Long-Term Benefits of Comprehensive Cardio-Renal-Metabolic Health Checks:

A Microsimulation Study Across Four Countries

Make the Change for kidney health

Study Design

A discrete-time, patient-level microsimulation model simulated up to 20 years assessed the long-term impact of cardio-renal-metabolic health checks on disease progression and healthcare resource use/costs across the United Kingdom, France, Germany, and Australia.[1,2]

Cardiovascular, Renal and Metabolic (CVRM) conditions are clinically interdependent drivers of poor health and rising healthcare costs across **Europe** and **Australia**, yet guideline recommendations for their management remain fragmented and more reactive than preventative.[3-6]

Early detection and management are key to slowing disease progression and reducing major complications in conditions like chronic kidney disease (CKD).[3]

Interconnected CVRM Diseases[2]	Key Risk Factor Tests[2]
> Hypertension > Heart failure > Dyslipidaemia	> Blood pressure > NT-proBNP > QRS duration > Lipid levels
> Chronic kidney disease	> eGFR > UACR
> Obesity > Type 2 diabetes	> Body mass index > HbA1c

Screening Approaches[2]

Current standard of care (SoC) screening
> Eligibility: Varies by country
> Frequency: Once in 3 or 5 yrs

VS.

Comprehensive CVRM screening
> Expanded eligibility: Age 35-74 yrs
> Increased frequency: Annual (for up to 20 years)

Disease Trajectory Simulation[2*]

Comprehensive screening and diagnosis
↓
Current SoC treatments
↓
Prognosis and outcomes

Results

Projected 20-Year Outcomes with Comprehensive CVRM Screening*

Over 20 years, the model shows that comprehensive CVRM health checks can outperform siloed screening, enabling earlier, more accurate risk identification and improving long-term outcomes. Expanding eligibility and including additional key tests (eg. UACR, eGFR, and NT-proBNP) improves prevention, supports earlier intervention, and delivers strong system value.[1]

Measurable Clinical and Economic Value by 20 Years: Combined Results[1]

*Modeled scenario reflects a 25% increase in screening uptake relative to the base case (United Kingdom: 9% to 11.25%, Germany: 34.3% to 42.88%, France: 9% to 11.25%, Australia: 9% to 11.25%); Assumption 80% diagnosed receiving treatment; Currency in USD.

This campaign is co-created with the Global Patient Alliance for Kidney Health as well as funded and produced by AstraZeneca.
This material has been developed and funded by AstraZeneca.

Veeva ID Z4-83183 | Date of Preparation: May 2026

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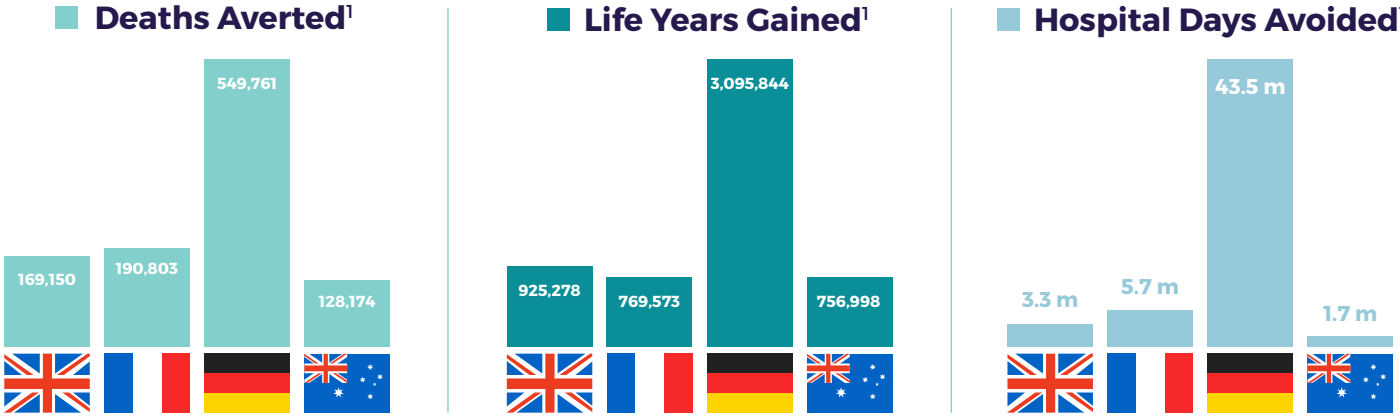
Measurable Clinical, Economic, Societal, and Environmental Value by 20 years: Results by Country*

Clinical



Lives saved ascribed to early detection and intervention of CVRM conditions[1]

Economic

Societal

Savings and Gains

Direct Cost Savings[1]

$26.16 bn Saved	$18.93 bn Saved	$44.89 bn Saved	$1.24 bn Saved

Productivity Gains[1]

$677 m Gained	$704 m Gained	$1.49 bn Gained	$729 m Gained

Savings attributed to preventing downstream acute events and high-cost long-term care[1]

Gains driven by reduced absenteeism and work impairment[1]

Environmental

Emissions Avoided[1]

Comprehensive CVRM screening serves as a prevention-focused approach that can deliver health, economic, and policy benefits via earlier detection and management of conditions like CKD.

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REFERENCES: 1. Xydopoulos G, et al. Poster presented at ISPOR; May 17-20, 2026; Philadelphia, PA. Poster #EE426. **2.** Xydopoulos G, et al. Poster presented at ISPOR; May 17-20, 2026; Philadelphia, PA. Poster #MSRR152. **3.** Säemann M, et al. *J Prim Care Community Health.* 2025;16:21501319251379732. **4.** Davis G, et al. *Heart Lung Circ.* 2025;34(10):1060-1068. **5.** Ferdinand KC, et al. *Diabetes Ther.* 2023;14(12):1979-1996. **6.** Kim M, et al. *J Med Econ.* 2025;28(1):2103-2118.

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