

Evaluation of quantitative HBsAg levels in people with chronic hepatitis B on nucleotide analogue therapy in Australia: a REACH-B sub-study

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Disclosure

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Background

- Quantitative HBV surface antigen (qHBsAg) is a biomarker with strong association with HBV natural history and is increasingly utilised to evaluate **treatment response** and predict the **risk of advanced liver disease** in people with chronic HBV infection.
- Clinical trial data for novel antiviral agents, including anti-sense oligonucleotides, highlight the importance of baseline qHBsAg in predicting functional cure.
- This analysis evaluated qHBsAg profiles among people with chronic HBV infection stable on antiviral therapy in a sub-study of a national cohort of people with hepatitis B (REACH-B).

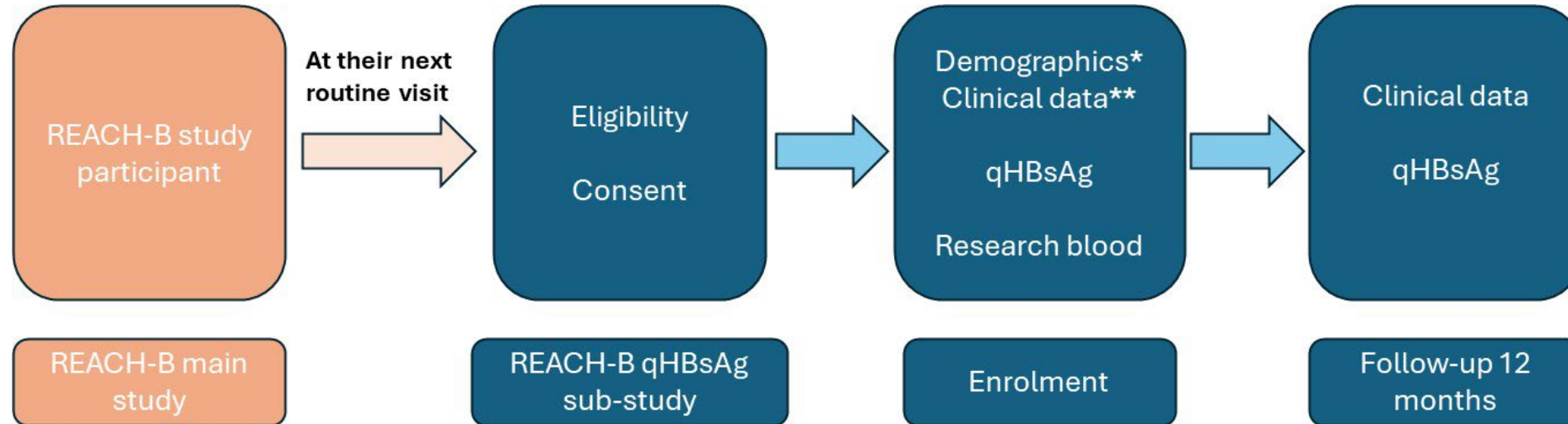
- **The Real-world Assessment of people living with Chronic Hepatitis B in Australia (REACH-B Study)** is an observational cohort study of >5,000 adults living with chronic HBV infection in Australia attending a national network of hepatitis clinical services.
- In this cross-sectional sub-study, REACH-B participants were enrolled from six hospitals (four jurisdictions - NSW, NT, QLD, SA).
- **Inclusion criteria:**
 - Received any nucleos(t)ide analogue therapy for ≥ 6 months (any time prior to enrolment)
 - Currently receiving any nucleos(t)ide analogue therapy for ≥ 3 months
 - HBV DNA undetected, or < 90 IU/mL on most recent test available
- **Exclusion criteria:**
 - History of prior or current hepatocellular carcinoma
 - Any investigational drug with potential HBV activity prior to the first dose of HBV medication

Methods

- At enrolment (index date), a venous whole blood sample was collected.
- A second blood sample **will be** collected 12 months ($\pm$ 3 months) after enrolment.
- HBsAg quantification using local laboratory or centralised assay.
- In this analysis, distribution of **qHBsAg levels at enrolment** and factors **associated with qHBsAg ≤ 3000 IU/mL*** were assessed among the **first 200 participants** enrolled during Oct 2025 to Feb 2026 (planned n=500, currently 410).

