MicroPort®

WHICH ONE REALLY LASTS THE LONGEST?

Breakthrough technology
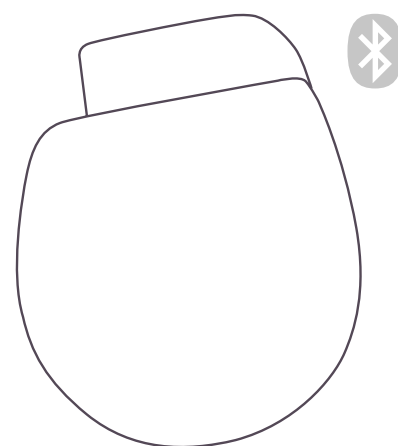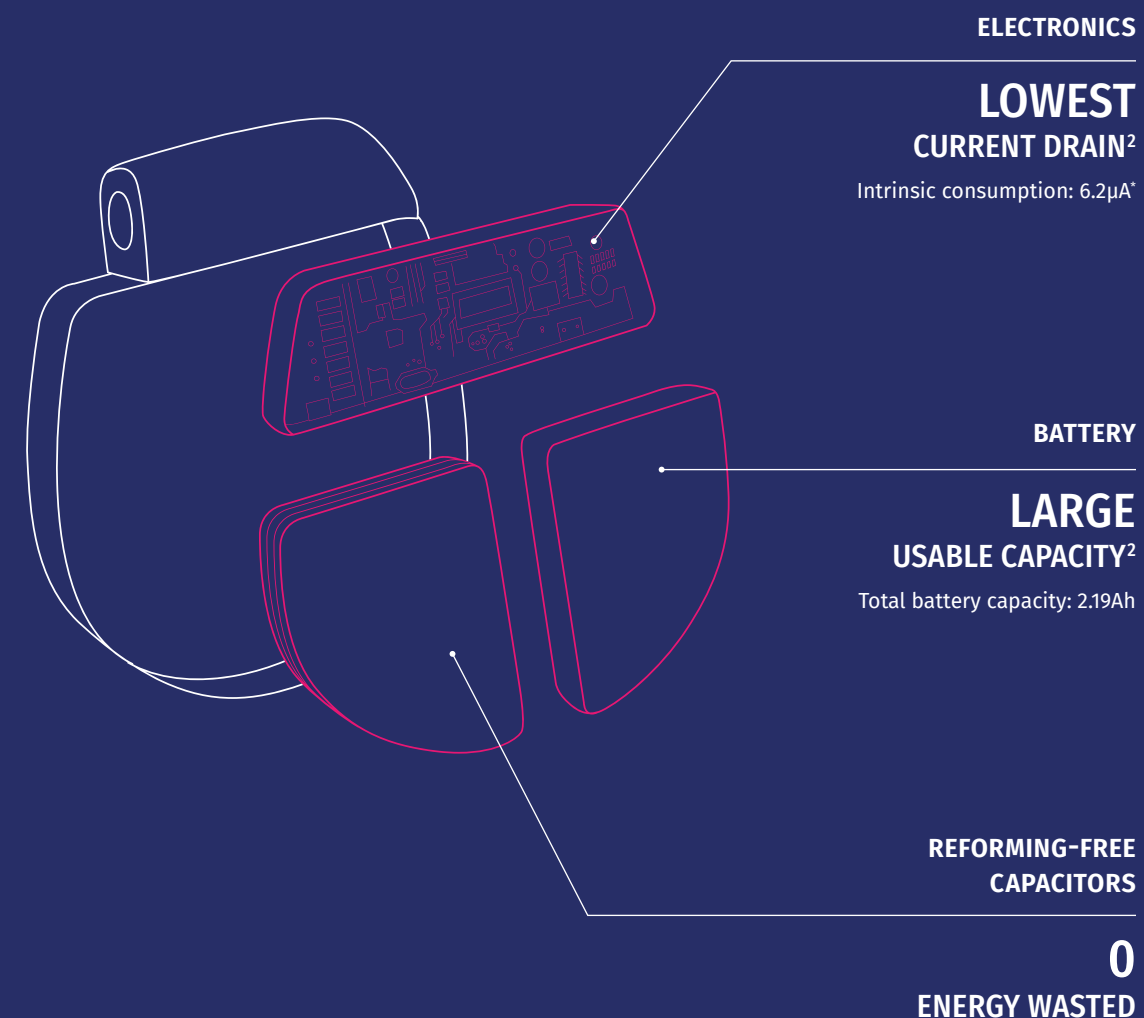
MicroPort® CRM BLE ICD & CRT-D

