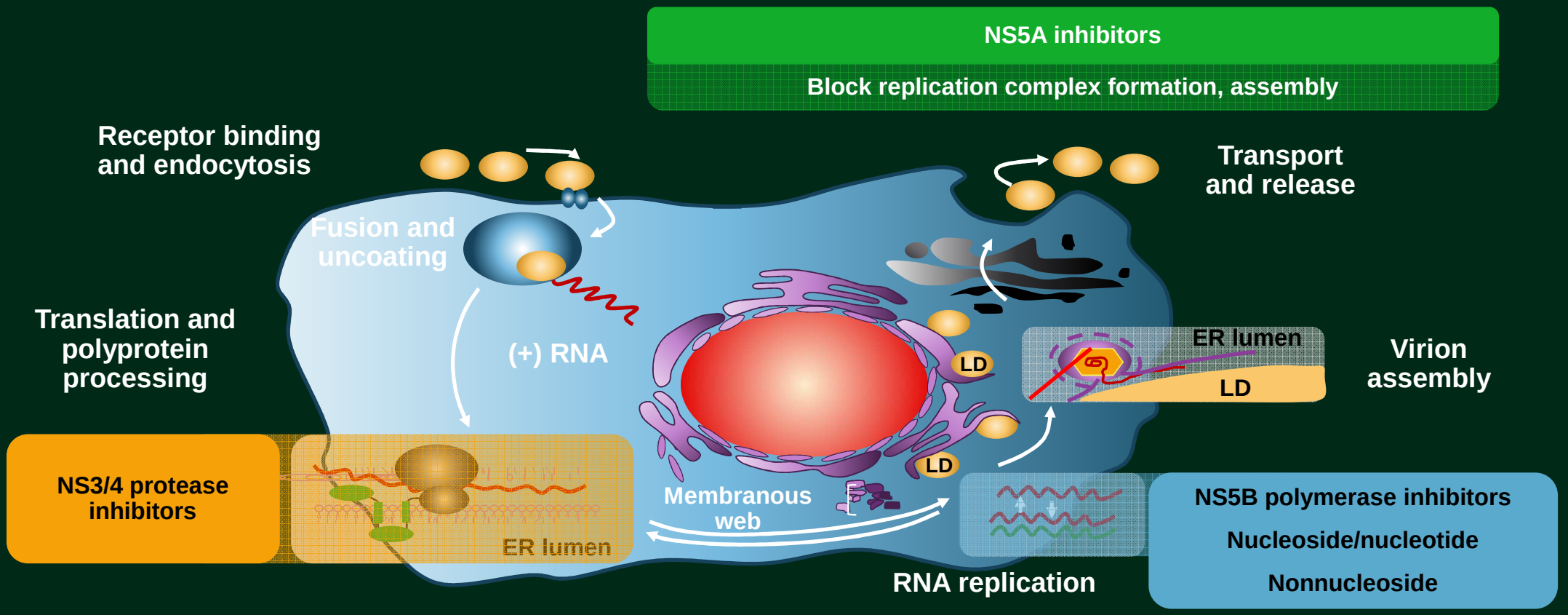
G. KUO, Q.-L. CHOO, H. J. ALTER, G. L. GITNICK, A. G. REDEKER, R. H. PURCELL, T. MIYAMURA, J. L. DIENSTAG, M. J. ALTER, C. E. STEVENS, G. E. TEGTMEIER, F. BONINO, M. COLOMBO, W.-S. LEE, C. KUO, K. BERGER, J. R. SHUSTER, L. R. OVERBY, D. W. BRADLEY, M. HOUGHTON

Milestones in HCV research and cure
From discovery to eradication

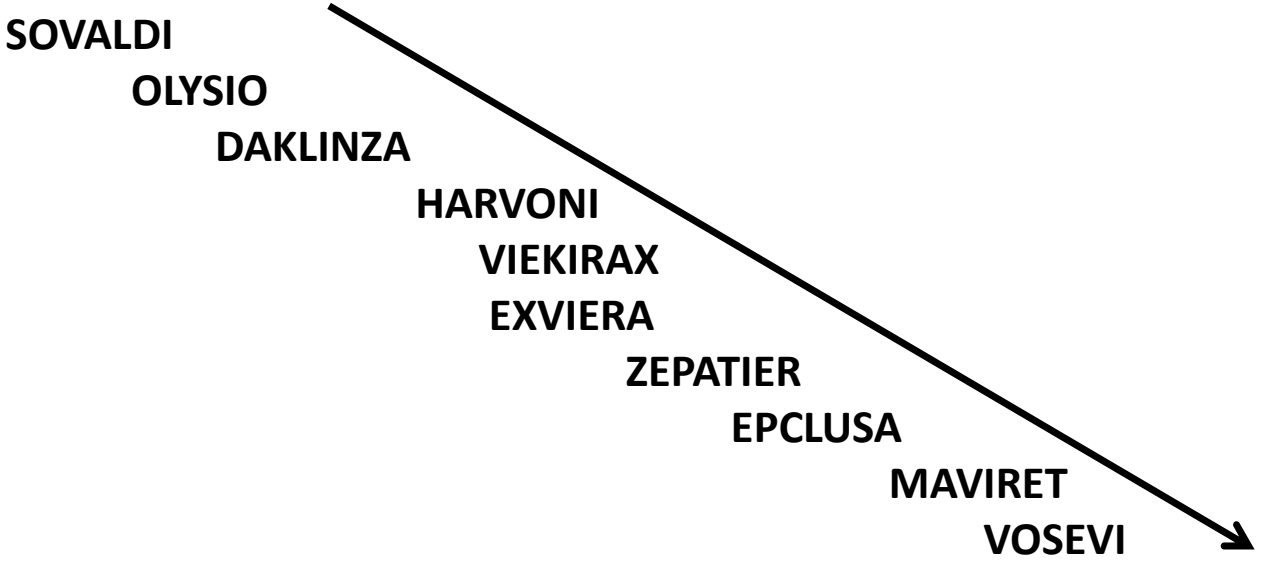



2014 : THE BEGINNING OF A NEW ERA IN HEPATITIS C THERAPY
IFN FREE THERAPY
Direct Antiviral Agents (DAAs)
IFN BASED THERAPY

HCV Life Cycle and DAA Targets

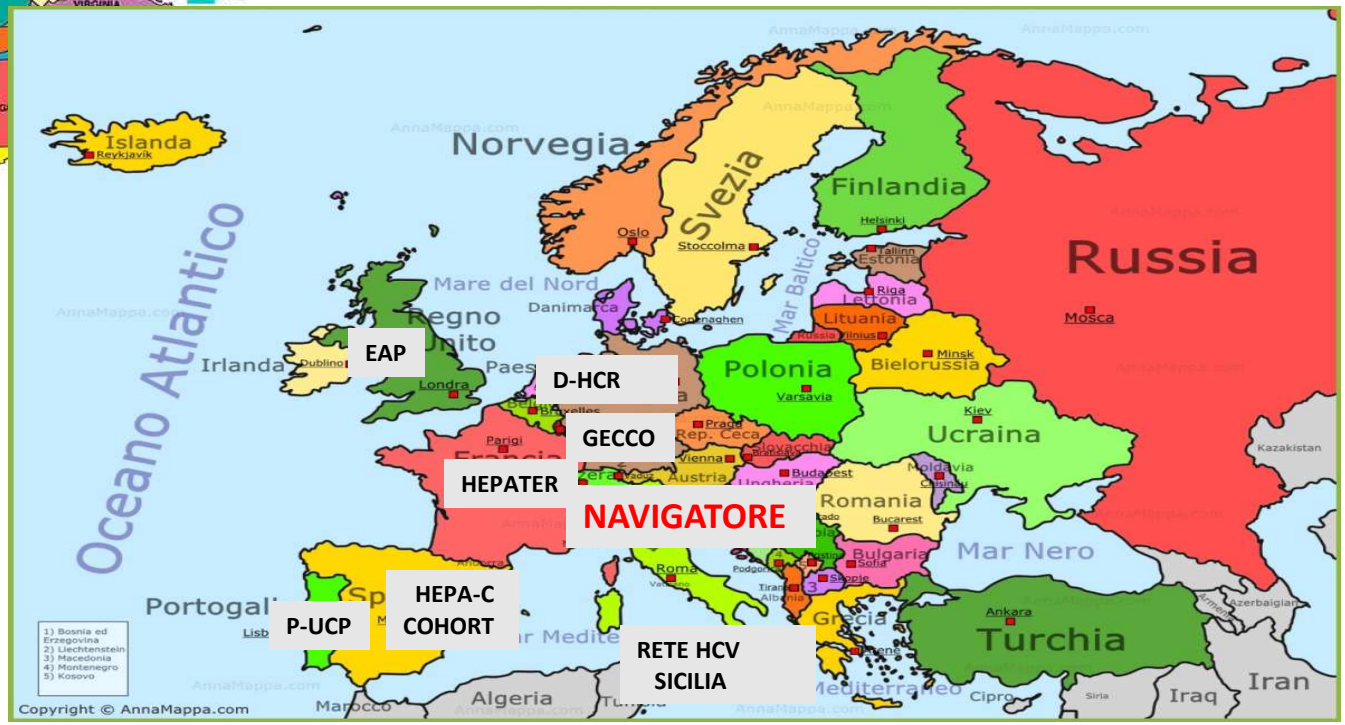


DIRECT-ACTING ANTIVIRAL AGENTS (DAAs) FOR HCV
Rapidly evolving innovation



	2014	2015-16	2017-18
REGIMEN	24 WKS + RBV	12-24 WKS ± RBV	8-12 WKS NO RBV
EFFICACY (SVR)	80%	>90%	95-100%

REAL – LIFE DATABASE/REGISTRIES FOR DAAs IN HEPATITIS C



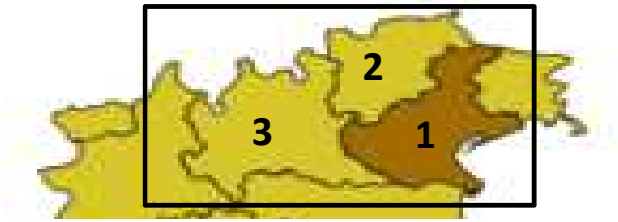
REGIONE DEL VENETO

DMM Dipartimento di Medicina Molecolare

AZIENDA OSPEDALIERA UNIVERSITA' PADOVA

LA PIATTAFORMA NAVIGATORE

Nuovi AntiVIrali per epatite C : Gestione AttraversO Registro degli Esiti



4.925.000
1.110.000
10.003.000

Residenti

PIATTAFORMA on-line su sistema RedCAP

VENETO :

