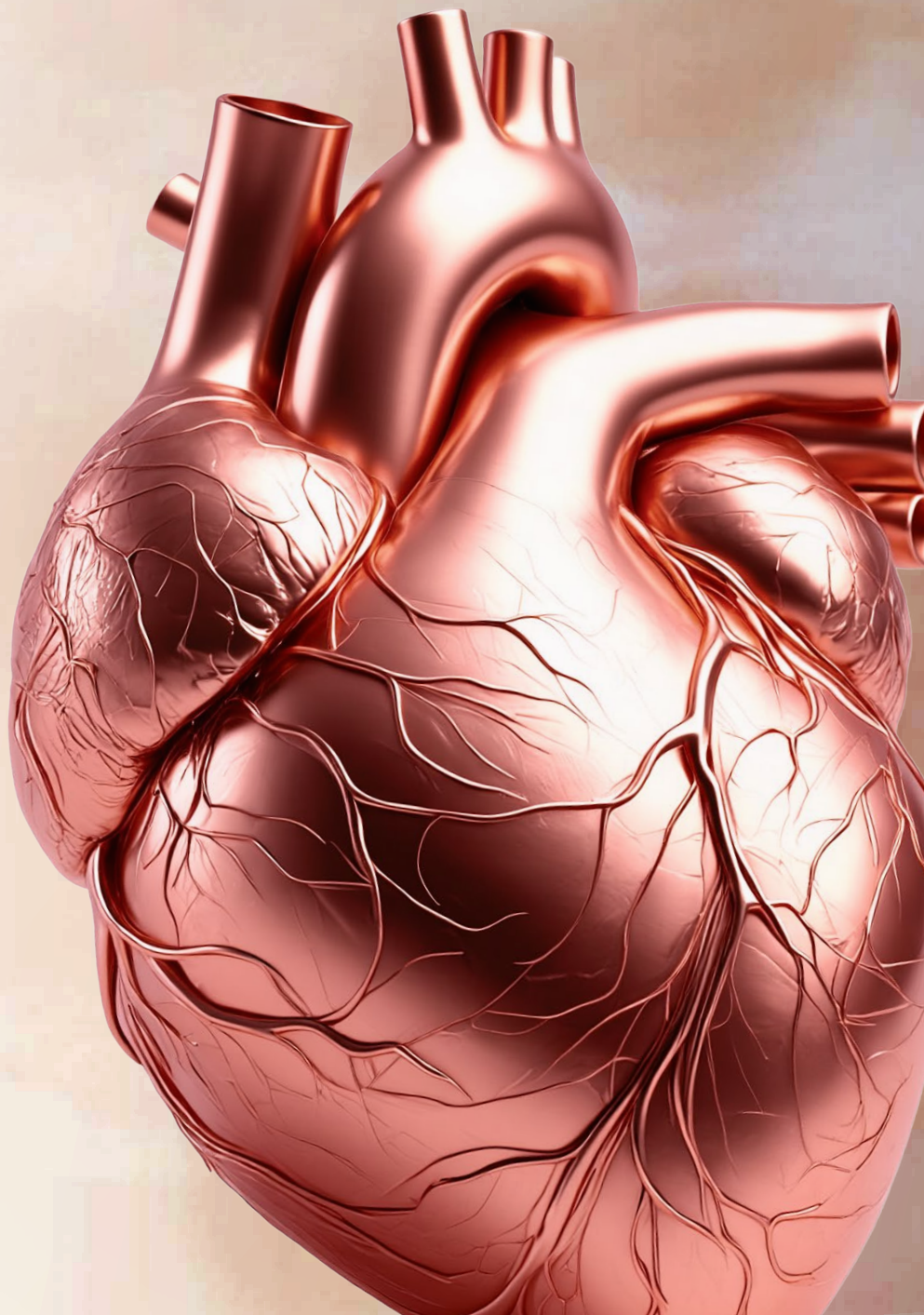


POLICY BRIEFING

DELIVERING THE EU SAFE HEARTS PLAN: THE ESSENTIAL ROLE OF RADIOLOGY IN CARDIOVASCULAR HEALTH



 **ESR** EUROPEAN
SOCIETY OF
RADIOLOGY

 EUROPEAN
SOCIETY OF
CARDIOVASCULAR
RADIOLOGY

A PRESSING NEED FOR EU ACTION

Cardiovascular disease (CVD) is the leading cause of death in Europe, claiming over 3.9 million lives each year.

The European Society of Radiology (ESR) and the European Society of Cardiovascular Radiology (ESCR) strongly welcome the **EU Safe Hearts Plan** structured around *three strategic pillars*:

1. **reducing cardiovascular risk factors**
2. **strengthening early detection through coordinated EU-wide screening and health checks**
3. **improving standards of care through better clinical guidelines and the development of a European network of cardiovascular centres.**

Cross-cutting priorities, including digital innovation, responsible integration of artificial intelligence (AI), stronger research and data capacities, and lower health inequalities are essential to its success.