**A baseline qHBsAg ≤ 3000 IU/mL was an inclusion criterion in Phase III clinical trial of bepirovirose (B-WELL studies)*

Methods



Westmead Hospital, Sydney
St Vincent's Hospital, Sydney
The Queen Elizabeth Hospital, Adelaide
Royal Adelaide Hospital, Adelaide
Menzies School of Health Research, Darwin
Sunshine Coast University Hospital, Sunshine Coast

*Demographics including age, racial and Aboriginal and/or Torres Strait Islander status
**Clinical and laboratory parameters including diabetes, co-infection status with HIV, HCV, HDV; HBV DNA, HBeAg, ALT, LFT, platelets; liver disease measures/fibrosis assessment; HBV treatment regimen(s) and duration

Results: Baseline characteristics

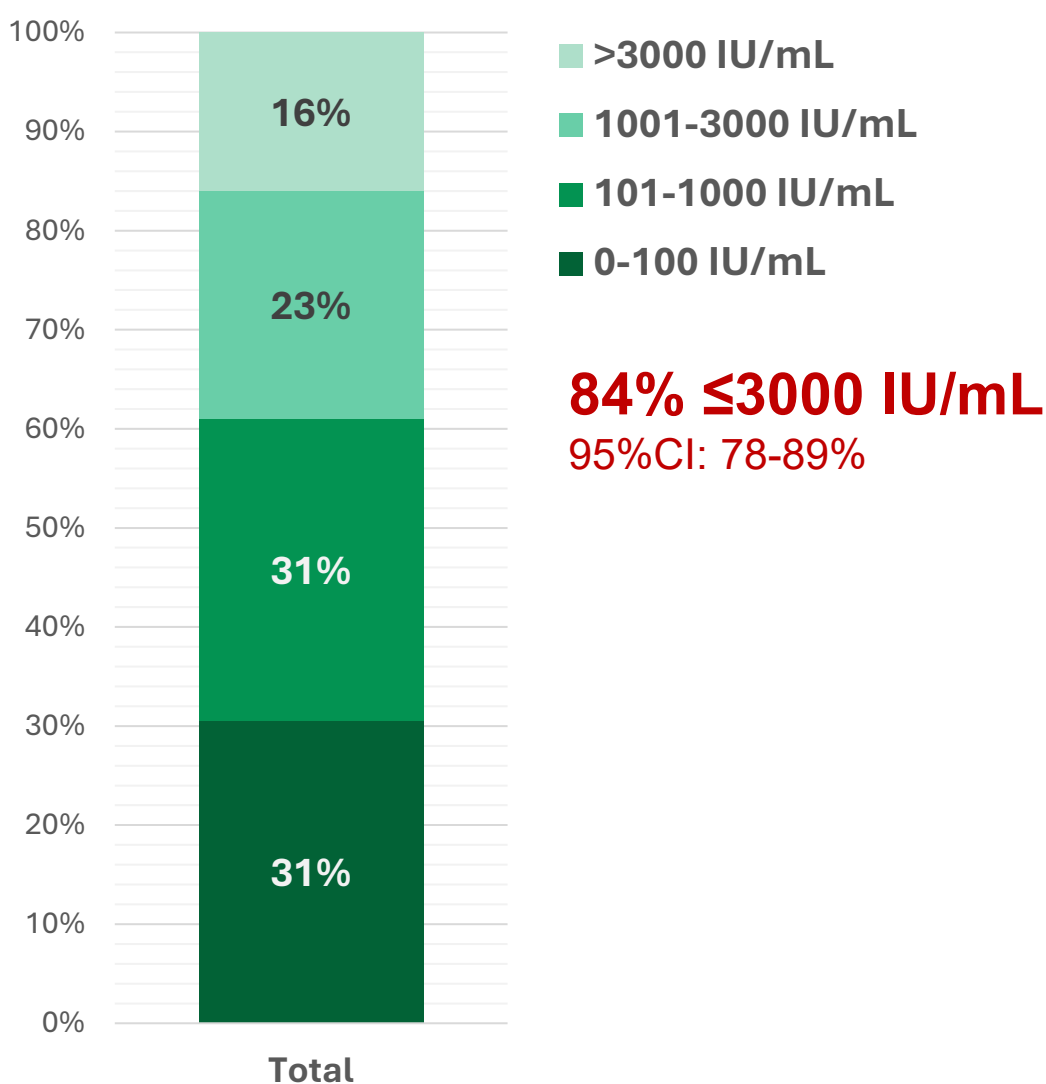
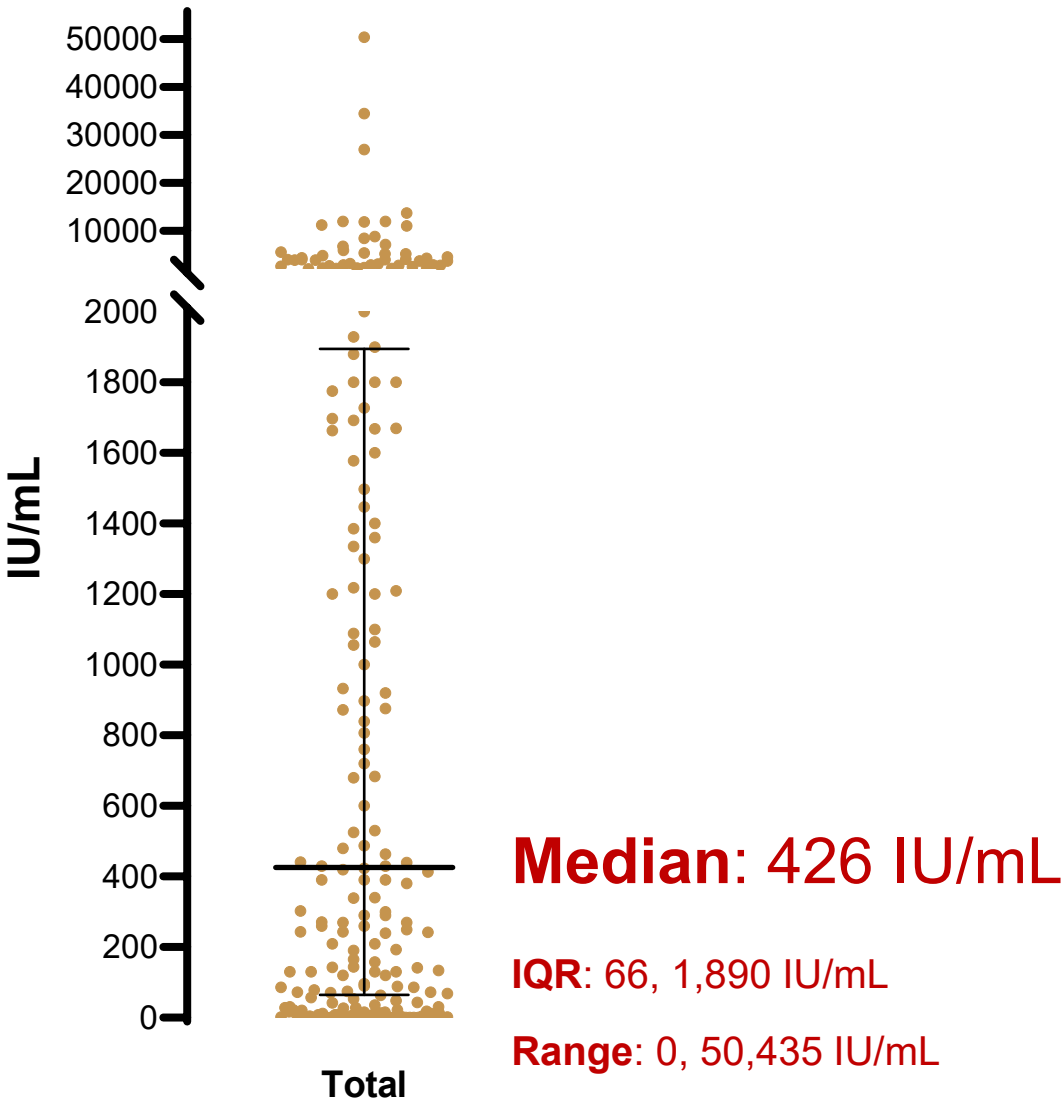
Baseline characteristics	qHBsAg sub-study, n=200	REACH-B participants* n=1128
Female	84 (42%)	461 (41%)
Median age (IQR), years	55 (45, 65)	52 (42, 62)
First Nations Australians	17 (8%)	101 (9%)
Region of birth		
Australia	25 (13%)	214 (19%)
North-East/South-East Asia	149 (74%)	711 (63%)
Other regions	26 (13%)	203 (18%)
HBeAg		
Negative	77 (39%)	786 (70%)
Positive	28 (15%)	191 (17%)
Not available	95 (47%)	151 (13%)
HBV DNA		
Undetected	151 (76%)	744 (66%)
Detected, <20 IU/mL	38 (19%)	334 (30%)
Quantifiable, 20-90 IU/mL	11 (6%)	50 (4%)
Elevated ALT (F>19, M>30 IU/L)	93 (47%)	663 (59%)