HUB
SPOKE

112 Utenti

FLUSSI PAZIENTI in tempo reale : Andamenti e Programmazione Regionale

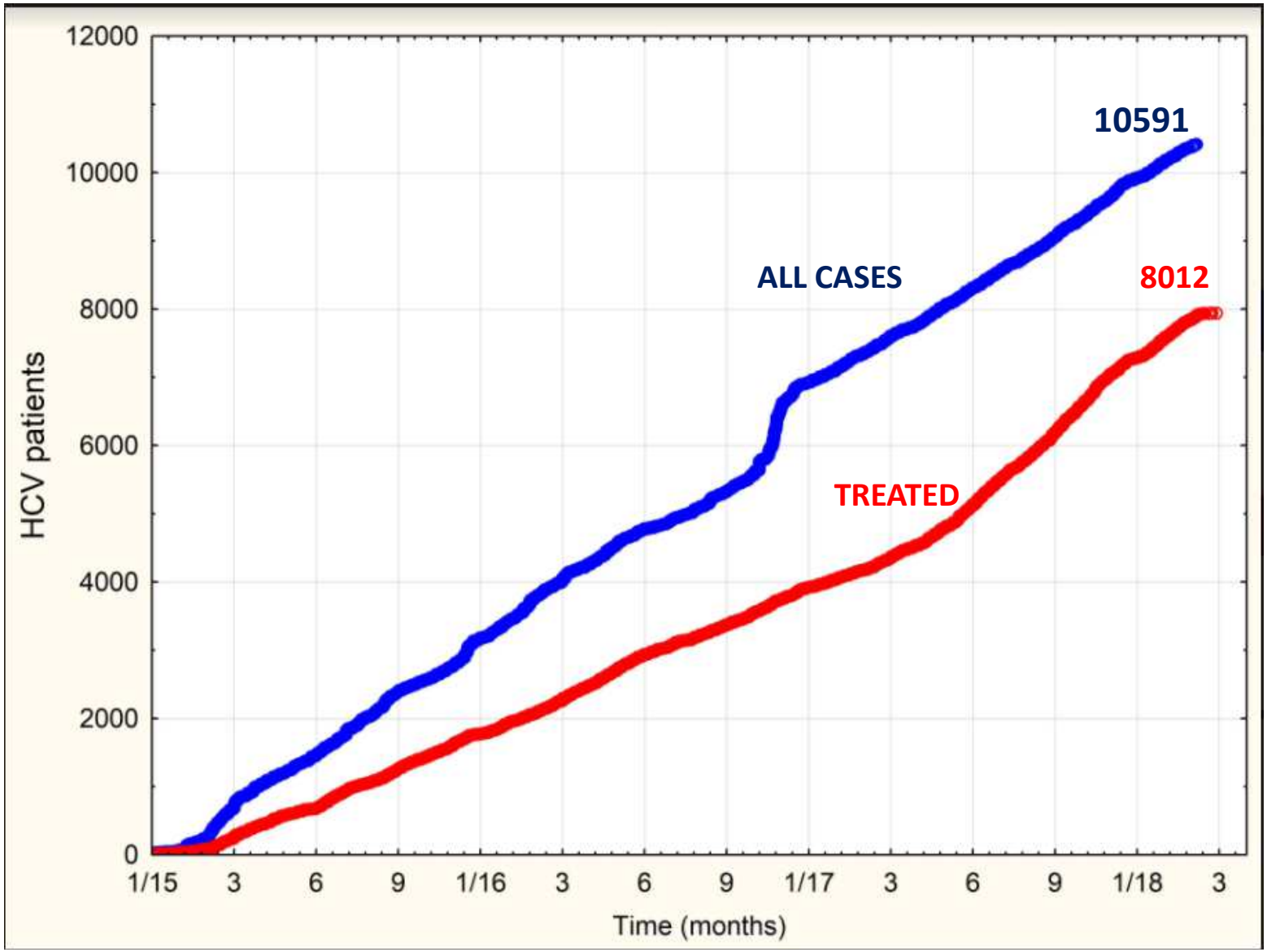
OTTIMIZZAZIONE e OMOGENEITA' NELLA GESTIONE CLINICA secondo linee di Indirizzo Nazionali e Regionali

VERIFICHE DI APPROPRIATEZZA anche in rapporto a Benchmark Regionali

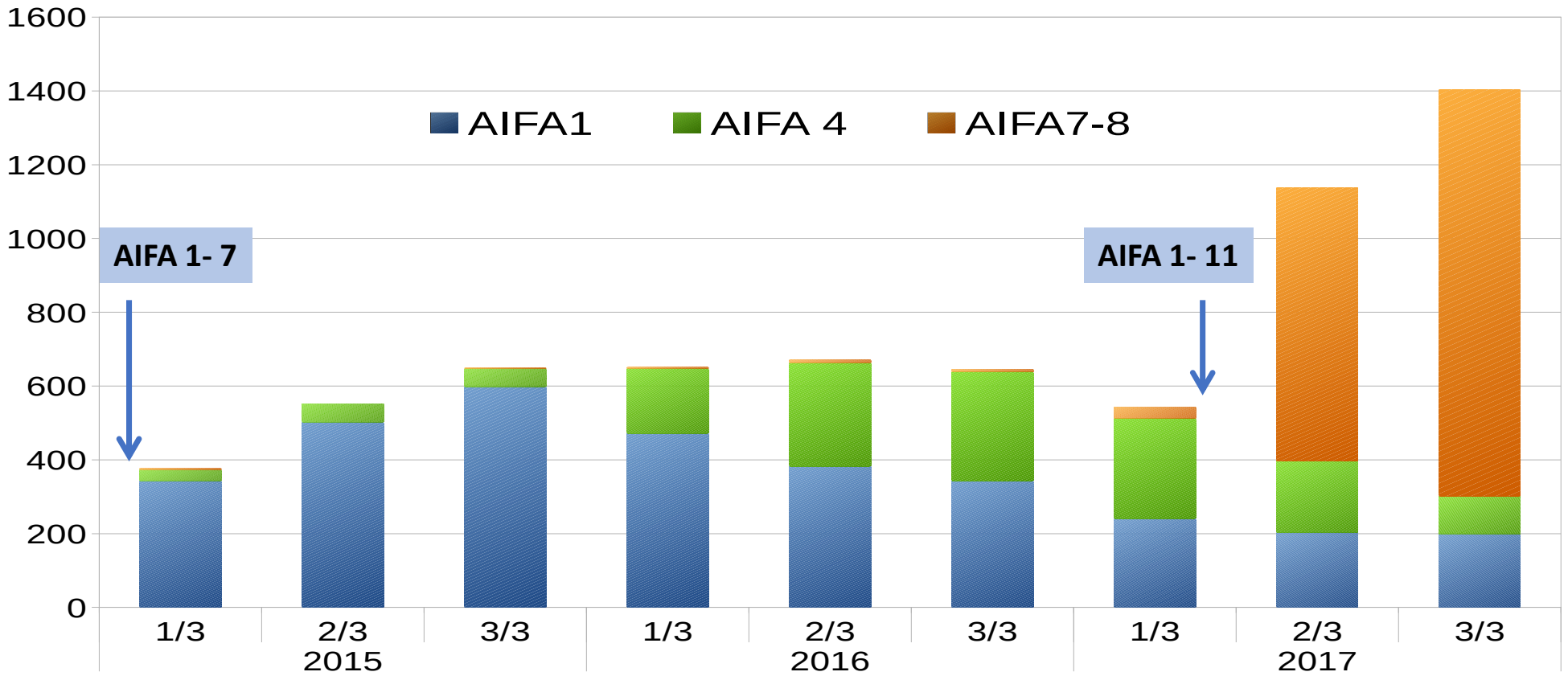
REGISTRAZIONE PROSPETTICA DEGLI OUTCOME
Virologici
Clinici

SICUREZZA ed EFFETTI AVVERSI : collaborazione con Centro Regionale di Farmacovigilanza

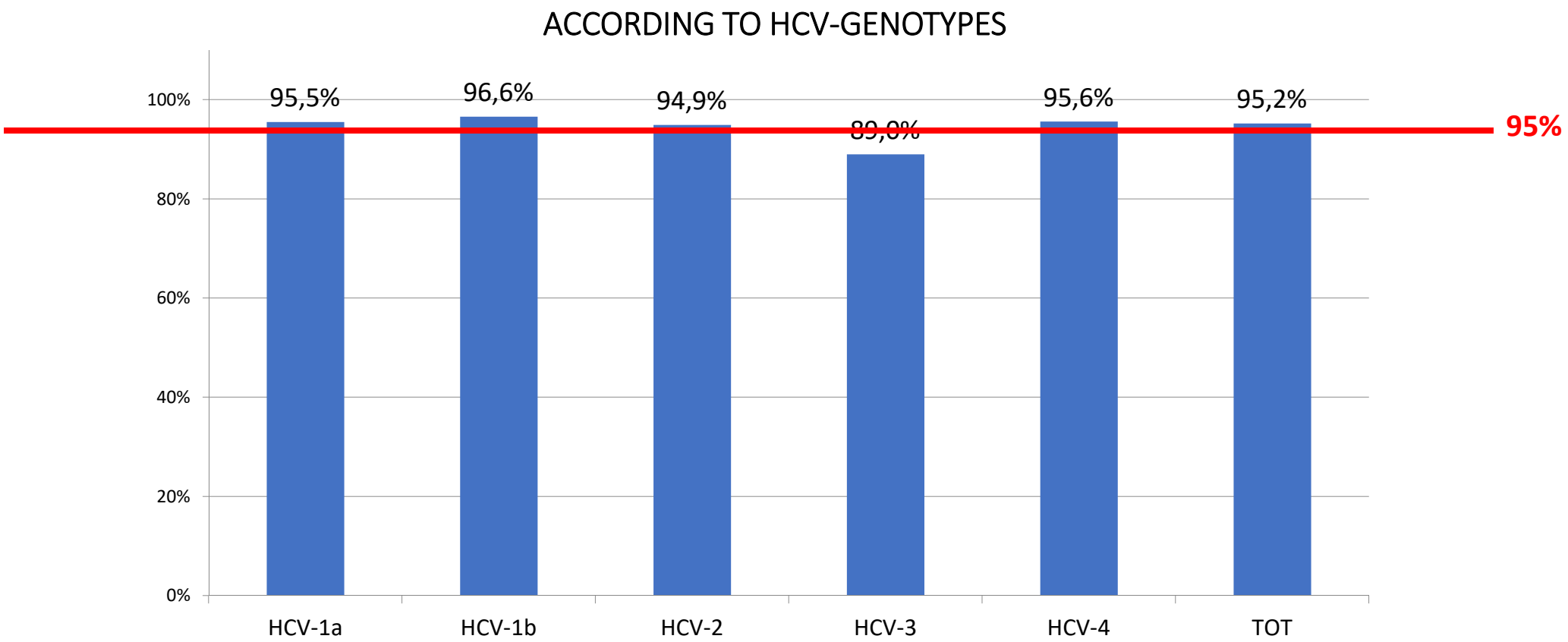
TRAJECTORIES OF HCV PATIENTS IN THE NAVIGATORE DATA-BASE (2015-2018)



