

(nAbs) against XBB.1.16 and JN.1, were measured at baseline (BL) and at 1, 4, 6, 9, and 12 months, while T-cell responses to Spike and nucleocapsid peptides at BL, 1, 4 and 12 months. The primary outcome was the magnitude and durability of immune responses between groups over time. Groups were compared using t-test or Mann–Whitney U test for continuous variables and Fisher's exact test for categorical variables. Immune responses over time are shown as boxplots.

**Results** Sixty-four patients were included (mean age  $67 \pm 12$  years; 47% male). BL characteristics were comparable between groups, except for prior vaccine doses ( $p=0.018$ ) (table 1). At BL, anti-S IgG, anti-N IgG, nAbs, and Spike- and nucleocapsid-specific T-cell responses were similar between arms. At randomisation, only the median value of anti-N IgG showed differences between arm 1 vs arm 2 (2.48 vs 1.55 log<sub>2</sub>S/CO;  $p=0.04$ ). At month 6 (2 months post-vaccination), anti-S and anti-N IgG were significantly higher in the vaccinated versus not (13.44 vs 12.03 log<sub>2</sub>BAU/mL;  $p<0.001$  and 2.33 vs 1.20 log<sub>2</sub>S/CO;  $p=0.02$ ). NAbs titers were statistically higher for JN.1 in arm 1 (5.32 vs 4.32 log<sub>2</sub>reciprocal serum dilution;  $p=0.023$ ), while similar for XBB.1.16 (6.32 vs 5.32 log<sub>2</sub>reciprocal serum dilution;  $p=0.66$ ). By month 9, differences attenuated: anti-S IgG remained statistically higher in the vaccinated (12.02 vs 11.48 log<sub>2</sub>BAU/mL;  $p=0.034$ ), with a trend for anti-N IgG (1.23 vs -0.29 log<sub>2</sub>S/CO;  $p=0.08$ ) and comparable nAb titers levels. By 12 months, anti-Spike IgG median levels were fully comparable between groups (11.60 vs 11.59 log<sub>2</sub>BAU/mL;  $p=0.4$ ). nAbs titers were similarly distributed for JN.1 (3.32 vs 3.32 log<sub>2</sub>reciprocal serum dilution;  $p>0.9$ ) and XBB.1.16 (4.32 vs 4.82 log<sub>2</sub>reciprocal serum dilution;  $p>0.9$ ). Spike- and nucleocapsid-specific T-cell responses were comparable, revealing a measurable response in both arms over time (figure 1).

**Conclusions** In mAb-treated patients with mild-to-moderate SARS-CoV-2 infection, vaccination after 4 months elicited a transient rise in anti-S IgG and neutralising activity, but this advantage progressively waned, and by 12 months, immune response was comparable between vaccinated and unvaccinated participants. These findings suggest a limited benefit of early vaccination in this setting.