* Who could have met criteria in overall REACH-B cohort

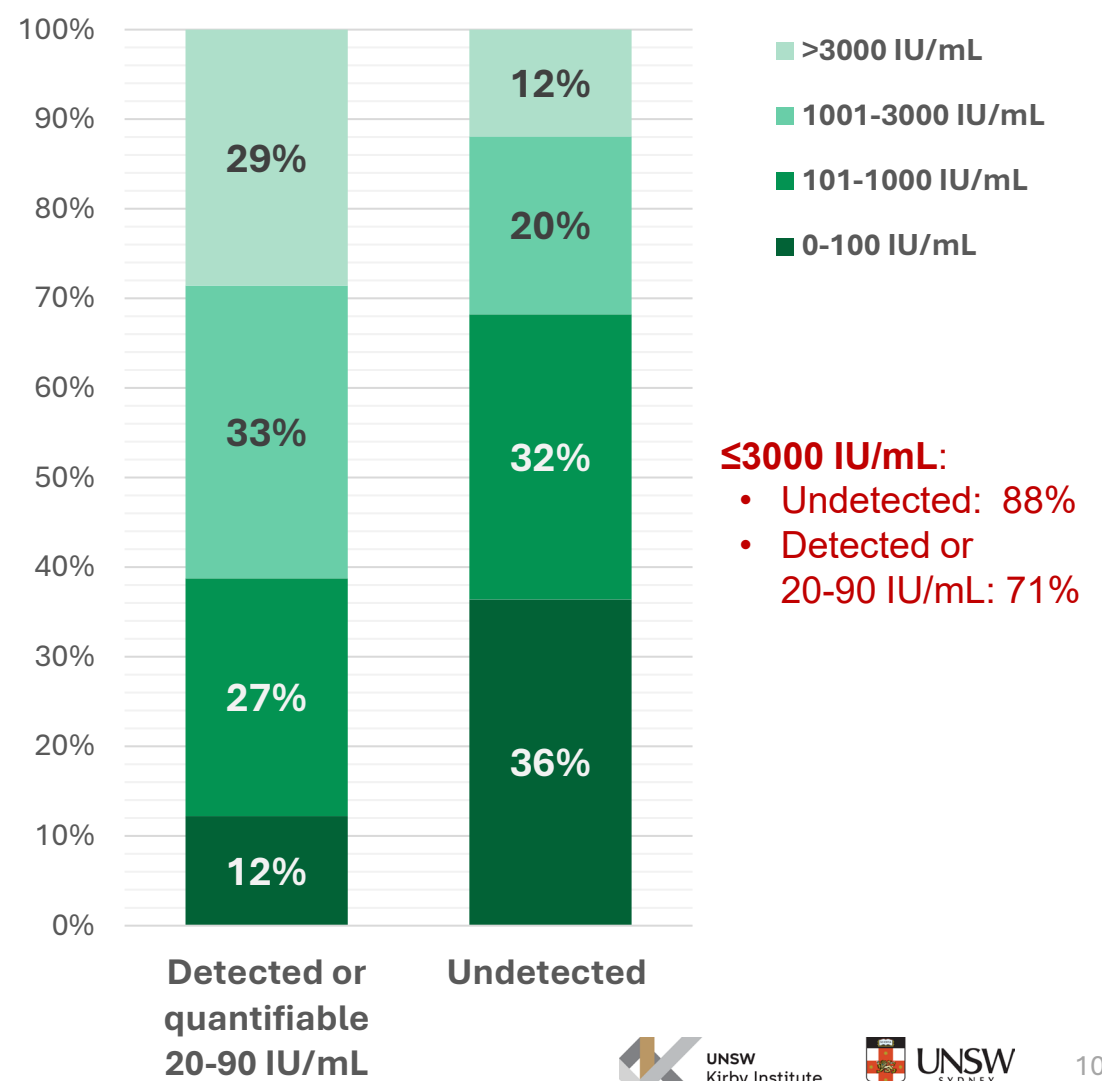
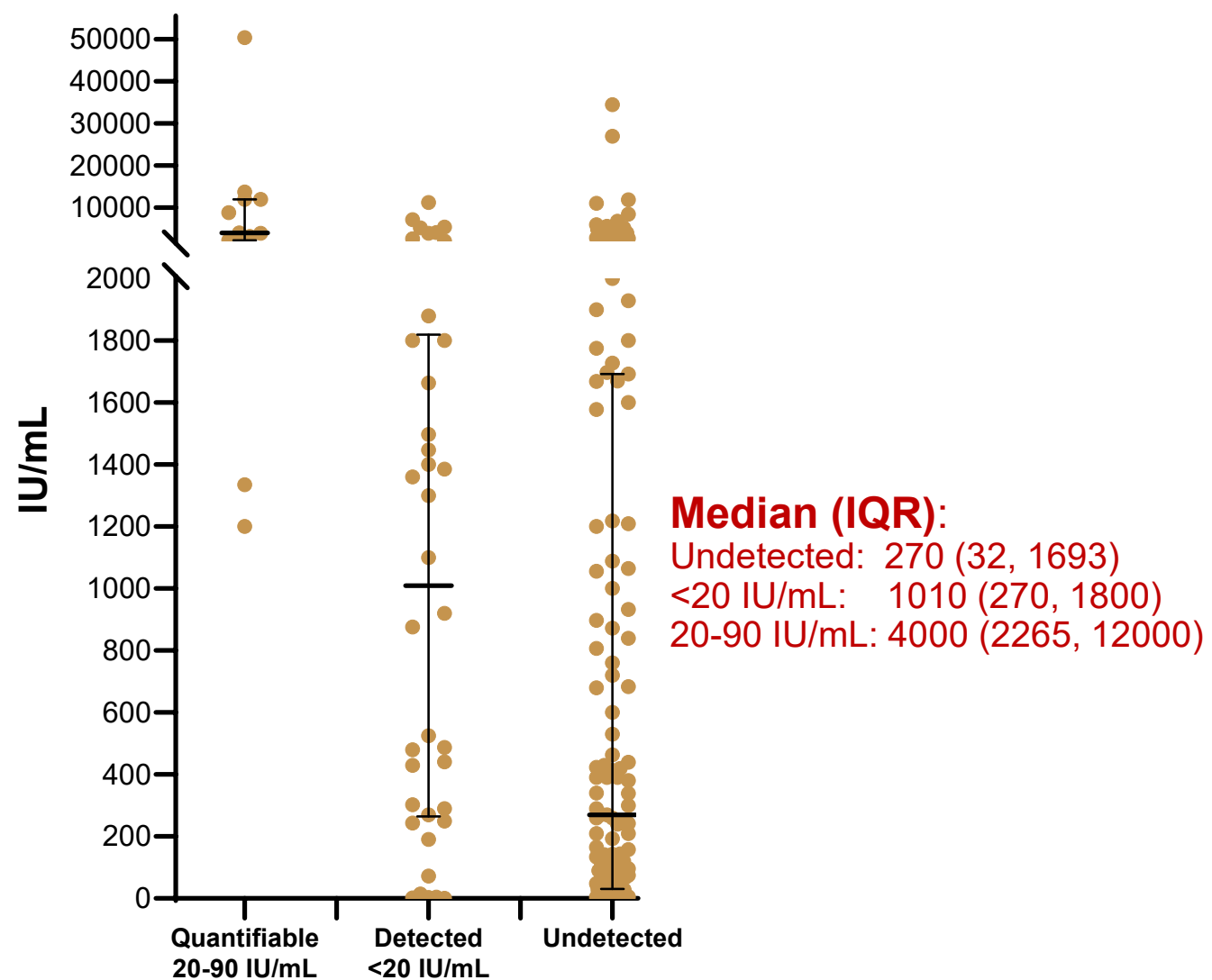
Results: Baseline characteristics

