**Supplementary Material**

**Elucidating the Role of Lung Function and Corticosteroid Treatment on Age Acceleration in Asthma: A Metabolomic Perspective**

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Supplementary Tables S2-S15 are provided on separate sheets within the 'supplementary-table.xlsx' file:

[*https://raw.githubusercontent.com/KevinMMendez/PhDThesis/main/ChapterFive/supplementary-table.xlsx*](https://raw.githubusercontent.com/KevinMMendez/PhDThesis/main/ChapterFive/supplementary-table.xlsx)

**Table S1.** Description of Data Extracted from Electronic Medical Records for this Study.

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| --- | --- |
| **Data** | **Description** |
| Age | Date of birth was retrieved from the MGB biobank questionnaire stored in the EMR, which was completed at the time of enrollment. The age was then calculated as the number of years elapsed until the date of biosample collection. |
| Sex | Sex information (male/female) was retrieved from the MGB biobank questionnaire stored in the EMR. |
| Body Mass Index (BMI) | Longitudinal BMI and weight records, along with height measurements, were extracted from the "health history" data files within the EMR. Additional height information was obtained from the MGB biobank questionnaire. Using the height measurements, the weight data was converted to BMI and merged with the extracted BMI records. The BMI record closest to the date of biosample collection was retained. |
| Smoking | Tobacco use information (current smoker, former smoker, or non-smoker) was retrieved from the MGB biobank questionnaire stored in the EMR. If a participant did not provide an answer on the questionnaire, the missing value was imputed with the smoking status closest to the date of biosample collection. This information was extracted from the "health history" data files within the EMR. |
| Charlson Comorbidity Index | Charlson Comorbidity Index was retrieved from the EMR. This index, created by the MGB biobank, is a weighted score based on the presence of curated comorbidities and the subject's age (PMID: 3558716; 15617955). |
| Inhaled Corticosteroids (ICS) | All prescription records were extracted from the EMR. A medication map of ICS names was created to extract ICS prescriptions. Relevant records from the preceding 5 years were retained and counted for each subject. |
| Oral Corticosteroids (OCS) | All prescription records were extracted from the EMR. A medication map of OCS names was created to extract OCS prescriptions. Relevant records from the preceding 5 years were retained and counted for each subject. |
| Forced Expiratory Volume in 1 second (FEV1) | In the EMR, the pulmonary notes contain the spirometry test results and clinical interpretations. These notes, sourced from various hospital facilities, are stored in free-text format. A complex regular expression pipeline was developed to extract the pre-bronchodilator FEV1 values, along with the test dates. These values were then converted to a tabular format to facilitate downstream analysis. |

Definition of abbreviations: EMR = Electronic Medical Records; BMI = body mass index; ICS = inhaled corticosteroids; FEV1 = Forced Expiratory Volume in 1 second; OCS = oral corticosteroids; MGB = Mass General Brigham

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A screen shot of a cell phone

Description automatically generated

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A screenshot of a cell phone

Description automatically generated

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**A screenshot of a diagram

Description automatically generated**