

## Supplementary Material

**Table S1. EQ-5D-5L utility index scores based on participant answers during period 1 and 2**

| ID | Period 1 |        | Period 2 |         |         |         |         |
|----|----------|--------|----------|---------|---------|---------|---------|
|    | Baseline | Week 8 | Week 16  | Week 12 | Week 24 | Week 36 | Week 48 |
| 7  | 0.937    | 0.937  | WD       | WD      | WD      | WD      | WD      |
| 14 | 0.922    | 1      | 1        | WD      | WD      | WD      | WD      |
| 16 | 1        | 1      | 1        | WD      | WD      | WD      | WD      |
| 32 | 0.809    | 0.751  | 0.859    | WD      | WD      | WD      | WD      |
| 46 | 1        | 1      | 1        | WD      | WD      | WD      | WD      |
| 47 | 1        | 0.937  | 0.937    | WD      | WD      | WD      | WD      |
| 55 | 1        | 0.673  | 0.874    | WD      | WD      | WD      | WD      |
| 58 | 1        | 0.887  | 0.779    | WD      | WD      | WD      | WD      |
| 59 | 0.879    | 0.748  | 0.937    | WD      | WD      | WD      | WD      |
| 72 | 1        | 1      | 0.937    | WD      | WD      | WD      | WD      |
| 6  | 0.512    | 0.751  | 0.481    | 0.922   | WD      | WD      | WD      |
| 34 | 1        | 0.937  | 1        | 1       | WD      | WD      | WD      |
| 64 | 0.922    | 1      | 0.922    | 0.652   | WD      | WD      | WD      |
| 35 | 0.916    | 0.937  | 0.864    | 1       | 0.666   | WD      | WD      |
| 69 | 0.937    | 0.922  | 1        | 1       | 1       | WD      | WD      |
| 8  | 1        | 1      | 0.859    | 0.922   | 0.922   | 1       | 1       |
| 10 | 1        | 1      | 1        | 1       | 1       | 0.922   | 0.922   |
| 22 | 1        | 1      | 1        | 0.922   | 1       | WD      | 1       |
| 23 | 0.922    | 0.916  | 0.833    | N/A     | N/A     | N/A     | 0.775   |
| 37 | 1        | 0.922  | 0.937    | 1       | 1       | 0.922   | 1       |
| 42 | 1        | 0.717  | 1        | 1       | 1       | 1       | 1       |
| 43 | 1        | 0.922  | 1        | 1       | 1       |         | 1       |
| 48 | 1        | 1      | 1        | 1       | 1       | 1       | 1       |
| 49 | 1        | 1      | 1        | 1       | 1       | 0.896   | 1       |
| 53 | 1        | 1      | 1        | 1       | 1       | 1       | 1       |
| 60 | 0.937    | 0.838  | 1        | 0.937   | 0.937   | 0.937   | 0.937   |
| 61 | 1        | 1      | 1        | 1       | 0.896   | 1       | 1       |
| 73 | 0.801    | 1      | 0.922    | 0.922   | 0.922   | 0.838   | 0.922   |

Abbreviations: ID: Study identification number WD: Withdrawn; N/A: Not available

**Table S2. Viral load of high-risk human papillomavirus types present in the anal samples of men who have sex with men who provided at least two anal swabs**