Baseline characteristics	qHBsAg sub-study, n=200	REACH-B participants potentially eligible for the sub-study, n=1128
Cirrhosis		
No	163 (82%)	920 (82%)
Yes	8 (4%)	130 (12%)
Not available	29 (14%)	78 (7%)
HBV treatment regimen		
Entecavir	130 (65%)	767 (68%)
Tenofovir	64 (32%)	293 (26%)
Other (<i>TDF containing ART or PreP</i>)	6 (3%)	56 (5%)
Duration of current therapy, years		
Median (IQR)	7 (3, 11)	5 (2, 8)
Less than one year	9 (5%)	75 (7%)
1-3 years	39 (19%)	258 (23%)
>3-5 years	25 (13%)	237 (21%)
More than 5 years	127 (63%)	558 (49%)

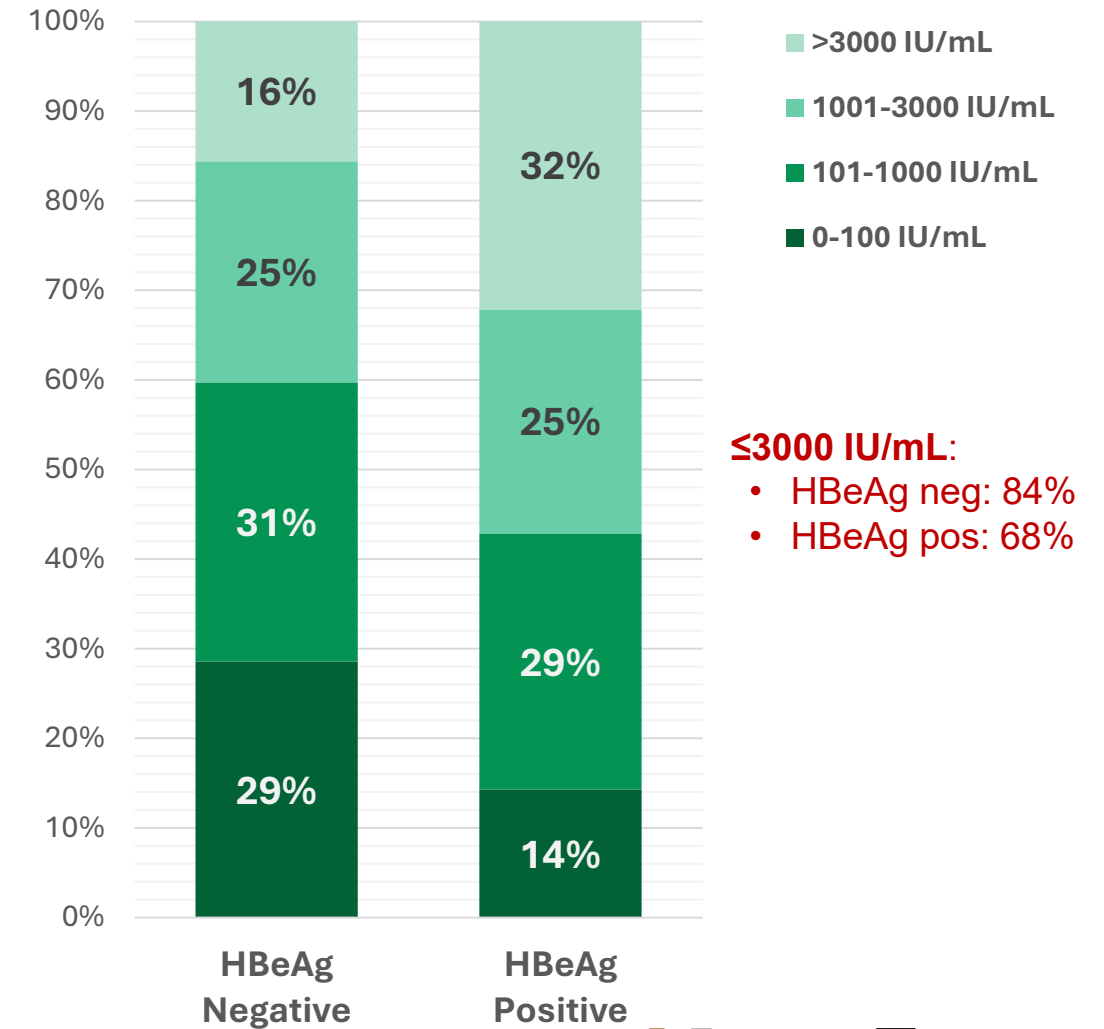
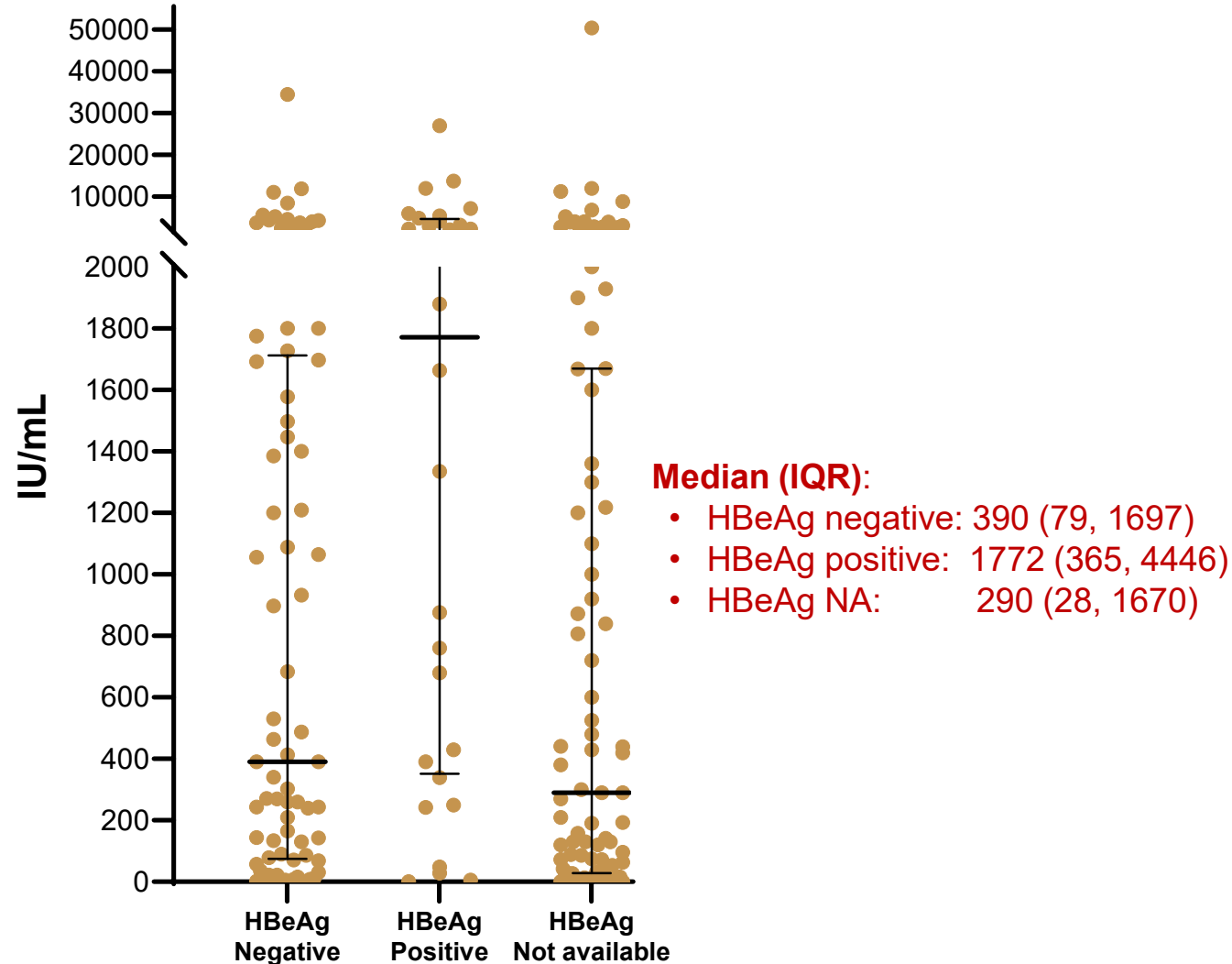
Results: Distribution of qHBsAg



