

## MAKING ORAQUICK QUICKER: A HEPATITIS C POINT-OF-CARE TEST REDUCED TO FIVE MINUTES FOR VIREMIC INDIVIDUALS

Vanderhoff A<sup>1,2\*</sup>, Smookler D<sup>1,2\*</sup>, Biondi M<sup>1,2</sup>, Sattar I<sup>2</sup>, Karkada J<sup>1,2</sup>, Mandel E<sup>2</sup>, Capraru C<sup>1,2</sup>, Hansen B<sup>1,3</sup>, Shah H<sup>1,2</sup>, Janssen HL<sup>1,2</sup>, Feld JJ<sup>1,2</sup>

\*the first two authors contributed equally to this work

<sup>1</sup>VIRCAN Care & Research, Toronto, Canada

<sup>2</sup>Toronto Centre for Liver Disease, University Health Network, Toronto, Canada

<sup>3</sup>Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, ON, Canada

<sup>5</sup>Sandra Rotman Centre for Global Health, University of Toronto, Toronto, ON, Canada

**Background and Aims:** Point-of-care testing (POCT) for hepatitis C (HCV) increases access to screening for hard-to-reach populations. OraQuick HCV Rapid Antibody POCT (OQ) requires waiting 20 minutes before interpreting results; however, field observations suggest a shorter read-time is sufficient for viremic individuals (VIs). Our aim is to determine if viremic samples reliably activate the test band prior 20 minutes and if so, to establish an earlier cut-off.

**Method:** Blood samples from 109 HCV VIs and 32 long-term responders (LTRs, defined as clearing HCV > 3 years prior) were tested with OQ. Photos were taken every 15 seconds for 20 minutes; time of a visible positive band was recorded and confirmed by a second reader. Band intensities at each minute were compared to final intensity at 20 minutes (n = 20). Negative controls included 6 uninfected subjects. Data collection is ongoing.

**Results:** All VIs were positive before 5 minutes (n = 109). Mean time to positivity was 2.6 minutes in VIs, compared to 5.6 minutes in LTRs (p < 0.0001). VIs were 61% male, median age of 59, median HCV RNA of 2.71x10<sup>6</sup> IU/ml, and 25 had cirrhosis. LTRs cleared HCV 5-14 years prior, following treatment; all were cirrhotic. 16 of 31 LTRs were positive at 5 minutes. Probability of a VI testing positive by 5 minutes was 100% (98% CI, 0.97-1.00). Analysis of band intensity showed that VI bands darken within 5 minutes to 52% (+/- 14%) of their final intensities.

**Conclusion:** OQ can reliably detect anti-HCV Abs within 5 minutes for VIs. There may be value in documenting past HCV infection; however, the main goal of screening is to identify those infected. This shortened read-time may have important implications to improve engagement and linkage to care by facilitating follow-up HCV RNA in as few as 5 minutes.

**Disclosure of Interest Statement:** NIL