Radiology is fundamental across all pillars.

KEY FACTS

CVD IS EXPECTED TO RISE BY 90% BY 2050¹.

CVD COST THE EU AN ESTIMATED € 282 BILLION PER YEAR¹.

IMAGING PLAYS A KEY ROLE IN PREVENTION, DIAGNOSIS AND DISEASE MANAGEMENT.

RADIOLOGISTS REPORT THE VAST MAJORITY OF IMAGING STUDIES (76% OF CT AND 71% OF MR EXAMINATIONS)².

RADIOLOGY ACROSS THE CARDIOVASCULAR CARE PATHWAY

Advanced non-invasive cardiac radiology including cardiac CT and cardiac MR, as well as cardiac nuclear medicine support the full continuum of care: early detection, risk stratification, diagnosis, treatment planning, and long-term follow-up. It enables more precise, evidence-based and personalised care. Cardiac CT and MRI are complex cross-sectional techniques requiring specialised expertise in acquisition, optimisation, safety, and interpretation of both cardiac and extracardiac findings. Across Europe, radiologists play a central role in delivering these services, working within multidisciplinary cardiovascular teams to ensure high-quality, safe and effective patient care.

Radiologists are uniquely trained and responsible for:

- » Selecting and optimising imaging protocols
- » Ensuring image quality, scan safety, and radiation protection
- » Delivering appropriate and comprehensive diagnostic interpretation as the basis for optimised patient care

With the Safe Hearts Plan shift to prevention and early detection, radiology is at the heart of its implementation. It detects disease at its earliest and most treatable stages, enables early, personalised risk stratification, and supports more effective treatment and long-term care.

The ESR and the ESCR stand ready to contribute their expertise and support the delivery of more effective, equitable and data-driven cardiovascular care across Europe.

THE ROLE OF IMAGING IN THE CARDIOVASCULAR CARE PATHWAY



PREVENTION & SCREENING

Coronary artery calcium scoring for risk stratification

- » Improved cardiovascular risk assessment
- » Fast, low-dose scalable screening



EARLY DETECTION & DIAGNOSIS

Improved diagnostic confidence

- » Earlier disease detection
- » Improved diagnostic accuracy



PERSONALISED TREATMENT PLANNING

Tailored treatment decisions

- » Tailored treatment pathways
- » Pathophysiology-informed management



MONITORING & FOLLOW-UP

Quantitative imaging for follow-up

- » Precise disease phenotyping
- » Serial follow-up imaging



RESEARCH & INNOVATION

Imaging bridges research & clinical implementation

- » Quantitative endpoints for trials
- » Novel disease characterisation

¹ Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee and the Committee of the Regions on an EU cardiovascular health plan: the Safe Hearts Plan.

² Natale, L., Vliegenthart, R., Salgado, R. et al. Cardiac radiology in Europe: status and vision by the European Society of Cardiovascular Radiology (ESCR) and the European Society of Radiology (ESR). *Eur Radiol* 33, 5489–5497 (2023). <https://doi.org/10.1007/s00330-023-09533-z>

FROM AMBITION TO IMPLEMENTATION: ESR/ESCR RECOMMENDATIONS

PREVENTION, EARLY DETECTION AND SCREENING



Radiology enables direct assessment of cardiovascular health, allows cardiovascular risk stratification and identifies high-risk patients more accurately than traditional risk factors alone.

- » Coronary Artery Calcium Scoring (CACS) based on CT is the strongest non-invasive marker of cardiovascular risk. Representing the “vascular age” of an individual, CACS is the most promising tool for improving cardiovascular risk assessment.
- » CACS CT is fast, low-dose, cost-effective, and scalable, and can be easily implemented within existing healthcare pathways, making it suitable for population-level strategies.

DIAGNOSIS, TREATMENT, CARE AND FOLLOW-UP



Radiology enables precision medicine through accurate diagnosis, therapy selection, and monitoring.

Key roles of radiological imaging:

- » Supporting clinical decision-making.
- » Guiding interventions and therapy selection.
- » Monitoring disease progression and therapy response.
- » Informing chronic disease management.

AI-POWERED, DATA DRIVEN CARDIO- VASCULAR CARE



Radiology is a leading specialty in the development and deployment of AI in healthcare.

- » AI provides promising solutions across the cardiac imaging process, including test selection, image acquisition, reconstruction, interpretation, prognosis and reporting.
- » Radiology is well positioned to support the Plan’s digital ambitions to translate innovation into safer, more accurate cardiovascular diagnostics.
- » Radiologists already use AI for image segmentation, biomarker measurement and post-processing.
- » Integration of radiology with echocardiography, clinical, ECG, and laboratory data enables digital twins and personalised care.