## Clinical insights of long-acting treatment

### SC19 WEIGHT AND LIPID CHANGES AFTER SWITCHING TO LONG-ACTING CABOTEGRAVIR AND RILPIVIRINE

<sup>1</sup>G Cologgi, <sup>2</sup>L Taramasso, <sup>3</sup>E Ricci, <sup>4</sup>S Ferrara, <sup>5</sup>G Orofino, <sup>6</sup>N Squillace, <sup>7</sup>E Pontali, <sup>8</sup>B Menzaghi, <sup>9</sup>E Sarchi, <sup>10</sup>G Cenderello, <sup>11</sup>G Pellicanò, <sup>12</sup>G Madeddu, <sup>13</sup>T Bini, <sup>14</sup>F Lagi, <sup>15</sup>O Bargiacchi, <sup>16</sup>M Carleo, <sup>17</sup>E Salomoni, <sup>18</sup>L Pusterla, <sup>19</sup>L Calza, <sup>20</sup>S Rusconi, <sup>21</sup>K Falasca, <sup>22</sup>S Martini, <sup>23</sup>R Bellagamba, <sup>24</sup>S Piconi, <sup>25</sup>G De Socio, <sup>26</sup>G Angioni, <sup>27</sup>A Cascio, <sup>1,2</sup>A Di Biagio, <sup>6</sup>P Bonfanti, for the CISAI study group. <sup>1</sup>Department of Health Sciences (DISSAL), University of Genoa, Genoa, Italy; <sup>2</sup>Infectious Diseases Unit, IRCCS Azienda Ospedaliera Metropolitana, Genova, Italy; <sup>3</sup>Fondazione ASIA, Milan, Italy; <sup>4</sup>Unit of Infectious Diseases, Department of Clinical and Experimental Medicine, University of Foggia, Foggia, Italy; <sup>5</sup>Unit of Infectious Diseases, Divisione A, Amedeo di Savoia Hospital, Torino, Italy; <sup>6</sup>Infectious Disease Unit, Fondazione IRCCS San Gerardo dei Tintori, Monza - University of Milano-Bicocca, Monza, Italy; <sup>7</sup>Department of Infectious Diseases, Galliera Hospital, Genoa, Italy; <sup>8</sup>Unit of Infectious Diseases, ASST della Valle Olona – Busto Arsizio (VA), Italy; <sup>9</sup>Infectious Diseases Unit, SS. Antonio e Biagio e Cesare Arrigo Hospital, Alessandria, Italy; <sup>10</sup>Infectious Diseases Department, Sanremo Hospital, Sanremo, Italy; <sup>11</sup>Unit of Infectious Diseases, Department of Clinical and Experimental Medicine, University of Messina, Messina, Italy; <sup>12</sup>Unit of Infectious Diseases, Department of Medicine, Surgery and Pharmacy, University of Sassari, Italy; <sup>13</sup>Unit of Infectious Diseases, San Paolo Hospital, Milano, Italy; <sup>14</sup>AOU Infectious and Tropical Diseases, Careggi Hospital, Florence, Italy; <sup>15</sup>Unit of Infectious Diseases, Ospedale Maggiore della Carità, Novara, Italy; <sup>16</sup>Infectious Diseases and Gender Medicine Unit, Cotugno Hospital, AO dei Colli, Naples, Italy; <sup>17</sup>SOC 1 USL CENTRO FIRENZE, Unit of Infectious Diseases, Santa Maria Annunziata Hospital, Florence, Italy; <sup>18</sup>Infectious Diseases Unit, Ospedale S. Anna, Como, Italy; <sup>19</sup>Infectious Diseases Unit, IRCCS Policlinico Sant'Orsola, University of Bologna, Italy; <sup>20</sup>Infectious Diseases Unit, ASST Ovest Milanese, Legnano and DIBIC, University of Milan, Italy; <sup>21</sup>Clinic of Infectious Diseases, Department of Medicine and Science of Aging, G. d'Annunzio University, Chieti-Pescara, Chieti, Italy; <sup>22</sup>Department of Infectious Diseases, University of Campania Luigi Vanvitelli, Naples, Italy; <sup>23</sup>Clinical and Research Infectious Diseases Department, National Institute for Infectious Diseases Lazzaro Spallanzani IRCCS, Rome, Italy; <sup>24</sup>Unit of Infectious Diseases, A. Manzoni Hospital, Lecco, Italy; <sup>25</sup>Infectious Diseases Clinic, Department of Medicine and Surgery, University of Perugia, Italy; <sup>26</sup>Infectious Diseases Unit, SS Trinità Hospital, Cagliari, Italy; <sup>27</sup>Unit of Infectious Diseases, Department of Health Promotion, Mother and Child Care, Internal Medicine and Medical Specialties, University of Palermo, Palermo, Italy

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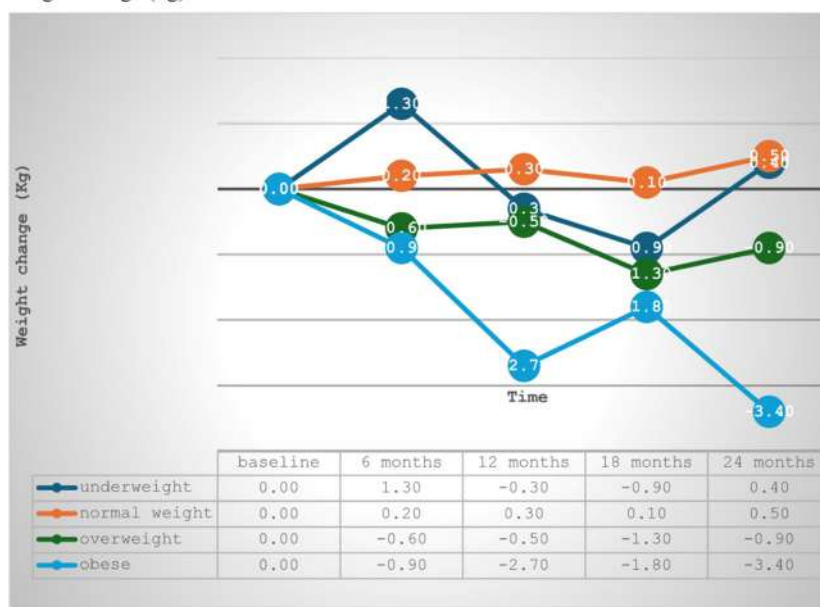
**Background** The long-acting (LA) treatment with cabotegravir (CAB) and rilpivirine (RPV) has been reported to have a neutral

**Abstract SC19 Table 1** Metabolic Parameters at Baseline and During Follow-Up After Switch to LA CAB+RPV

Level of blood glucose, total cholesterol (TC), HDL cholesterol (HDL), LDL cholesterol (LDL) and triglycerides at baseline (T0), one (T1) and two (T2) years after initiating long acting cabotegravir and rilpivirine (median, interquartile range).