PAZIENTI TRATTATI CON DAA NEL DATA-BASE NAVIGATORE NELLE DIVERSE CATEGORIE AIFA

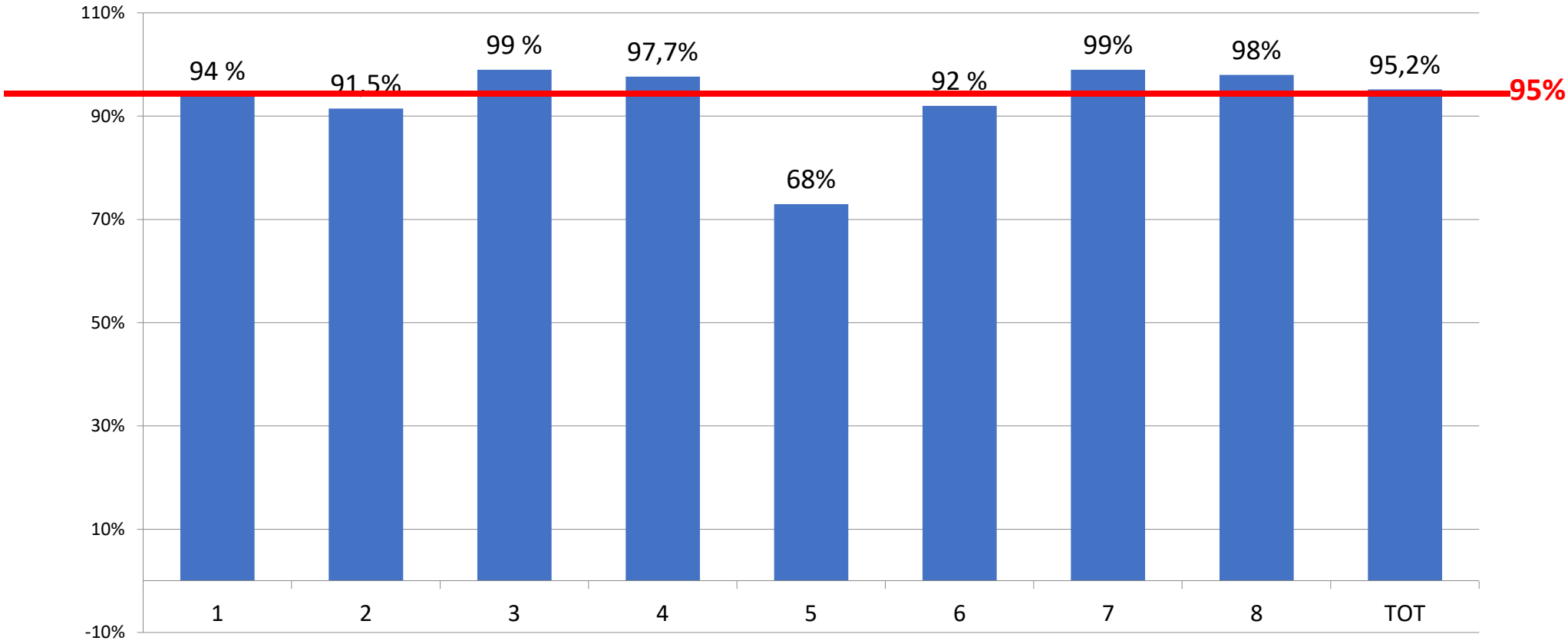


SVR 12 IN THE FIRST 5000 HCV PATIENTS TREATED IN THE NAVIGATORE PLATFORM



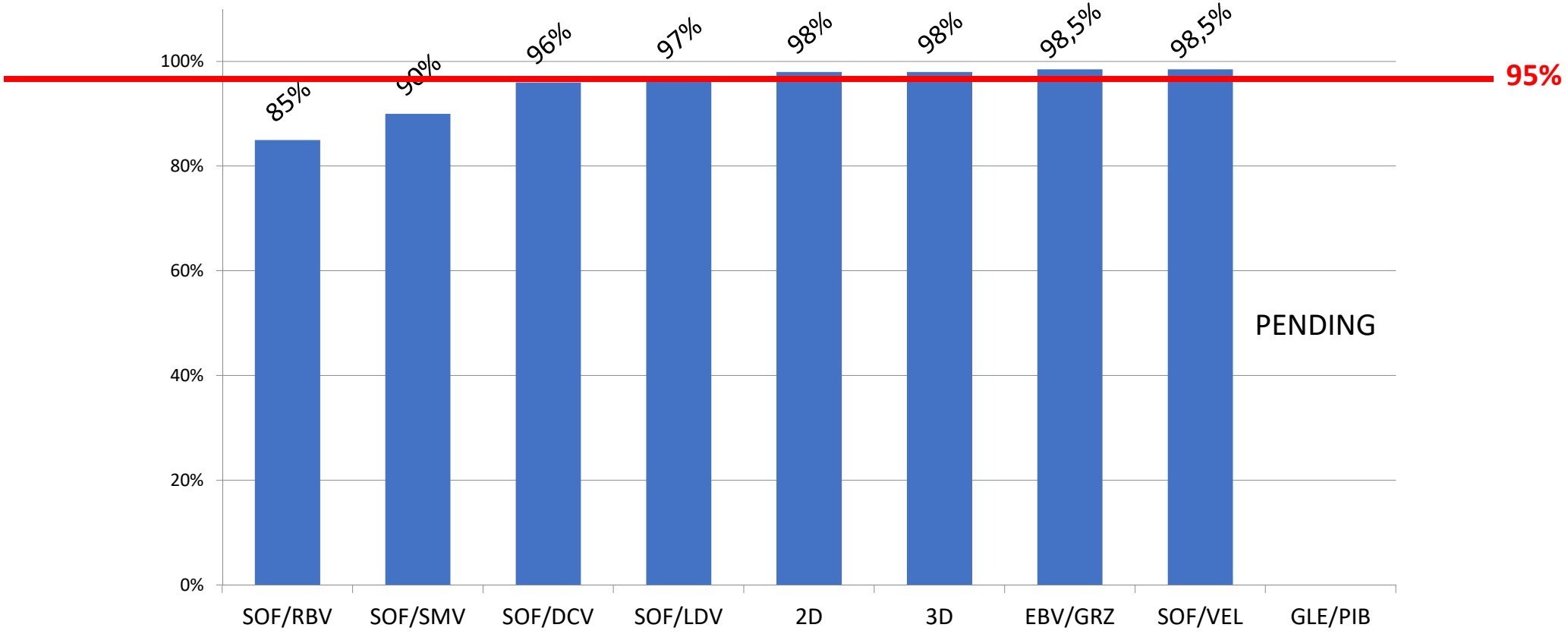
SVR 12 IN THE FIRST 5000 HCV PATIENTS TREATED IN THE NAVIGATORE PLATFORM

ACCORDING TO AIFA CATEGORIES



SVR 12 IN THE FIRST 5000 HCV PATIENTS TREATED IN THE NAVIGATORE PLATFORM

ACCORDING TO DAA REGIMEN



CLINICAL OUTCOMES IN 3530 HCV PATIENTS WITH COMPENSATED CIRRHOSIS TREATED IN THE NAVIGATORE DATA BASE

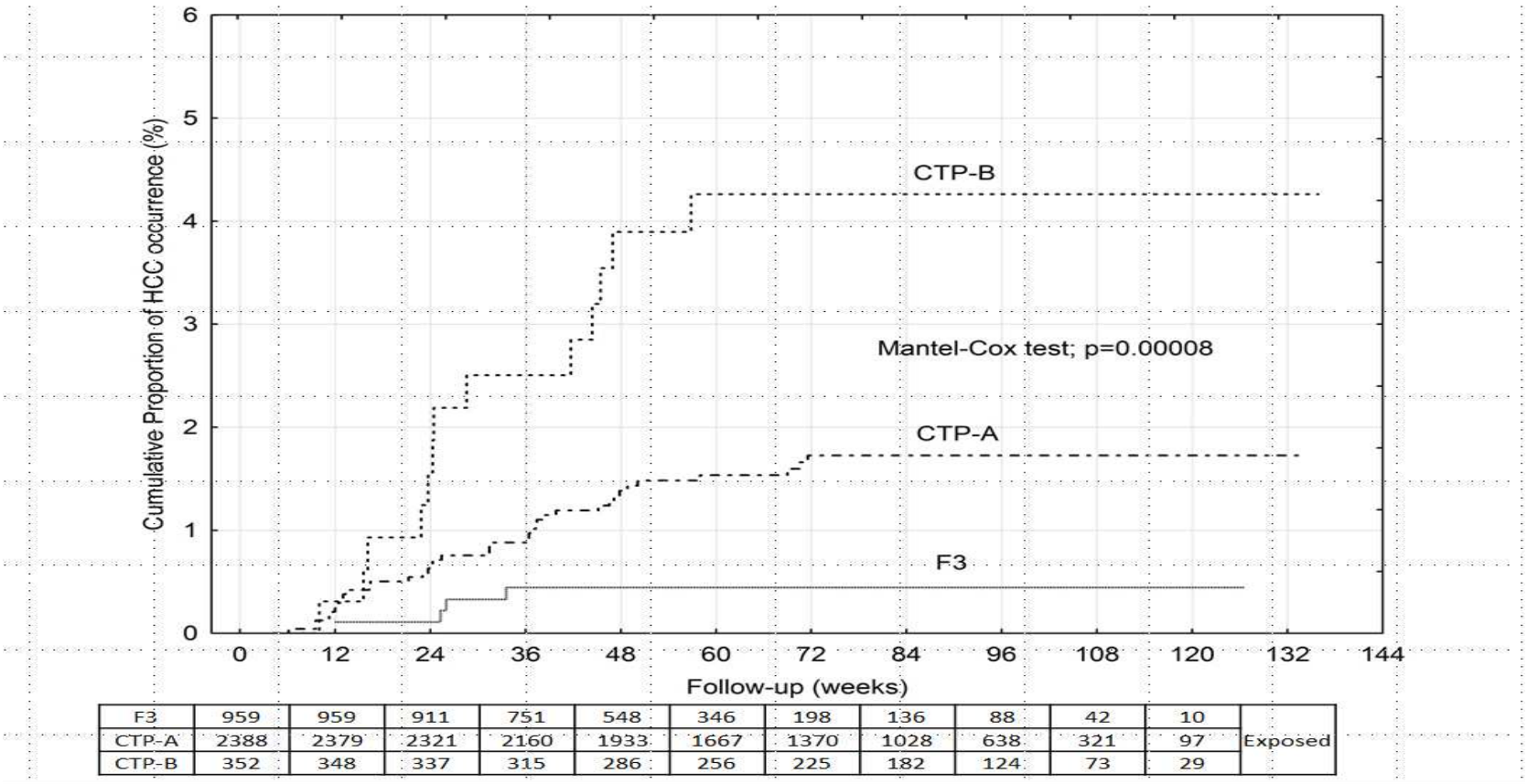
OUTCOME	TREATED*	UNTREATED**
GI BLEEDING	0.51%/yr	1.5%/yr
ASCITES	1.6%/yr	3%/yr
DECOMPENSATION	2.1%/yr	4.2%/yr
HCC	1.6%/yr	3%/yr
LIVER-RELATED DEATH	0.39%/yr	1-3%/yr