ESR/ESCR CALL ON THE EU INSTITUTIONS AND MEMBER STATES TO

Integrate cardiac radiology in the protocols for cardiovascular health checks and the national cardiovascular health plans.

Embed CACS CT within health check centres to enable precise, imaging-based risk stratification at the point of care.

Integrate CACS into existing programmes (e.g. for lung cancer screening) to improve cost-effectiveness and public health impact.

Fund pilot programmes and structured rollouts for imaging-based screening with the support of European professional societies.

ESR/ESCR CALL ON THE EU INSTITUTIONS AND MEMBER STATES TO

Develop harmonised EU guidelines and protocols integrating cardiac radiology into diagnosis and care pathways in collaboration with ESR/ESCR and other European professional societies.

Promote harmonised care pathways to integrate imaging-based risk stratification into diagnosis, treatment and follow-up pathways for CVD.

Invest in radiology capacity, radiological workforce and EHDS-aligned reporting systems.

ESR/ESCR CALL ON THE EU INSTITUTIONS AND MEMBER STATES TO

Integrate AI-enabled cardiovascular radiology into the forthcoming Council Recommendation on personalised treatment and care and national strategies.

Invest in interoperable multimodal health data infrastructures.

Facilitate access to high-quality for AI and digital twin development.

Strengthen training and governance for safe, ethical AI use.

RESEARCH & INNOVATION



Cardiac CT, MRI and nuclear imaging have become indispensable components of cardiovascular research methodology and evidence generation, enabling:

- » Precise characterisation of CVD.
- » Objective assessment of treatment response.
- » Non-invasive longitudinal monitoring of disease progression.
- » Deeper insights into pathophysiological processes.
- » Quantitative endpoints for interventional trials.

ESR/ESCR CALL ON THE EU INSTITUTIONS AND MEMBER STATES TO

Fund outcome-based studies demonstrating the impact of cardiac radiology on patient lifestyle (e.g. smoking cessation), management decisions, adherence, and outcome improvement.

Fund standardisation of imaging biomarkers (e.g. CT quantitative plaque analysis).

Support evidence generation for the value of opportunistic CACS via lung cancer screening or routine chest CT.

Advance evidence generation for imaging in patients with acute chest pain.

Validate emerging imaging biomarkers for personalised treatment.

Invest in AI, datasets, interoperable systems, validation of integrative risk models.

Address inequalities by prioritising imaging studies in underrepresented populations.

Support implementation research and large-scale European demonstration projects of imaging pathways.

MULTIDISCIPLINARY, WORKFORCE TRAINING AND CAPACITY

High-quality and safe cardiovascular imaging depends on specialised radiology expertise and multidisciplinary collaboration.

- » Radiologists play a central role in delivering cardiovascular imaging and in translating imaging advances into clinical practice.
- » Multidisciplinary teams can ensure the right test for the right patient at the right time.
- » Radiologists play a key role in ensuring the safety, quality, and transparency in AI-powered cardiovascular imaging.

ESR/ESCR CALL ON THE EU INSTITUTIONS AND MEMBER STATES TO

Invest in radiology workforce training, imaging infrastructure and capacity to meet the growing demand for cardiovascular imaging.

Encourage multidisciplinary collaboration between professional societies and other health stakeholders to meet the objectives of the EU Safe Hearts Plan.

Integrate imaging into national and EU cardiovascular health strategies.

Radiology is a key enabler of the Safe Hearts Plan's ambition to reduce premature cardiovascular deaths by 25% by 2035. Embedding radiology across prevention, diagnosis, care, and digital innovation will be essential to delivering more effective, equitable, and sustainable cardiovascular healthcare in Europe.

The ESR and ESCR stand ready to support implementation with their expertise.



**SAFE HEARTS
PLAN'S AMBITION:
REDUCE PREMATURE
CARDIOVASCULAR
DEATHS BY**

25%

BY 2035



the radiology profession with nearly 150,000 individual members and acts as the umbrella organisation of all national radiological societies in Europe as well as Europe's subspecialty organisations in the field of radiology. EU Transparency Register no. 478131313572-40; www.myesr.org

The European Society of Radiology (ESR) is an apolitical, non-profit organisation, dedicated to promoting and coordinating the scientific, philanthropic, intellectual and professional activities of radiology in all European countries. The Society's mission at all times is to serve the healthcare needs of the general public through the support of science, teaching and research and the quality of service in the field of radiology. The ESR is the European body representing



The European Society of Cardiovascular Radiology (ESCR) is an institutional member of the ESR, dedicated to promoting and advancing European cardiovascular radiology by offering annual scientific meetings, workshops, webinars, and other scientific and educational events. www.escr.org