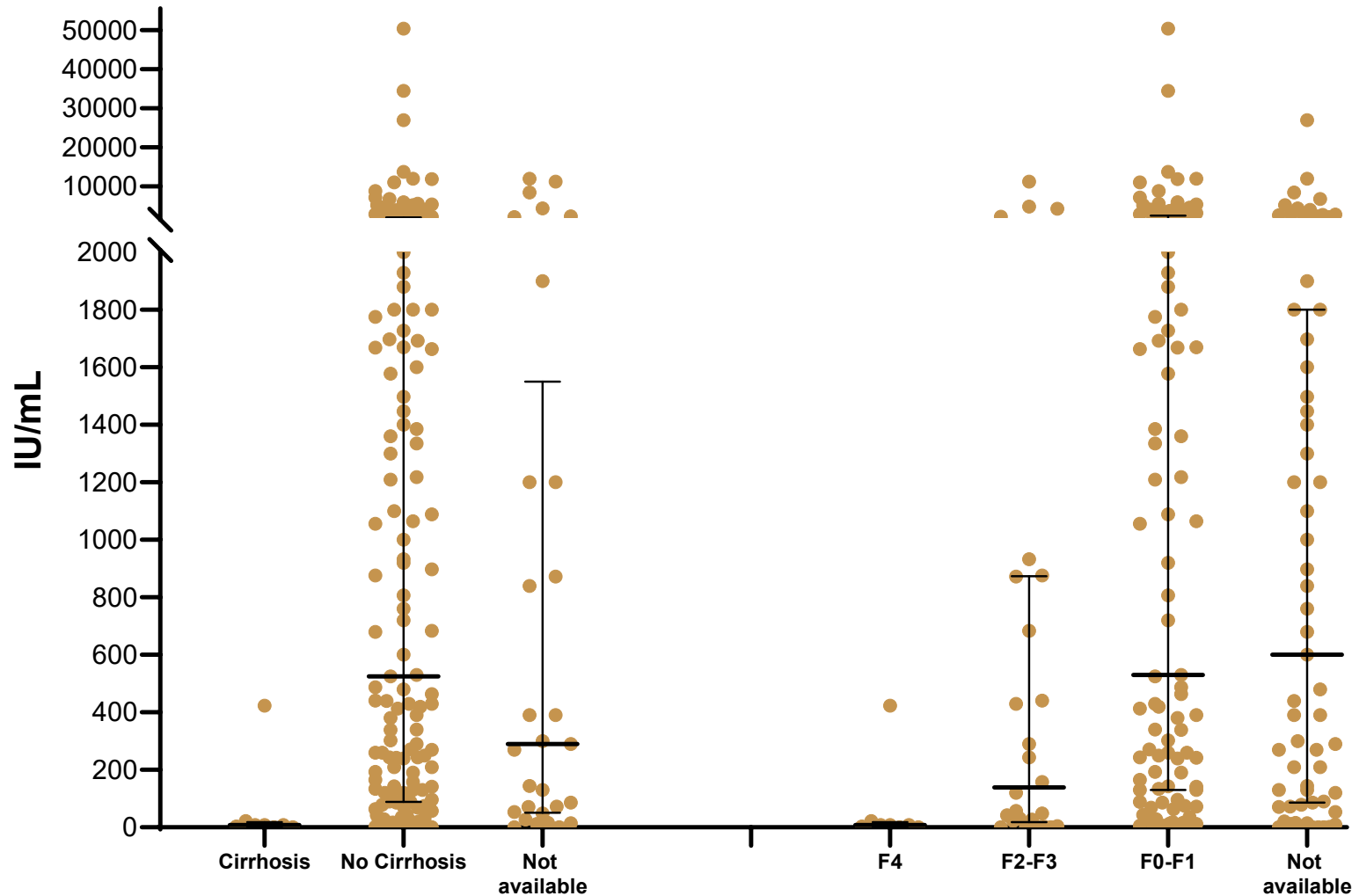
Results: Distribution of qHBsAg by HBV DNA



