

Hylomorph | PRIMA

Image-based home-monitoring for the
early detection of post surgical infection with AI

Simone Bottan

Wednesday 13 November 2024

CRM infection: key numbers...

1.7-5.6%

Incidence in low-high risk patients.
Real-world evidence data.

4 in 5

Medicare patients with infection not
treated per guidelines

57%

Higher risk of death when
not timely treated












ESC
European Society
of Cardiology

Europace (2023) 25, 1–8
<https://doi.org/10.1093/europace/euad224>

CLINICAL RESEARCH

REDucing INFectiONS thROUGH Cardiac device Envelope: insight from real world data. The REINFORCE project

Matteo Ziacchi ^{1*}, Mauro Biffi ¹, Saverio Iacopino ², Michele di Silvestro ³,
Procolo Marchese ⁴, Francesca Miscio ⁵, Vincenzo Paolo Caccavo⁶,
Gabriele Zanutto⁷, Luca Tomasi⁸, Antonio Dello Russo ⁹, Luca Donazzan ¹⁰,
and Giuseppe Boriani ¹¹

ACC.22 Late-Breaking Clinical Trial

*Low Rates of Guideline Directed Care
Associated with Higher Mortality in Patients
With Infected CIEDs*

Sean D. Pokorney, Lindsay Zepel, Melissa A. Greiner, Vance G. Fowler, Jr., Eric Black-Maier, Robert K. Lewis, Donald D. Hegland, Christopher B. Granger, Laurence M. Epstein, Roger G. Carrillo, Bruce L. Wilkoff, Chantelle Hardy, Jonathan P. Piccini

JAMA Cardiology | **Original Investigation**

Lead Extraction and Mortality Among Patients With Cardiac Implanted Electronic Device Infection

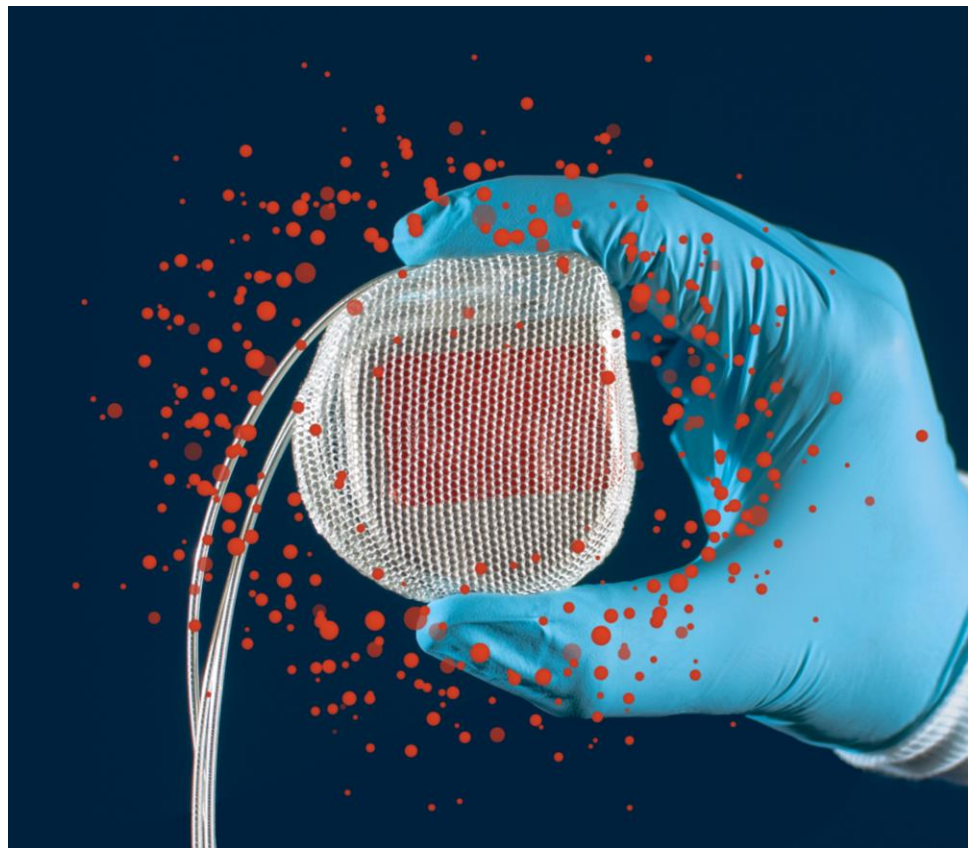
Sean D. Pokorney, MD; Lindsay Zepel, MS; Melissa A. Greiner, MS; Vance G. Fowler Jr, MD, MHS;
Eric Black-Maier, MD; Robert K. Lewis, MD, PhD; Donald D. Hegland, MD; Christopher B. Granger, MD;
Laurence M. Epstein, MD; Roger G. Carrillo, MD; Bruce L. Wilkoff, MD;
Chantelle Hardy, MPH; Jonathan P. Piccini, MD, MHS