* NAVIGATORE ** NATURAL HISTORY ACCORDING TO D'AMICO et al,2014

CLINICAL OUTCOMES IN 3530 HCV PATIENTS WITH COMPENSATED CIRRHOSIS TREATED IN THE NAVIGATORE DATA BASE

OUTCOME	1° YEAR	2-3° YEAR
GI BLEEDING	0.71%/yr	0.24%/yr
ASCITES	1.9%/yr	0.72%/yr
DECOMPENSATION	3.0%/yr	0.9%/yr
HCC	2.4%/yr	0.9%/yr
LIVER DEATH	0.8%/yr	0.1%/yr

De Novo incidence of HCC
In the NAVIGATORE Database



F3	959	959	911	751	548	346	198	136	88	42	10	
CTP-A	2388	2379	2321	2160	1933	1667	1370	1028	638	321	97	Exposed
CTP-B	352	348	337	315	286	256	225	182	124	73	29	

A. Romano, et al. (Journal of Hepatology 2018)

De Novo incidence of Hepatocarcinoma

***Baseline* risk factors for the development of HCC at multivariate analysis**

Multivariate Cox's regression			
	HR	**95% CI**	**P value**
CTP-B vs CTP-A	2.19	1.10-4.37	**0.026**
APRI score ≥ 2.5	2.03	1.14-3.61	**0.0016**
HBsAg+	3.99	1.24-12.91	**0.021**
Diabetes	1.89	0.96-3.71	0.065

A. Romano, et al Journal of Hepatology (2018)

BENEFICI CLINICI ED ECONOMICI DEL TRATTAMENTO CON DAA DEL PAZIENTE CIRROTICO – OUTCOME DAL DATA BASE NAVIGATORE

Outcome modelling in 3350 HCV pazienti con cirrosi

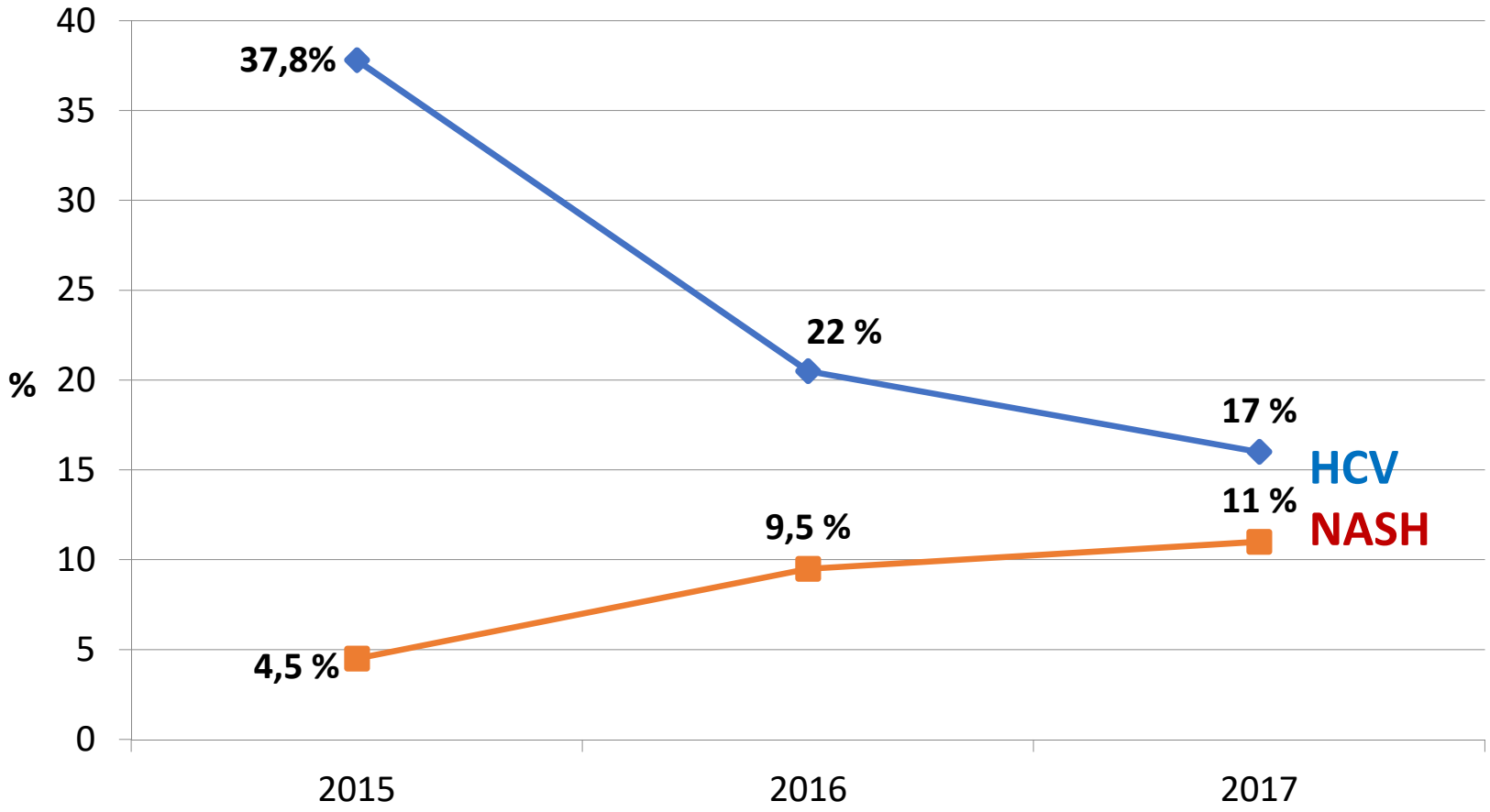
EVENTI CLINICI EVITATI

	1° ANNO	2° ANNO	**TOTALE**
EMORRAGIA GI	27	42	**69**
ASCITE	37	77	**114**
SCOMPENSO	41	111	**152**
HCC	20	70	**90**
DECESSO	73	97	**170**
TOTALE	**198**	**397**	**595**

PAREGGIO DI BILANCIO

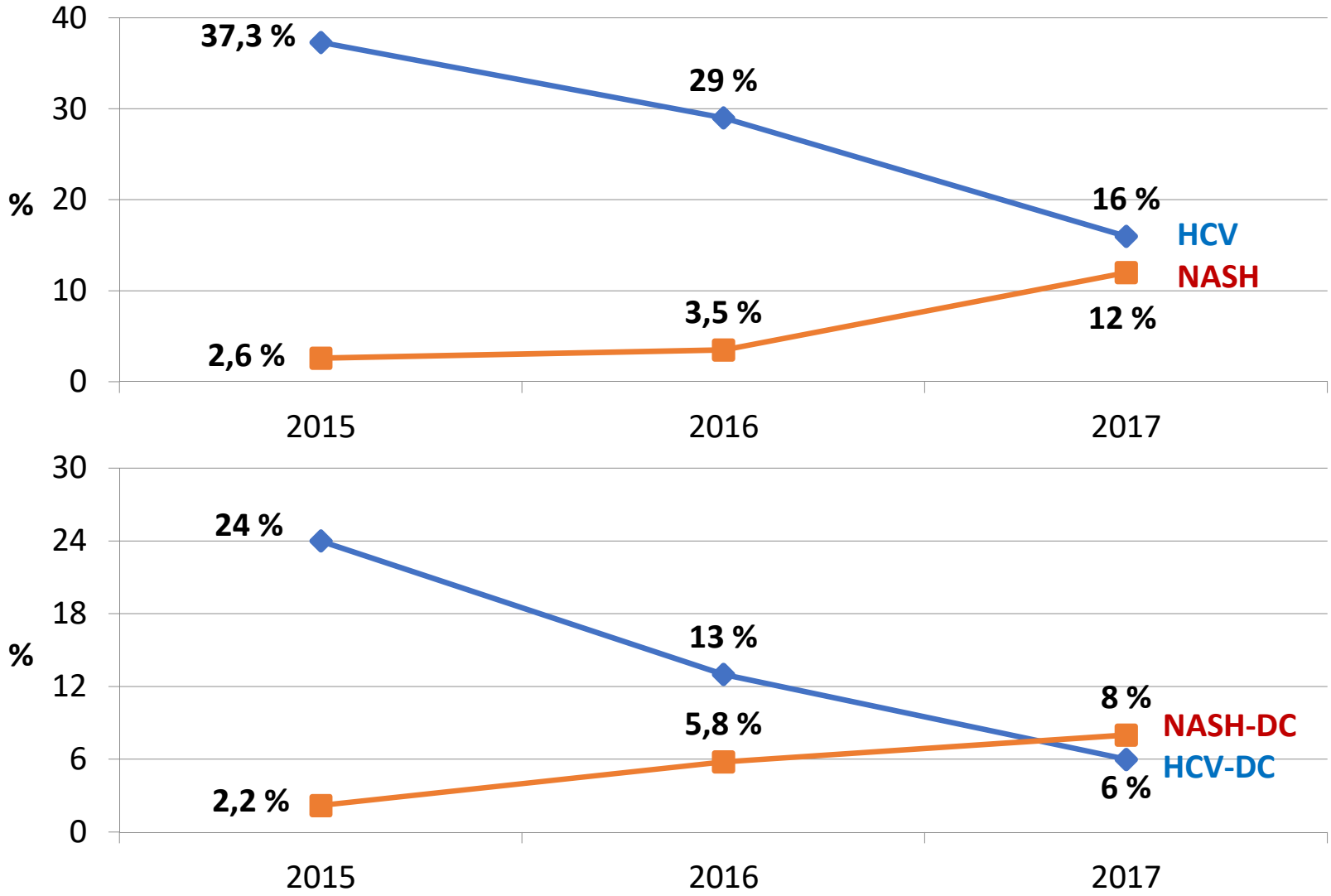
Per il 2020-2021 al prezzo di 12.500 EURO/Trattamento DAA

