The main clinical and viro-immunological features of the study population are presented in Table 1. A significant diversity according to length, net charge and PNGs of V2 region was observed between B and non-B subtypes, as well as a wide variability of the 179-181 tripeptide. Overall, LDV was the most common tripeptide (41.2%), followed by LDI (24.5%). Asp180 was highly conserved (99% of strains). The LDIV mimotope was significantly (p < 0.001) more conserved in non-B variants than in B subtype (Table 2).

A correlation of V2 length and net charge with CD4 cell count was demonstrated by multivariate analysis (Table 3).

Patients with Lou79 were more likely to have a less recent infection, whereas subjects with Var41 were mainly MSM. These correlations were confirmed with multivariate analysis (Table 4).

### Table 3: correlation between V2 features and viro-immunological variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>V2 Length</th>
<th>Net Charge</th>
<th>CD4+ T Cell Count</th>
<th>Log10 HIV-1 RNA</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group</td>
<td>(yr)</td>
<td>(yr)</td>
<td>(cells/mm^3)</td>
<td>(log10 copies/mL)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>Younger, F &lt; 40</td>
<td>47.5 (34.4 - 59.1)</td>
<td>39.9 (31.2 - 50.2)</td>
<td>579 (348 - 1111)</td>
<td>4.65 (4.34 - 4.95)</td>
<td>0.002</td>
</tr>
<tr>
<td>Younger, M &lt; 40</td>
<td>44.9 (33.3 - 62.6)</td>
<td>34.8 (25.4 - 49.4)</td>
<td>597 (380 - 925)</td>
<td>4.34 (3.94 - 4.74)</td>
<td>0.005</td>
</tr>
</tbody>
</table>

### Table 4: correlation between 179-181 tripeptide and clinical / viroimmunological variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>V2 Tripeptide</th>
<th>Log10 HIV-1 RNA</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>LDV</td>
<td>4.5 (4.1 - 4.9)</td>
<td>0.02</td>
</tr>
<tr>
<td>Risk factor</td>
<td>MSM</td>
<td>4.3 (3.9 - 4.7)</td>
<td>0.03</td>
</tr>
</tbody>
</table>

### Results

#### Variability of HIV-1 V2 Env Domain for Integrin Binding: Clinical Correlates

The clinical and viro-immunological features of the study population are presented in Table 1. A significant diversity according to length, net charge and PNGs of V2 region was observed between B and non-B subtypes, as well as a wide variability of the 179-181 tripeptide. Overall, LDV was the most common tripeptide (41.2%), followed by LDI (24.5%). Asp180 was highly conserved (99% of strains). The LDIV mimotope was significantly (p < 0.001) more conserved in non-B variants than in B subtype. A correlation of V2 length and net charge with CD4 cell count was demonstrated by multivariate analysis.

Patients with Lou79 were more likely to have a less recent infection, whereas subjects with Var41 were mainly MSM. These correlations were confirmed with multivariate analysis.

#### Methods

Op120 sequences were obtained from 322 newly diagnosed subjects with HIV-1.

V2 regions were evaluated for:

- Length, potential N-linked glycosylation sites (PNGs), net charge and tripeptide motif at residues 179-181.

### Background & aims

- The main clinical and viro-immunological features of the study population are presented in Table 1. A significant diversity according to length, net charge and PNGs of V2 region was observed between B and non-B subtypes, as well as a wide variability of the 179-181 tripeptide. Overall, LDV was the most common tripeptide (41.2%), followed by LDI (24.5%). Asp180 was highly conserved (99% of strains). The LDIV mimotope was significantly (p < 0.001) more conserved in non-B variants than in B subtype.

- A correlation of V2 length and net charge with CD4 cell count was demonstrated by multivariate analysis (Table 3).

- Patients with Lou79 were more likely to have a less recent infection, whereas subjects with Var41 were mainly MSM. These correlations were confirmed with multivariate analysis (Table 4).

### Conclusions

- A certain variability was observed in HIV-1 V2 structure, including the α6β1-binding tripeptide, in both B and non-B subtypes. Our study suggests a possible association between V2 features and viro-immunological characteristics.

- Further knowledge regarding the virus/integron interaction could have important implications, given the current availability of anti-opioid monoclonal antibodies (5).

**References**