VESTA | bioresorbable antibacterial envelope

**Modular, tailored, local,
sustained drug delivery.
Where needed, when needed.**

- Antibacterial above MIC for >7 days
- Resorbs in 3 months

***“What about those patients
who still develop an infection?”***

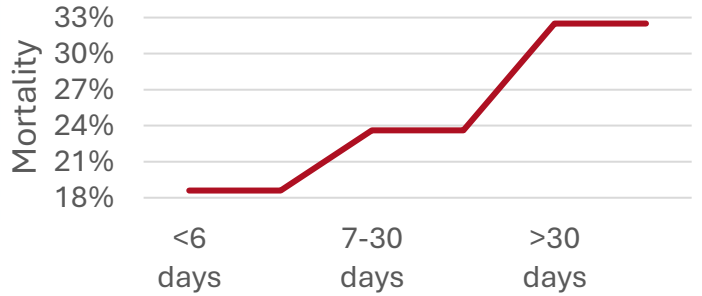


Early detection & action are critical to patient survival



Hui-Chen Han et al, Europace 2021

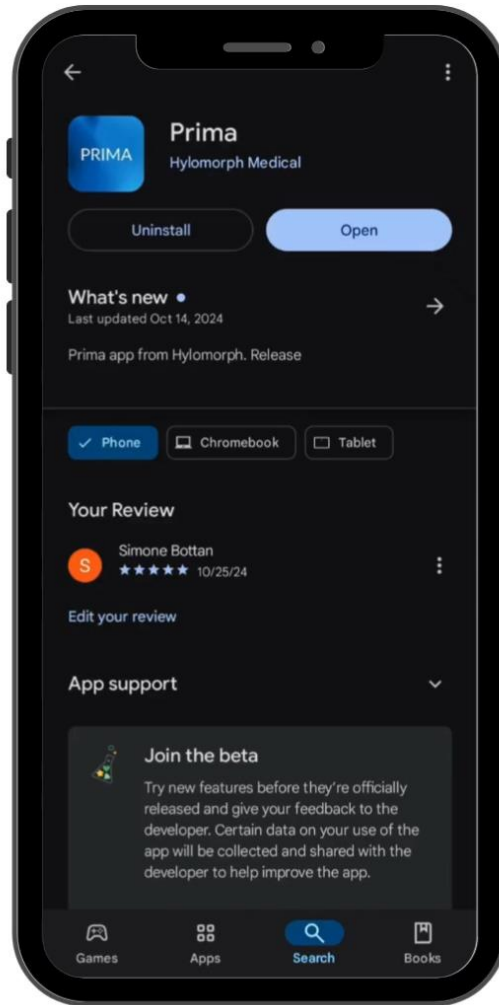
Wait time to extraction	Mortality
>30 days	32.5%
7-30 days	23.6%
<6 days	18.6%



Pokorney et al, JAMA Card 2023

PRIMA





Image-based
home monitoring
for the early detection
of infection
with AI

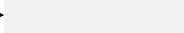
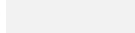