| Phase 1 (Intervention) |                                              | Phase 2 (Maintenance)                         |                                               |                                               |
|------------------------|----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| ID                     | Week 0<br>HPV type (viral load) <sup>a</sup> | Week 16<br>HPV type (viral load) <sup>a</sup> | Week 24<br>HPV type (viral load) <sup>a</sup> | Week 48<br>HPV type (viral load) <sup>a</sup> |
| 6                      | 16++, 39+, 56+, 31+                          | 16+++, 39+++, 56+++, 31++                     | WD                                            | WD                                            |
| 8                      | 35++, 39++, 58++, 59++, 61++                 | 31++, 33++, 39++, 51++, 56++, 58++, 59++      | 39+, 51++, 58+, 59+                           | 33++, 39+, 51+, 58++, 59+, 68+                |
| 10                     | 18++ 31+, 52+, 58++                          | 18++, 33++, 58+++                             | 18++, 58+++                                   | 33+, 58+                                      |
| 14                     | 45+                                          | N/A                                           | WD                                            | WD                                            |
| 16                     | 18+, 39+, 52+, 58++                          | -ve                                           | WD                                            | WD                                            |
| 22                     | 33++, 35++, 45++, 59+                        | 33++, 39++, 45++                              | 33++, 35+, 39+++, 45++                        | 39+                                           |
| 23                     | 16+++                                        | -ve                                           | -ve                                           | -ve                                           |
| 32                     | 16++                                         | 16+                                           | WD                                            | WD                                            |
| 34                     | 39++                                         | 39++, 66++                                    | WD                                            | WD                                            |
| 35                     | 16+, 18++, 33++, 51+++, 58++                 | 16+, 51+                                      | WD                                            | WD                                            |
| 37                     | 16++, 31++, 39+++                            | 31++, 39++                                    | 31+, 39++                                     | 31++, 39++                                    |
| 42                     | 18++ 45++, 66+, 68++                         | 68+                                           | 45++, 66++, 68++                              | 18++, 45++, 56++, 66++, 68++                  |
| 43                     | 58++                                         | 58++                                          | 58++, 68+                                     | 58+++, 68+                                    |
| 46                     | 16+, 45++                                    | -ve                                           | WD                                            | WD                                            |
| 47                     | 66++                                         | 66++                                          | WD                                            | WD                                            |
| 48                     | 18++, 56++, 58+++                            | 18++ 56++, 58+, 68+                           | 56+, 68++                                     | 18+++ 56+++, 58+++, 68+++                     |
| 49                     | 39++, 45+, 51++, 52++, 68+                   | 31++, 39+++, 45+++, 51+++, 52+++, 68+++       | 31+, 39+++, 45+++, 51++, 52++, 68++           | 39++, 45++, 52+, 68++                         |
| 53                     | 51+++, 56++, 58++, 68+                       | 51++, 56++, 58++, 68+                         | 51++, 56+++, 68++                             | 51++, 58+                                     |
| 55                     | 16+++ 31+++, 39++                            | 16++, 31++, 39++                              | WD                                            | WD                                            |
| 58                     | 18+ 45+, 59+ <sup>b</sup>                    | 18++, 51++, 59+                               | WD                                            | WD                                            |
| 59                     | 39++                                         | -ve                                           | WD                                            | WD                                            |
| 60                     | 16++                                         | 16+++ 31++, 35++, 39++, 58+++                 | 16+, 35+, 58+                                 | 16+++ 31++, 35++, 39+++, 58+++                |
| 61                     | 39++                                         | Invalid sample                                | 59+                                           | 16+, 51++, 52++, 59++, 68++                   |
| 64                     | 18++, 51+                                    | 16+, 18+++ 51+                                | WD                                            | WD                                            |
| 69                     | 35+, 51+, 58++, 56+, 68++                    | 33++, 56+++, 58++, 68++                       | WD                                            | WD                                            |
| 72                     | 59++                                         | -ve                                           | WD                                            | WD                                            |
| 73                     | 45++, 51++, 59+                              | 45++, 51++, 59++                              | 45++, 51++, 59++                              | 45+, 51++, 59+                                |

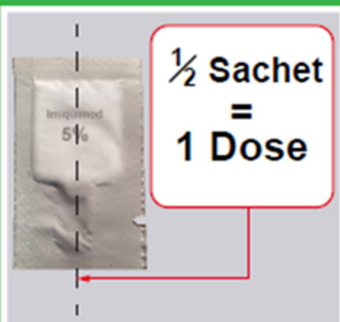
Abbreviations: ID: Study identification number WD: Withdrawn; -ve: Negative for the corresponding high-risk HPV types; N/A: Sample not available

<sup>a</sup> Anyplex assay yields a semi-quantified viral load result which may be high (+++; positive signal before 31 PCR cycles), medium (++; positive signal between 31 and 39 PCR cycles), or low (+; positive signal after 40 PCR cycles)

## Instruction Sheet for using Imiquimod

Each sachet of Imiquimod contains 2 doses (applications).  
Ignore the instructions on the sachet.

### Dose and Frequency of Application



Half a sachet (you should roughly estimate) is one dose.



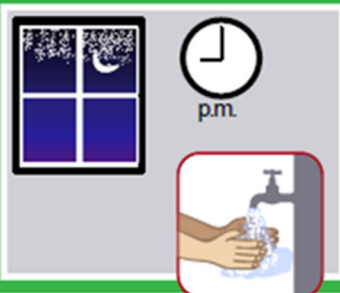
For the first 4 months of the study apply one dose (half a sachet) 3 times per week.

**If you have any negative side effects or concerns once you start using Imiquimod contact the study research team.**

**1800 875 121**

They might tell you to discontinue use or reduce the frequency of application per week until your symptoms clear.

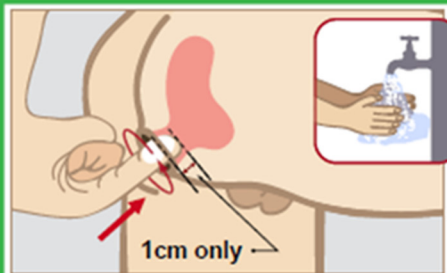
### Instructions for Application:



Imiquimod is best applied before going to sleep.  
Wash and dry your hands and anus before application.



Squeeze half a sachet of Imiquimod onto your finger.



Using your finger, rub Imiquimod around your anus and just slightly inside the opening of your anus.  
(no more than 1 cm inside your anus)  
Wash your hands with soap and water.



- Wash your hands if you come into contact with Imiquimod.
- Avoid getting Imiquimod on any part of your body (or a partner's body) other than your finger and your anus.



- Don't apply Imiquimod on the day of a clinic visit as it interferes with HPV testing.
- Don't apply Imiquimod before insertive anal sex or rimming (his penis / tongue in your anus).
- Don't use Imiquimod as lube for sex.
- Don't apply Imiquimod before having a bowel movement.
- Don't shower for 6-10 hours after Imiquimod application.

Version:2.1 Date:8-02-2018

Figure S1. Instruction sheet for using imiquimod.