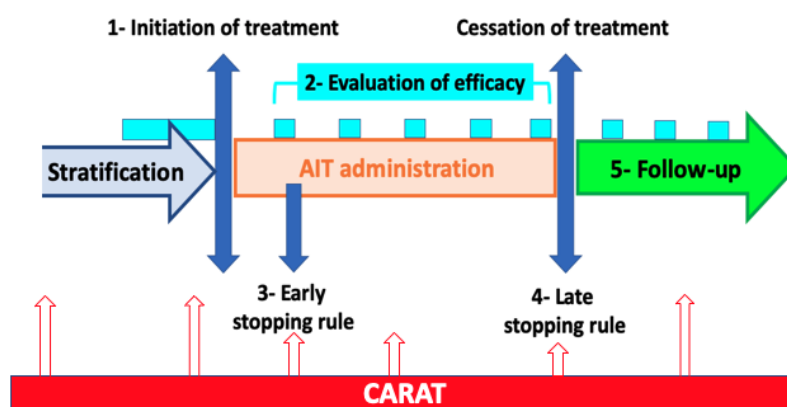


SUPPLEMENTARY MATERIAL

Figure 1. Applicability of digital biomarkers in allergen immunotherapy

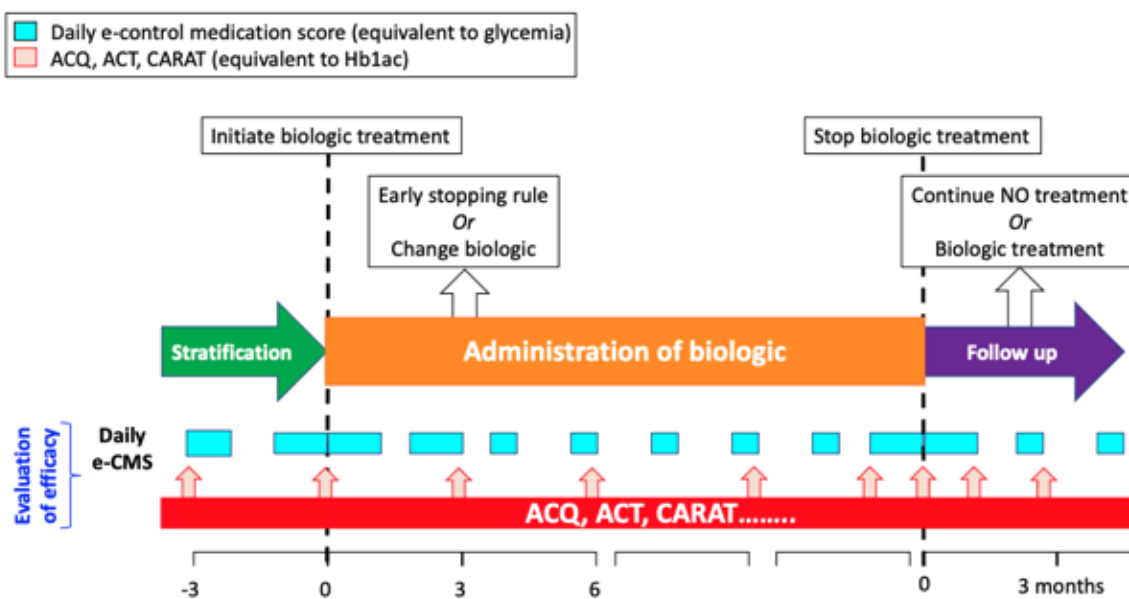
The “diabetes” approach

- CARAT (correlated with ACT and CSMS) equivalent to Hb1Ac
- Daily control medication score (CSMS) equivalent to glycemia



Application to biologic treatment in severe asthma: Currently, a major criterion to initiate or stop a biologic in asthma is the frequency of exacerbations. In MASK-air[®], exacerbations can be defined by the occurrence of uncontrolled VASs using the cut-offs calculated ($VAS \geq 36/100$) and/or the use of oral corticosteroids. With the available data on file, MASK-air[®] researchers are assessing whether the change in e-DASTHMA could be associated with an exacerbation. Moreover, in future studies, with the new development of MASK-air[®] (MDR Class IIa), e-DASTHMA values will be refined (Figure 2).

Figure 2. Applicability of digital biomarkers in severe asthma using the diabetes approach



ANNEX 2

SILAM

(System for Integrated modeLling of Atmospheric coMposition)

3 Accuracy of SILAM predictions

The Copernicus Atmosphere Monitoring Service (CAMS) provides continuous forecasts, hind-casts and re-analyses of atmospheric composition (global and European). The service describes the current situation, forecasts a few days ahead and analyses retrospective data records for recent years. The Copernicus Atmosphere Monitoring Service supports many applications in a variety of domains including health, environmental monitoring, renewable energies, meteorology and climatology. Being one of the ensemble members of the CAMS operational regional air quality products, the SILAM forecasts are routinely evaluated against real measurement data. The model quality scores are regularly updated at the CAMS web-page (<https://regional.atmosphere.copernicus.eu/>). The summary results of the recent model evaluation for the last three month are shown in Figure 1.

Figure 1. Taylor diagram of air quality predictions by CAMS models

(<https://regional.atmosphere.copernicus.eu/>, visited on 25 Nov 2022). SILAM scores are marked with a green triangle. The perfect score (i.e. forecast exactly matches observations) would hit the unity at the X-axis. The closer the model marker is located to this point on the graph, the more accurate the air quality forecast is. The modelled predictions are compared to the surface measurements for O₃ (a), NO₂ (b), PM₁₀ (c) and PM_{2.5} (d).