Cardiovascular Round Table



Dashboard

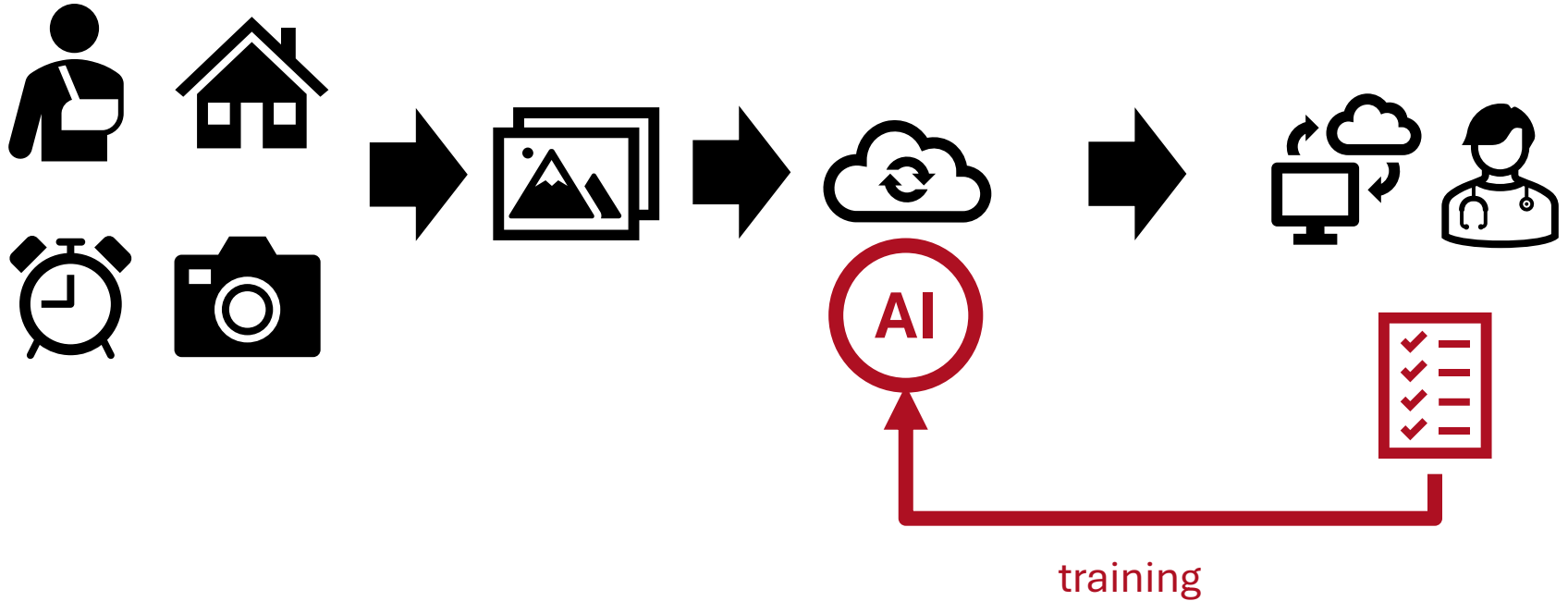
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 John_Doe_01-04-1970	3 days ago
 Simone_Bottan_1983-04-28	4 days ago

 >  > Simone_Bottan_1983-04-28 

 Name ↓ ▾
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  2024_09_10_15_12_01_SB_1983-04-28.jpg
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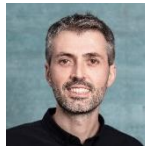


AI workflow & training: doctors' central role



Cross-Functional Endeavor

Hylomorph



Simone Bottan

CEO & co-founder

15 years in Medtech, former Pioneer Fellow ETH,
Project Leader Wyss Zurich, Venturekick award



Aldo Ferrari

CSO & co-founder

20+ years in Medtech, former lecturer ETH,
Author 50+ peer reviewed scientific papers



Francesco Robotti

COO & co-founder

12 years in Medtech, PhD ETH Zurich,
Co-developed Hylomorph tech



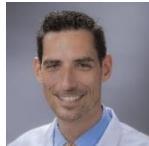
Sebastian Cavalli

CRQO

15 years in Regulatory & Quality Medtech,
former RQ at Geistlich Pharma

10x

Clinical



Alexander Breitenstein



Mauro Biffi



AI



Prof Ender Konukoglu

ETH zürich



The benefit at scale in Cardiac Rhythm

CRM	Patients/year	Infections	Deaths
Global	2 million	34k-112k	6.4k-29k
EU	500k	8.5k-28k	1.6k-7.3k
Avg Center	300	5-17	1-5

The potential upside