TRAJECTORIES OF WAIT-LISTING FOR LIVER TRANSPLANT BY ETIOLOGY IN PADOVA



COMUNICATED by Prof Patrizia Burra (UOD trapianto Multiviscerale – Padova)

TRAJECTORIES OF LIVER TRASPLANTS BY ETIOLOGY IN PADOVA

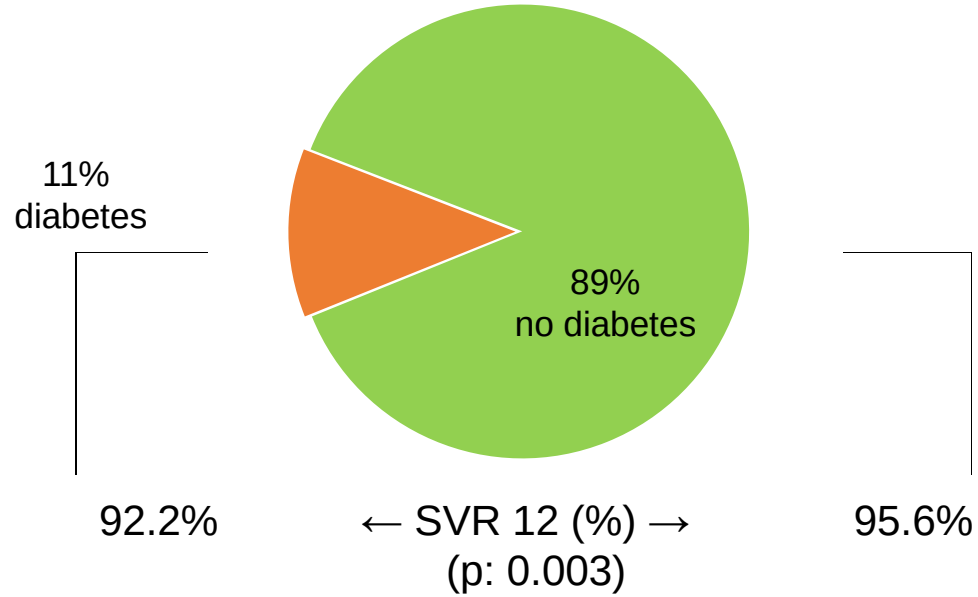


COMUNICATED by Prof Patrizia Burra (UOD trapianto Multiviscerale – Padova)

Real-life data (NAVIGATORE Data-base) on DAA treatment in HCV patients with type 2 diabetes

Effects of diabetes on SVR

464/4159 (11%) had type 2 Diabetes

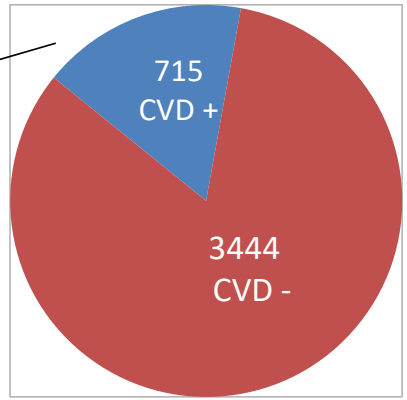


Difference confirmed after stratification for age/genotype/stage

Subgroup analysis revealed significant difference in SVR only for SOF/RBV and SOF/SMV

Real-life data (NAVIGATORE Data-base) on DAA therapy in HCV patients with CVD

715/4159 (17%) had CVD requiring multiple drug treatment



SVR 12
(p: 0.201)

95.3%

94.9%

2.2% with cirrhosis
1.0% without cirrhosis

PREMATURELY DISCONTINUED

2.0% with cirrhosis
0.8% without cirrhosis

CVD OUTCOMES?

FROM

INDIVIDUAL LEVEL

TO

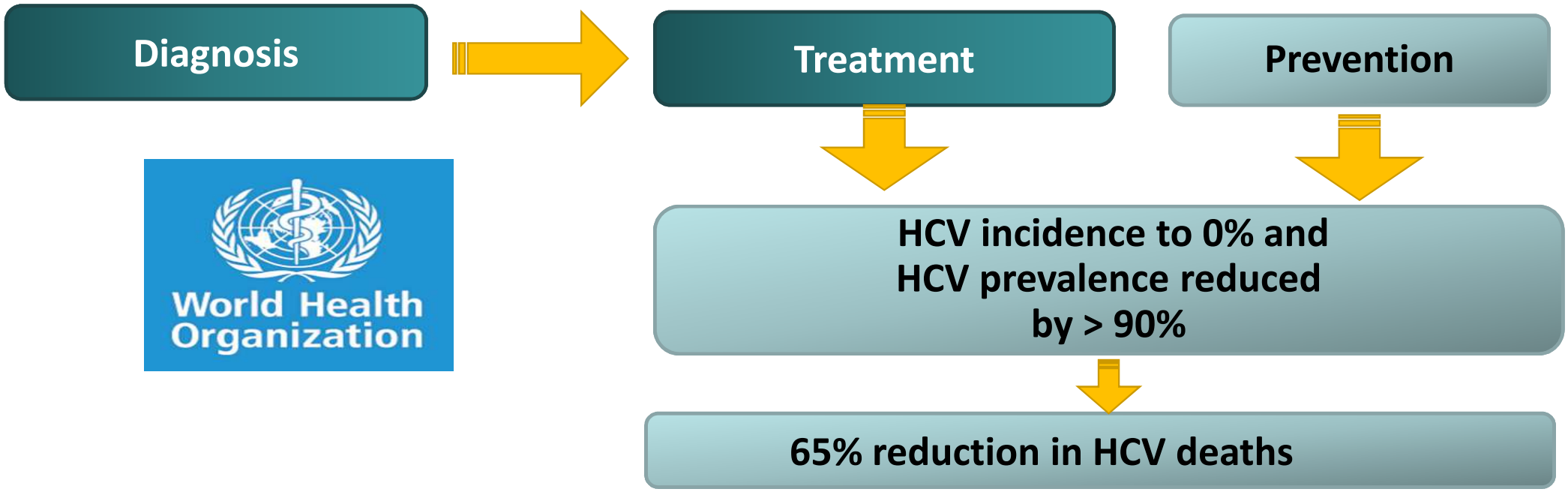
POPULATION LEVEL

TARGET :

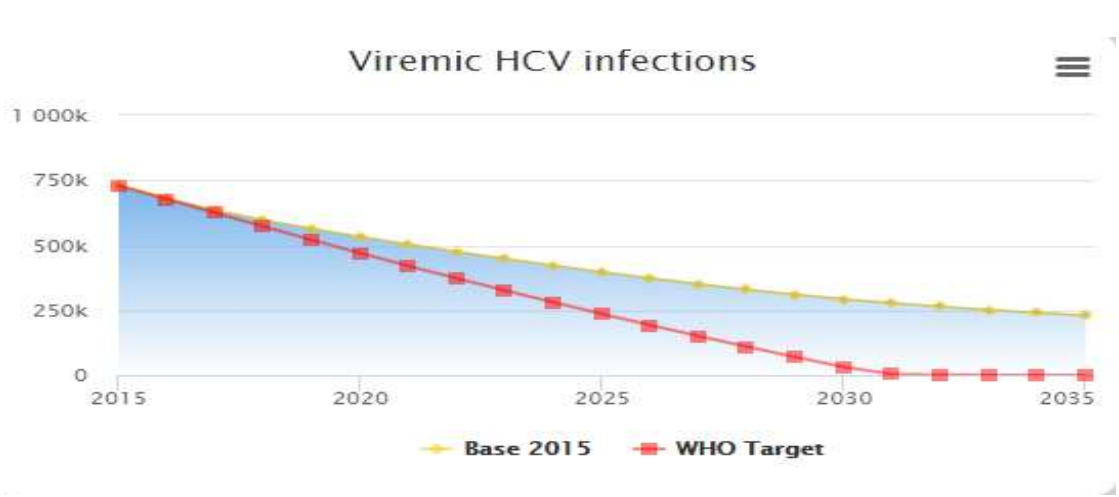
- **DISEASE CONTROL**
- **HCV ELIMINATION**
- **HCV ERADICATION**

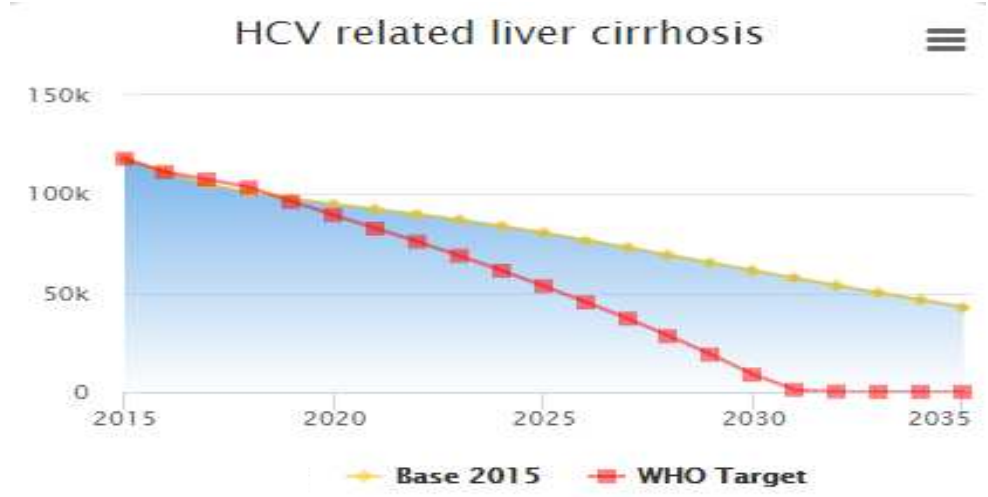
The Goal of Hepatitis C Elimination by 2030

