

# WEIGHT AND BODY COMPOSITION IN A COHORT OF HIV-POSITIVE CLIENTS IN SYDNEY: AN INSIGHT

## Authors:

Purnomo J<sup>1</sup>, Marriott J<sup>1</sup>, Smith D<sup>1</sup>, Furner V<sup>1</sup>, Tom M<sup>1</sup>

<sup>1</sup>The Albion Centre, Population and Community Health (PaCH) Directorate, South Eastern Sydney Local Health District (SESLHD)

## Background:

Integrase strand-transfer inhibitor (INSTI)-based antiretroviral therapy (ART) has become the preferred option for HIV management. There is growing evidence that supports the concept of excess weight gain with INSTI-based regimens. This study aimed to investigate body composition profile in a cohort of clients attending an HIV ambulatory care clinic.

## Methods:

This is a retrospective analysis of HIV-positive clients who participated in a lifestyle and body composition check-up program during routine care between July 2019 and July 2020 and were receiving INSTI-based ART regimens. Body composition was assessed using 8-point multi-frequency bioelectrical impedance analysis. Data on demographic variables, co-morbid medical conditions, body composition, viral load (VL), CD4+ cell count and ART history were extracted and descriptively analysed.

## Results:

The study included 42 clients (all males, mean age 49 years, 69% Caucasians, 26% smokers). All were virologically suppressed (VL < 200 copies/mL) with a median CD4 770 cells/ $\mu$ L). Over half (55%) were receiving bicitgravir, 33% dolutegravir, 10% elvitegravir and 2% raltegravir. Sixty-seven percent (n=28) were either above or well above the healthy weight range and had a mean BMI of  $30.0 \pm 3.4 \text{ kg/m}^2$ . Among the 42 clients, 67% had an increased or high fat mass index, 64% had an increased or high volume of visceral fat with an average 3.5 litres of visceral adipose tissue (VAT). The mean of fat mass percentage was  $26.0 \pm 9.1$ . Sarcopenic obesity was observed in 17% (n=7) of these clients.

## Conclusion:

Our findings suggest that excess body fat and central obesity was observed in our cohort along with a concerning sarcopenic trend. Given the clinical implications of higher body weight and low muscle mass on long-term health and the broad adoption of INSTI-based ART regimens as recommended first-line therapy, ongoing body composition monitoring is essential to enable the identification of this high risk client group and to provide targeted interventions.

## Disclosure of Interest Statement:

No interests to disclose.