Results: Distribution of qHBsAg by HBeAg status



Results: Distribution of qHBsAg by liver fibrosis



Median (IQR):

- Cirrhosis: 8 (2, 15)
- No cirrhosis: 525 (89, 2087)
- NA: 290 (53, 1200)
- F4: 8 (2, 15)
- F2-F3: 134 (22, 873)
- F0-F1: 530 (130, 2506)
- NA: 600 (86, 1800)

Results: Factors associated with qHBsAg ≤ 3000 IU/mL

	Participants (n=192)			
	OR (95%CI)	P	Adjusted OR (95%CI)	P
Sex				
Male	1.00			
Female	1.00 (0.45, 2.22)	0.997		
Age	1.04 (1.01, 1.07)	0.027	1.02 (0.99, 1.06)	0.236
First Nations identity				
Yes	1.00			
No	2.53 (0.73, 9.02)	0.141		
HBV DNA				
Quantifiable 20-90	1.00		1.00	
Detected <20 IU/mL	12.44 (2.50, 62.21)	0.002	10.49 (1.96, 56.24)	0.023
Undetected	18.23 (4.27, 77.65)	<0.001	15.62 (3.41, 71.36)	<0.001
ALT				
Normal	1.00			
Elevated	0.89 (0.41, 1.99)	0.785		
Duration of treatment (year)	1.10 (1.01, 1.20)	0.031	1.06 (0.95, 1.17)	0.293

Conclusion

- Among people with chronic HBV infection receiving nucleos(t)ide analogues with HBV suppression, most individuals (85%) had qHBsAg ≤ 3000 IU/mL.
- The proportion with qHBsAg ≤ 3000 IU/mL increased among those with undetected HBV DNA.
- These findings suggest a biomarker profile consistent with potential eligibility for emerging curative treatments in a substantial proportion of treated individuals in Australia.
- Full analysis will evaluate the n=500 dataset and varying levels of cut-off

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