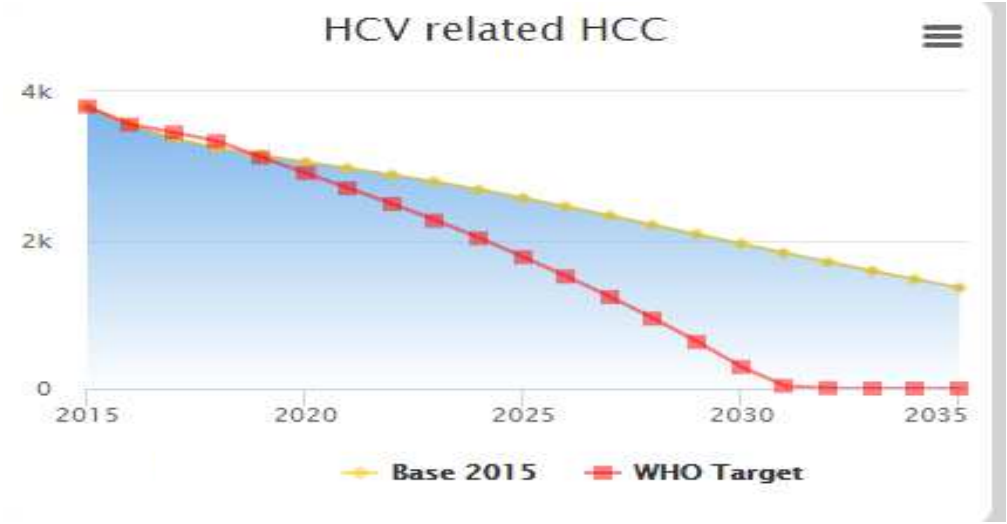
Elimination of HCV infection in the country through identifying 90% and treating 80% HCV patients strengthened by effective prevention interventions

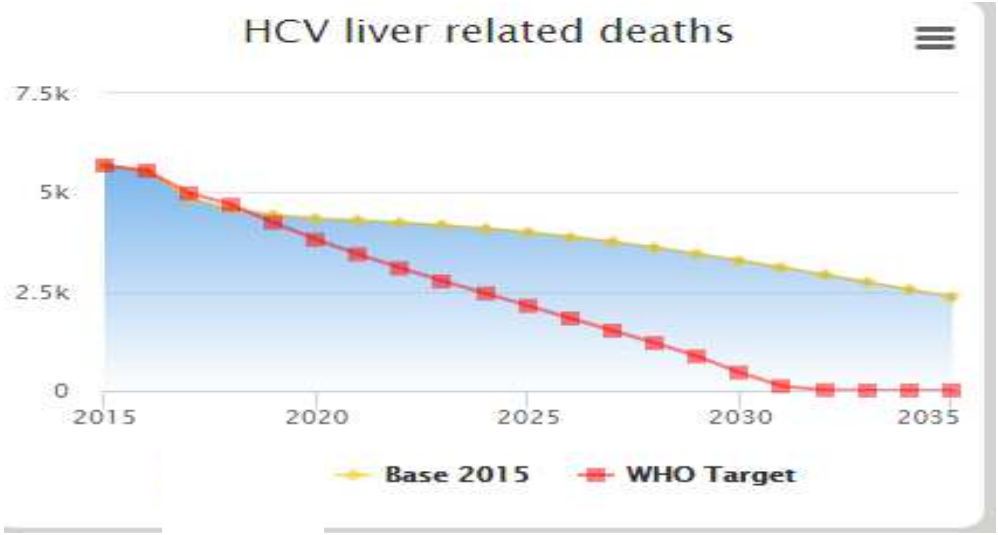


CDA MODELLING OF DISEASE CONTROL AND HCV ELIMINATION IN ITALY









REGIONE DEL VENETO

DMM Dipartimento di Medicina Molecolare

REGIONE DEL VENETO
AZIENDA ZERO

PROGETTO « ELIMINAZIONE HCV IN VENETO»

GLI OBIETTIVI – 80/80/80

- IDENTIFICAZIONE DELL' 80 % DEI SOGGETTI CANDIDABILI A TERAPIA
- TRATTAMENTO DELL' 80% DEI SOGGETTI ELEGGIBILI
- OTTENENDO UNA RIDUZIONE DELL' 80% DELLA PREVALENZA
- CON DEFINIZIONE DELLE FASI E TEMPI DI REALIZZAZIONE

LE FASI

- I NUMERI
- GLI ALGORITMI DEL CHI FA COSA E COME
- GLI STRUMENTI
- LE RISORSE

STIME HCV NELLA POPOLAZIONE GENERALE DEL VENETO

HCV-RNA POSITIVI DA PROIEZIONE 2002 (Alberti et al Ann. Int. Med)

