Based on the **CardioMetAge** algorithm detailed in the *BMC Medicine* paper, I have constructed a CSV template below. You can copy this text, save it as CardioMetAge_Calculator.csv, and open it in Excel or Google Sheets to calculate your score.

The CardioMetAge Calculator (CSV Template)

Instructions:
1. Copy the code block below.
2. Paste it into a text editor (Notepad, TextEdit).
3. Save the file as CardioMetAge_Calculator.csv.
4. Open in Excel/Google Sheets.
5. **Enter your values in the "Your Value" column.** (The "Contribution" column will need a formula; since CSVs don't store formulas, I have provided the Excel formula syntax below the block for you to paste into cell **E2** and drag down).

Code snippet

```
Parameter,Units,Your Value,Coefficient,Contribution (Years),Notes
Intercept,N/A,1,-101.454,-101.454,Base constant
Chronological Age,Years,,0.831320,,Enter your real age
HbA1c,%,,19.5734,,Requires LN transformation: 19.5734 * LN(Value + 1)
RDW,%,,1.77394,,Red Cell Distribution Width
Systolic BP (SBP),mmHg,,0.0760217,,
Creatinine,mg/dL,,6.18803,,Kidney function / Muscle mass
Lymphocyte Percent,%,,-0.148076,,Negative correlation (Higher = Younger)
MCV,fL,,0.218946,,Mean Corpuscular Volume
Pulse Rate,beats/min,,0.105980,,Resting Heart Rate
Pulse Pressure (PP),mmHg,,0.0603608,,Calculated as: SBP - DBP
Uric Acid,mg/dL,,0.636711,,
CRP (hs-CRP),mg/dL,,2.40001,,Requires LN transformation: 2.4 * LN(Value + 1). Note: If mg/L divide by 10.
Waist Circumference,cm,,0.0283277,,Visceral adiposity proxy
BUN,mg/dL,,0.0754119,,Blood Urea Nitrogen
""
TOTAL CardioMetAge (Years),,,SUM ABOVE,
CardioMetAge Gap (Years),,,=Total - Age,
```

Excel Formulas to Activate the Sheet

Once you open the CSV in Excel, paste the following formulas into the **"Contribution (Years)"** column for the specific rows that require logarithmic transformation:

- **For HbA1c (Row 4):** =D4 * LN(C4 + 1)
- **For CRP (Row 13):** =D13 * LN(C13 + 1)
- **For all other linear rows (Rows 3, 5-11, 14-15):** =D_Row * C_Row (e.g., =D5*C5)
- **For Total Score:** =SUM(E2:E15)
- **For Gap:** =E17 - [Your Chronological Age]

Scoring & Interpretation Guide

The CardioMetAge score is an estimate of your biological age specific to your cardiometabolic system (heart, vasculature, metabolic regulation).

1. The "Gap" (CardioMetAge Deviation)

The most critical metric is your **CardioMetAge Gap** (Biological Age - Chronological Age).
- **Negative Gap (< -2.0 Years): Bio-Resilient.**
  - You are aging slower than your chronological peers.
  - *Biohacker Context:* The CALERIE trial showed that 25% Caloric Restriction reduced this metric by ~1.23 years over 2 years. A gap of -3.0 or more is significant.

- **Neutral Gap (-2.0 to +2.0 Years): Average Aging.**
  - Your metabolic risk profile aligns with your birth year.
- **Positive Gap (> +3.0 Years): Accelerated Aging (High Risk).**
  - You are exhibiting the metabolic wear-and-tear of someone significantly older.
  - **Risk Magnitude:** For every **1 SD increase (approx. 4.17 years)** in CardioMetAge, the risk of dying from cardiometabolic disease increases by **87%** (HR 1.87).

2. Key Driver Identification

If your score is high, examine the "Contribution" column to see which biomarkers are adding the most "years" to your score. The algorithm weights them as follows:

- **Top Drivers (Heaviest Weight):** HbA1c, RDW, SBP. These have the highest standardized coefficients, meaning shifts in these markers swing your age score the most.
- **Protective Factor: Lymphocyte Percent** has a negative coefficient (-0.148). Higher lymphocyte % (within healthy range) reduces your biological age score, reflecting robust immune competence.

3. Critical Unit Conversions

- **CRP:** The model uses **mg/dL**. Most standard labs report **mg/L**.
  - *Action:* If your lab is mg/L, **divide by 10** before entering (e.g., 1.5 mg/L becomes 0.15 mg/dL).
- **HbA1c:** Must be entered as a percentage (e.g., 5.4), not a decimal (0.054) or mmol/mol.
- **Pulse Pressure:** If your lab doesn't list this, calculate it: **Systolic BP - Diastolic BP** (e.g., 120/80 = 40 PP).