Variable mg/dL	T0	T1	P value T1- T0	T2	P value T2- T0
Blood glucose	87 (80-93)	86 (79-94)	0.76	88 (81-94)	0.076
TC	186 (161-208)	193(170-214)	0.0011	191 (168-211)	0.030
HDL	50 (42-60)	52 (44-61)	0.32	53 (45-62)	0.011
LDL	112 (90-130)	114 (97-135)	0.16	114 (92-134)	0.30
Triglycerides	95 (72-133)	100 (75-145)	0.0009	100 (75-133)	0.32

Baseline weight change was set to zero for all groups. Values next to each data point indicate mean weight change (kg).



**Abstract SC19 Figure 1** Mean weight change over time by BMI category

effect on weight and blood lipids in people with HIV (PWH) during treatment. However, few real-world data are available from observational cohorts.

**Materials and Methods** This was a multicentre prospective observational study conducted within the SCOLTA (Surveillance Cohort Long-Term Toxicity Antiretrovirals) project. PWH RNA<50 copies/mL switched to CAB+RPV LA from 2022 onwards with at least one year of follow-up were included. Variables were compared using the paired t-test (1- and 2-years vs baseline). To determine the association between change from baseline and PWH's characteristics, we run a multivariate model including age, sex, BMI, CD4-T cells and the baseline value of the variable.

**Results** A total of 671 PWH were enrolled, with a median follow-up period of 22 months (interquartile range, IQR: 13–29 months). The median age of the participants was 49 years (IQR 40–58) and median duration of ART was 10.3 years (IQR 6.4–16.7). The median body mass index (BMI) at enrolment was 24.6 kg/m<sup>2</sup> (IQR 22.6–27.0).

During the follow-up, mean weight did not change significantly in the study population, with a change of -0.25 kg (95% CI: -0.59 to +0.08,  $p = 0.1403$ ) after one year and -0.18 kg (95% CI: -0.70 to +0.33,  $p = 0.4864$ ) after two years. The multivariable analysis revealed that the probability of weight change was significantly associated with baseline BMI, with obese people experiencing a reduction in weight, significantly greater compared to normal-weight (mean estimate -2.79 kg, SE 0.64,  $p < 0.0001$ ), and those who were overweight showed a tendency towards significant reduction (mean estimate -0.75 kg, SE 0.38,  $p = 0.052$ ; see figure 1). Age, sex and CD4 count did not correlate with the probability of weight change.

Regarding blood lipids, LDL levels remained stable during the study, while total cholesterol increased significantly, driven by an increase in HDL levels (table 1).

Multivariable analysis revealed that trends in total cholesterol, HDL and LDL cholesterol were inversely correlated with their baseline values (mean estimated change:  $-0.36 \pm SE 0.04$ ,

$p < 0.0001$ ;  $-0.39 \pm SE 0.05$ ,  $p < 0.0001$ ; and  $-0.38 \pm SE 0.04$ ,  $p < 0.0001$ , respectively). HDL changes also showed a direct linear correlation with female sex (estimate:  $+4.02 \pm SE 1.60$ ,  $p = 0.0123$ ) and age (estimate:  $+0.12 \pm SE 0.05$ ,  $p = 0.0322$ ). **Conclusions** Body weight remained stable in SCOLTA after switching to LA CAB+RPV during two-years of observation. People with higher BMI at baseline were more likely to lose weight during treatment, confirming the feasibility of this regimen also in obese people and reassuring towards the concern of further weight gain and the consequent difficulty of achieving the proper injection depth. The modest but significant increase in cholesterol levels was driven by an increase in HDL, confirming the metabolic safety of the LA regimen.

#### SC20 USE OF NEXT-GENERATION SEQUENCING (NGS) AS AN ADDITIONAL TOOL TO EVALUATE SUITABILITY OF LONG-ACTING CABOTEGRAVIR/RILPIVIRINE TREATMENT AND TAILORING FOLLOW-UP

<sup>1</sup>G Cologgi, <sup>1</sup>M Giurco, <sup>1</sup>E Pratalongo, <sup>2</sup>B Bruzzone, <sup>2</sup>F Stefanelli, <sup>2</sup>N Randazzo, <sup>2</sup>V Ricucci, <sup>1,3</sup>M Bassetti, <sup>1,3</sup>A Di Biagio, <sup>3</sup>L Taramasso. <sup>1</sup>Department of Health Sciences, University of Genoa - Genoa, Italy; <sup>2</sup>Hygiene Unit, IRCCS Azienda Ospedaliera Metropolitana - Genoa, Italy; <sup>3</sup>Infectious Diseases Unit, IRCCS Azienda Ospedaliera Metropolitana - Genoa, Italy

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**Background** Long-acting (LA) cabotegravir (CAB) and rilpivirine (RPV) is an effective and well-tolerated antiretroviral switch option for virologically suppressed people with HIV (PWH). However, incomplete treatment history or unavailable historical Genotype Resistance Testing (hGRT) may limit access to LA therapy. We implemented Next-Generation Sequencing (NGS) on proviral DNA as an additional tool to refine eligibility, stratify virological failure (VF) risk, and tailor HIV-RNA monitoring frequency beyond current guideline recommendations.