35.000-40.000

TRATTATI ED ERADICATI DAL 2002 (IFN e DAA) : 10.000

STIMA HCV-RNA POSITIVI 25.000-30.000

DEI QUALI CON DIAGNOSI NOTA 11.000-12.000

DEI QUALI GIA' REGISTRATI SU NAVIGATORE 3000

↓

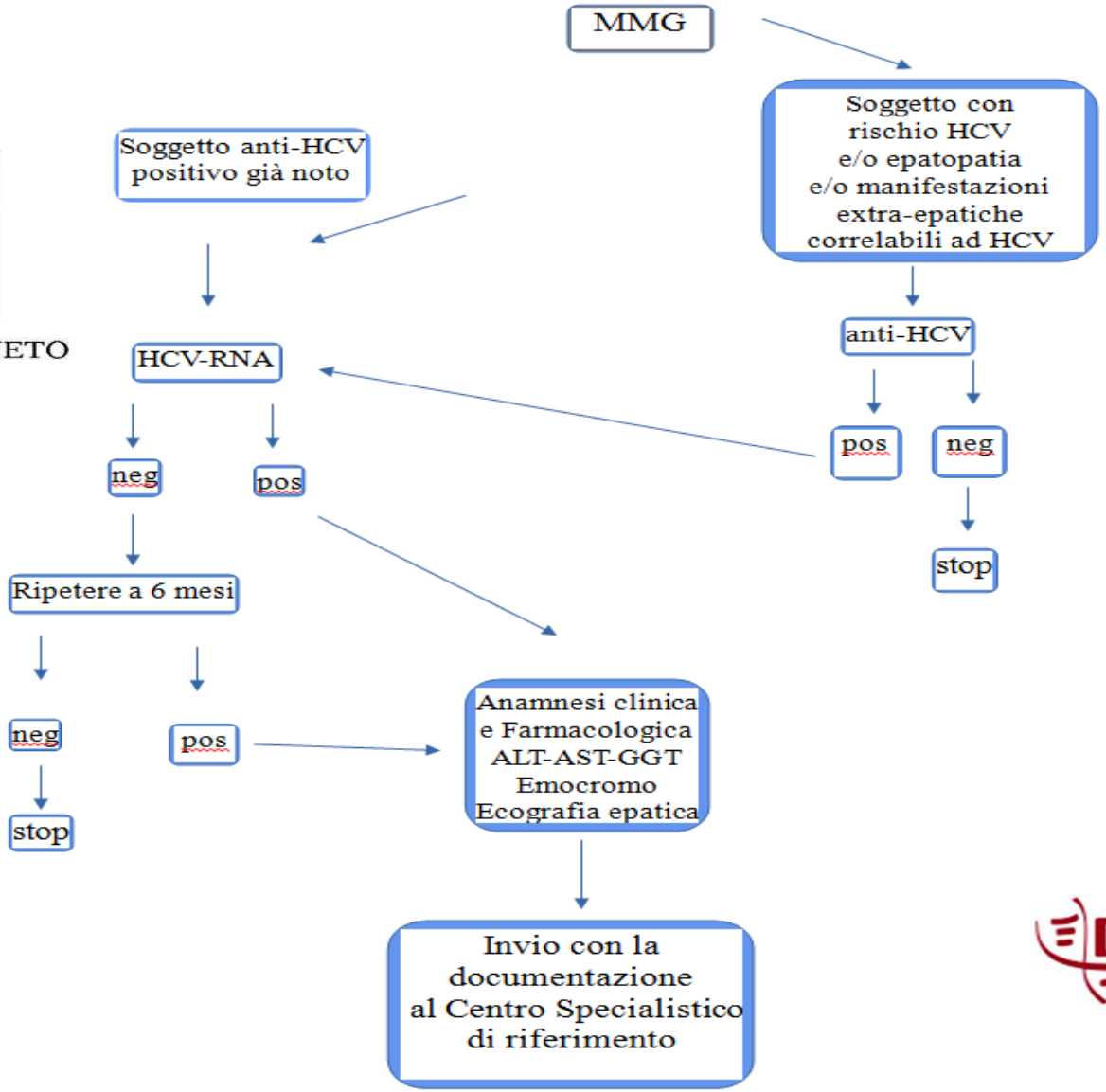
CON DIAGNOSI NOTA MA NON RIFERITI ALLA RETE : 8000-9000

ANCORA DA DIAGNOSTICARE : 14.000-19.000

TARGET DI TERAPIE x ELIMINAZIONE HCV : 12.500-16.000

ALGORITMO MMG ⟶ CENTRO SPECIALISTICO

REGIONE DEL VENETO

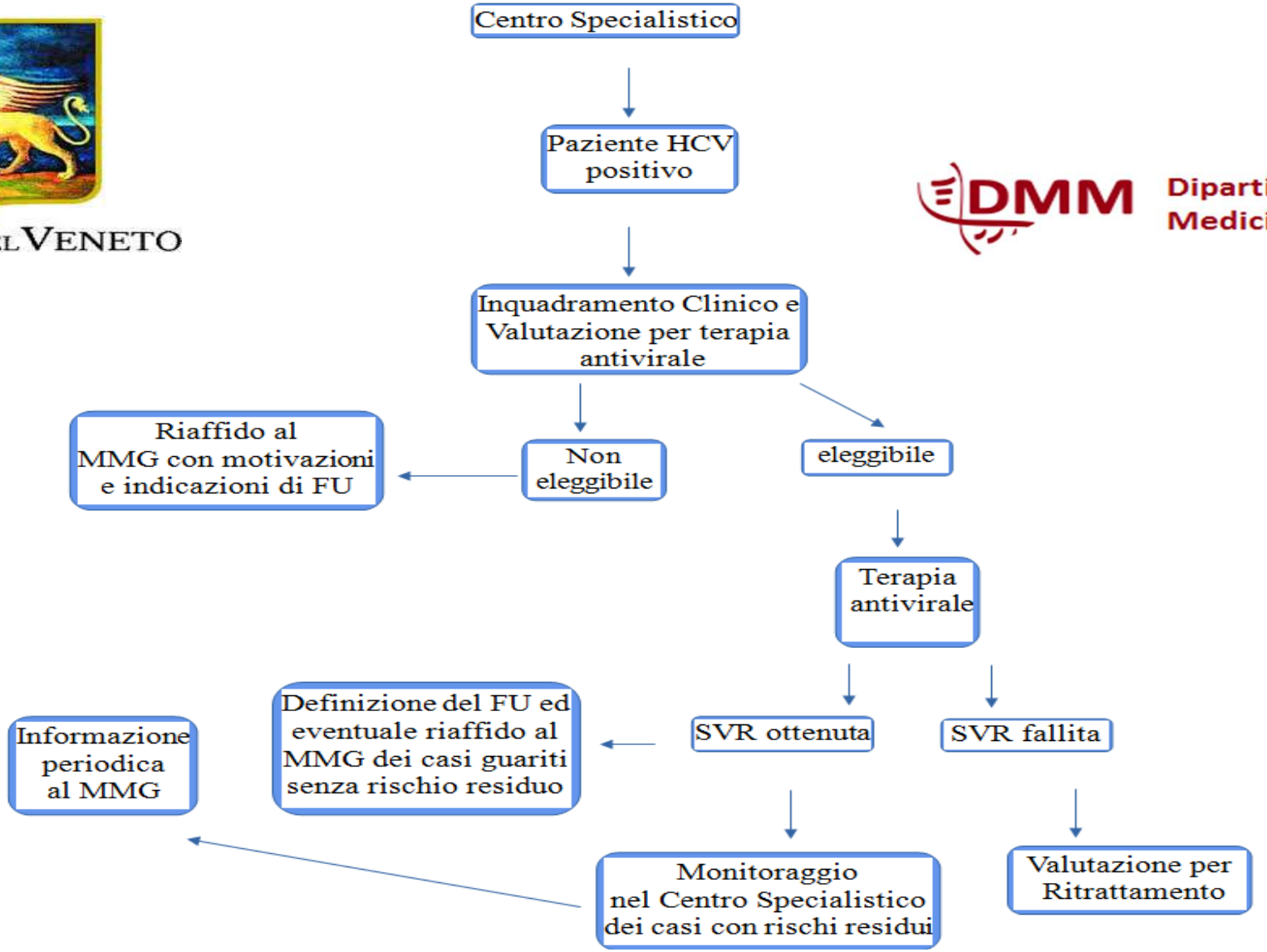


DMM Dipartimento di Medicina Molecolare

ALGORITMO CENTRO SPECIALISTICO ⟶ MMG

REGIONE DEL VENETO

DMM Dipartimento di Medicina Molecolare



Special Population: HCV in Veneto (Ser.D. Stime)

Ser.D.

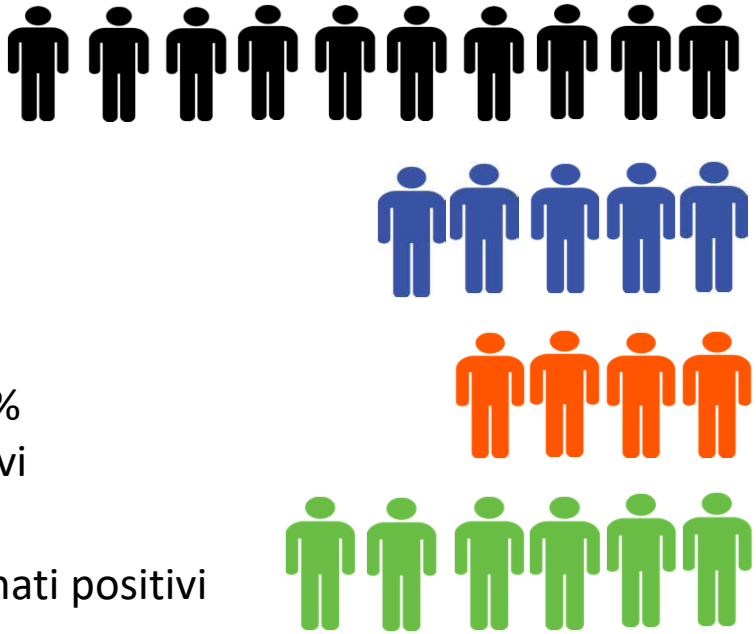
Tot. 45

10.690
in carico

19-36%
testati

25-50 %
positivi

2.650-5350 stimati positivi



Cortesia di S Lobello e F Nava

Special Population: HCV in Veneto (Carceri Stime)

Carceri

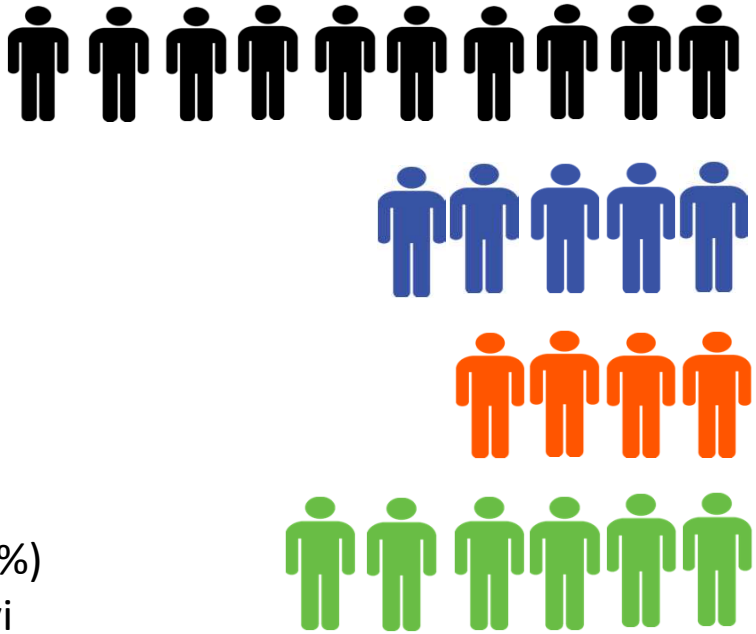
Tot. 9

2.181
detenuti
(al 31.12.06)

?
testati

?
positivi

440-660 (20-30%)
stimati positivi



Dati Amministrazione Penitenziaria, 2017

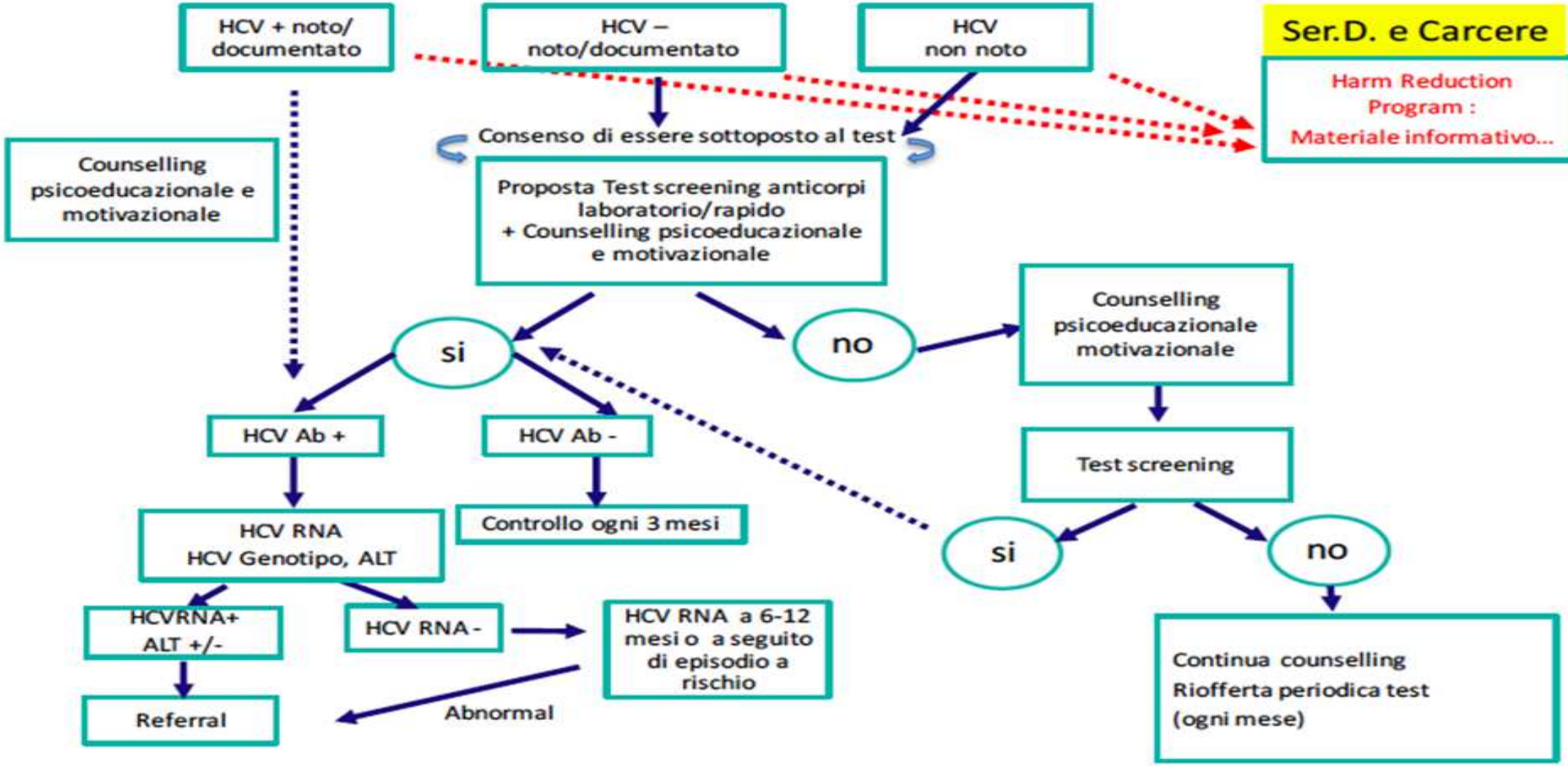


Fig. 1. Algoritmo per lo screening nei Ser.D e nelle Carceri

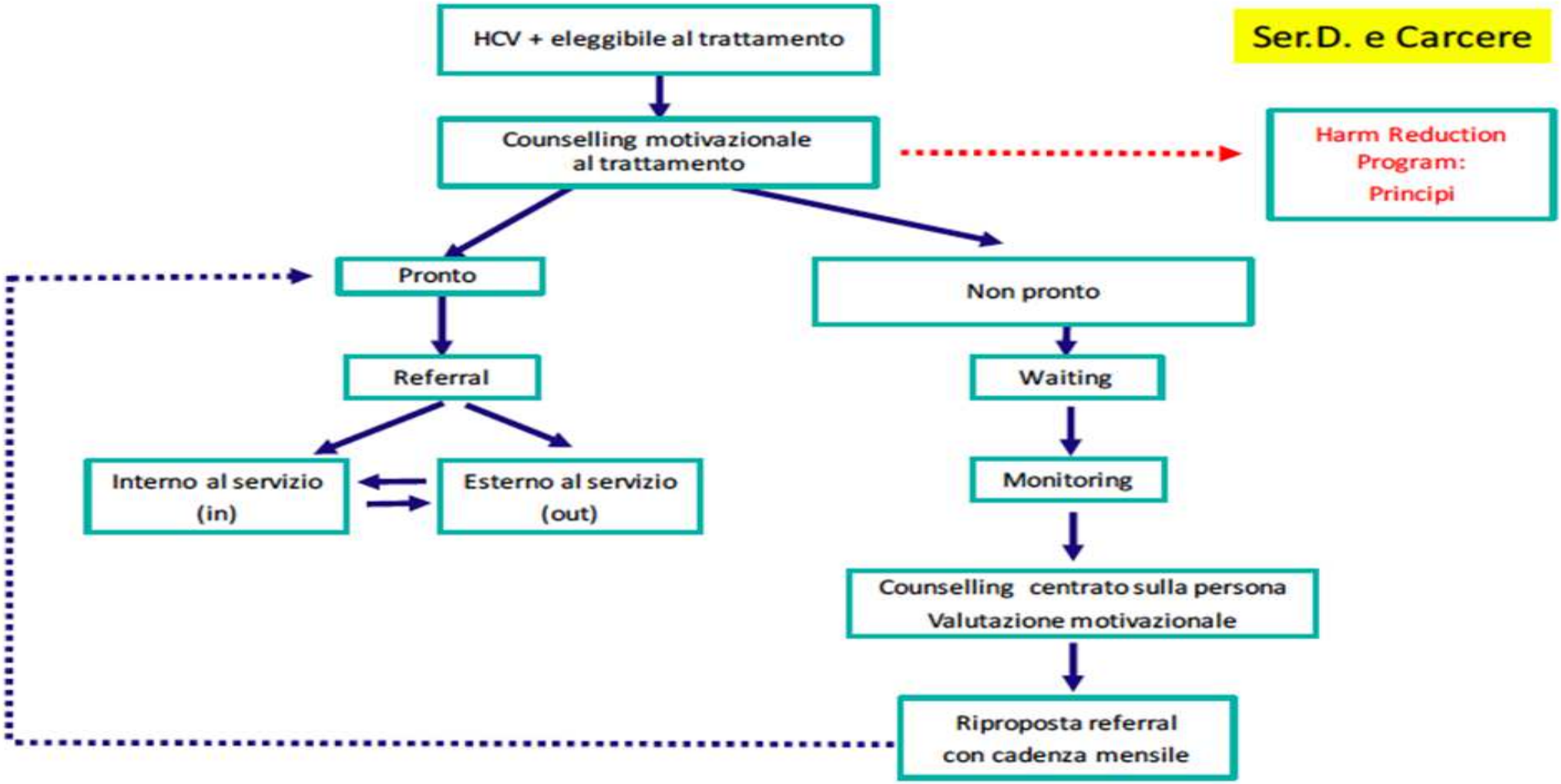


Fig. 2. Algoritmo per il referral

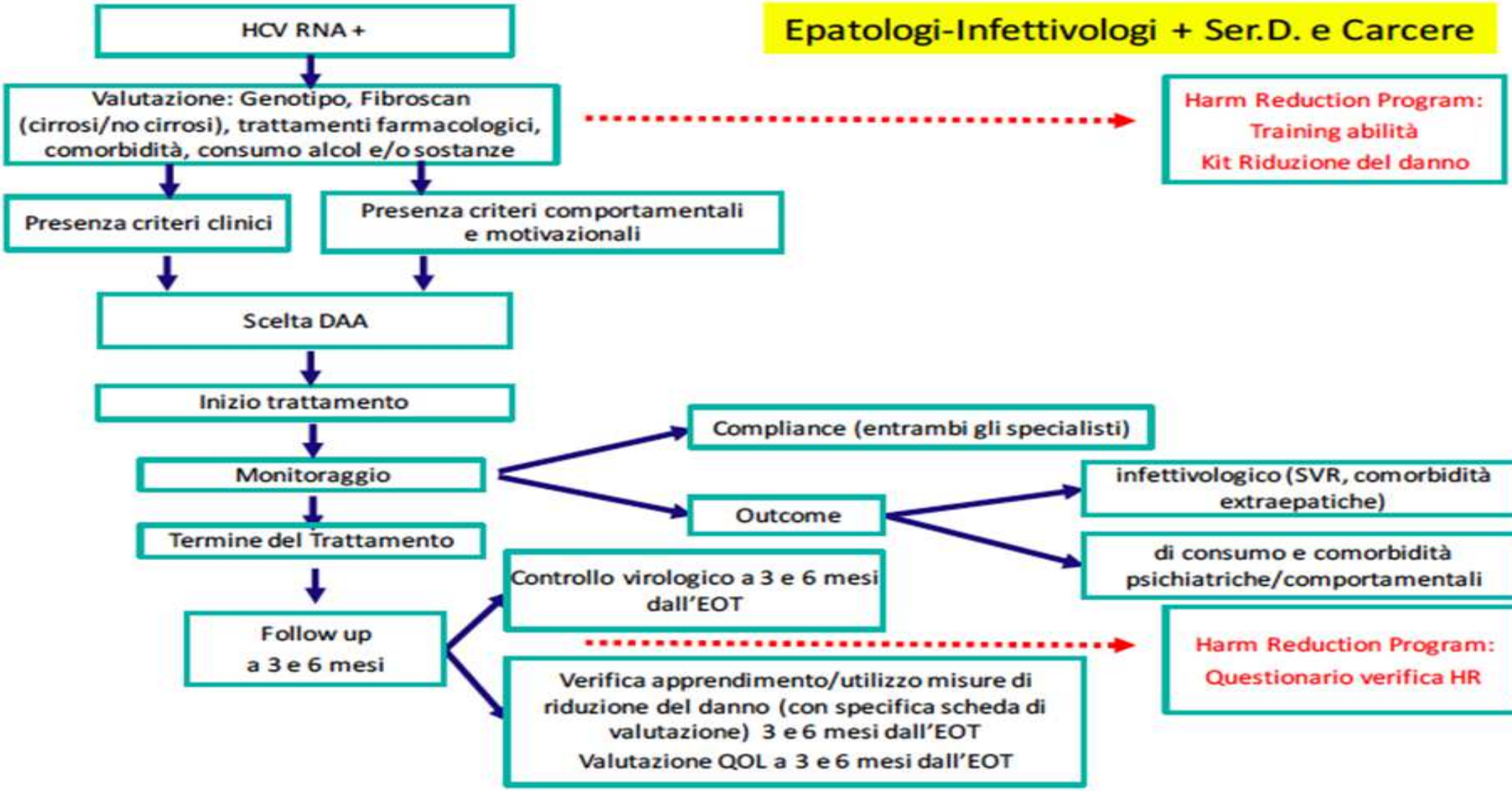


Fig. 3. Algoritmo per il trattamento

Fig. 5. Algoritmo delle azioni di riduzione del danno nelle diverse fasi della presa in carico d
soggetto a rischio con infezione

LO STRUMENTO : NAVIGATORE -2.0

45 Ser.D collegati come SPOKE ad HUB di riferimento

9 CARCERI collegate come SPOKE ad HUB di riferimento
(dopo fase sperimentale)

Accesso libero al Portale Web per MMG e altro Personale Sanitario

ACKNOWLEDGEMENTS

MEDICINA GENERALE PADOVA

Sara Piovesan
Georgios Anastassopoulos
Francesca Pasin
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Giovanna Cardaci
Paola Berto
Michela Mauro

Franco Noventa

Salvatore Lobello
Felice Nava

Clinica Medica 5
Gastroenterologia
Malattie Infettive
Trapianto Multiviscerale
Chirurgia Epatobiliare e
dei Trapianti Epatici

DMM Dipartimento di Medicina Molecolare

Saverio Parisi
Monica Basso
Giorgio Palù

REGIONE DEL VENETO

Giovanna Scroccaro
Silvia Adami
Valentina Fantelli
AnnaMaria Menti

- AZIENDA ULSS 1 DOLOMITI
- AZIENDA ULSS 2 MARCA TREVIGIANA
- AZIENDA ULSS 3 SERENISSIMA
- AZIENDA ULSS 4 VENETO ORIENTALE
- AZIENDA ULSS 5 POLESANA
- AZIENDA ULSS 6 EUGANEA
- AZIENDA ULSS 7 PEDEMONTANA
- AZIENDA ULSS 8 BERICA
- AZIENDA ULSS 9 SCALIGERA
- AZIENDA OSPEDALIERA DI PADOVA
- AZIENDA OSPEDALIERA UNIVERSITARIA INTEGRATA VERONA