World's greatest projected longevity,
with up to **50%** additional battery life

COMPARED TO OTHER DEVICES.[1]

ELECTRONICS

LOWEST
CURRENT DRAIN[2]

Intrinsic consumption: 6.2μA*

BATTERY

LARGE
USABLE CAPACITY[2]

Total battery capacity: 2.19Ah

REFORMING-FREE
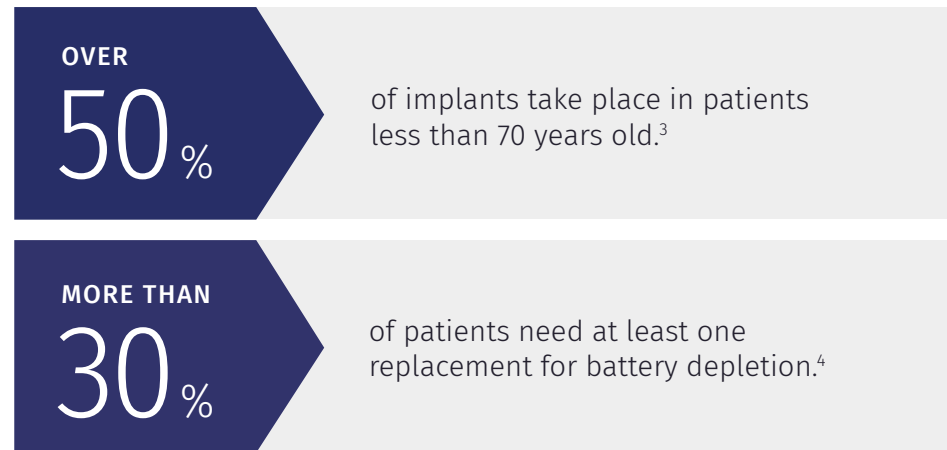CAPACITORS

0
ENERGY WASTED

MicroPort® CRM BLE ICD and CRT-D incorporate advanced technology that withstands the test of time. With the lowest current drain and a large battery capacity, MicroPort® CRM excels in predicted longevity by up to 50% more in comparison to devices from other manufacturers.[1,2]

*Indicated at 60bpm (μA on battery voltage).*

Why longevity matters?

There is a need to solve the mismatch between patient life expectancy and ICD/CRT-D longevity.

OVER

50%

of implants take place in patients less than 70 years old.[3]

MORE THAN

30%

of patients need at least one replacement for battery depletion.[4]

Complications with Replacement

Sooner or later, the issue of replacement will arise and with it risks of serious complications.
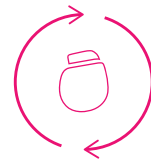
Replacement procedures are associated with:

1. Twice as many occurrences of surgical re-interventions for infections or others causes.[5]

2. A five-fold increase of ICD lead issues.[6]

Warranty: the proof of trust in our device longevity.

MicroPort® CRM offers a comprehensive warranty which applies regardless of conditions and therapy frequency.[7]

	VR	DR	CRT-D	SONR CRT-D
Warranty	11 years	9 years	7 years	6 years

Healthcare Cost Savings

Extended longevity significantly decreases the cost of therapy.

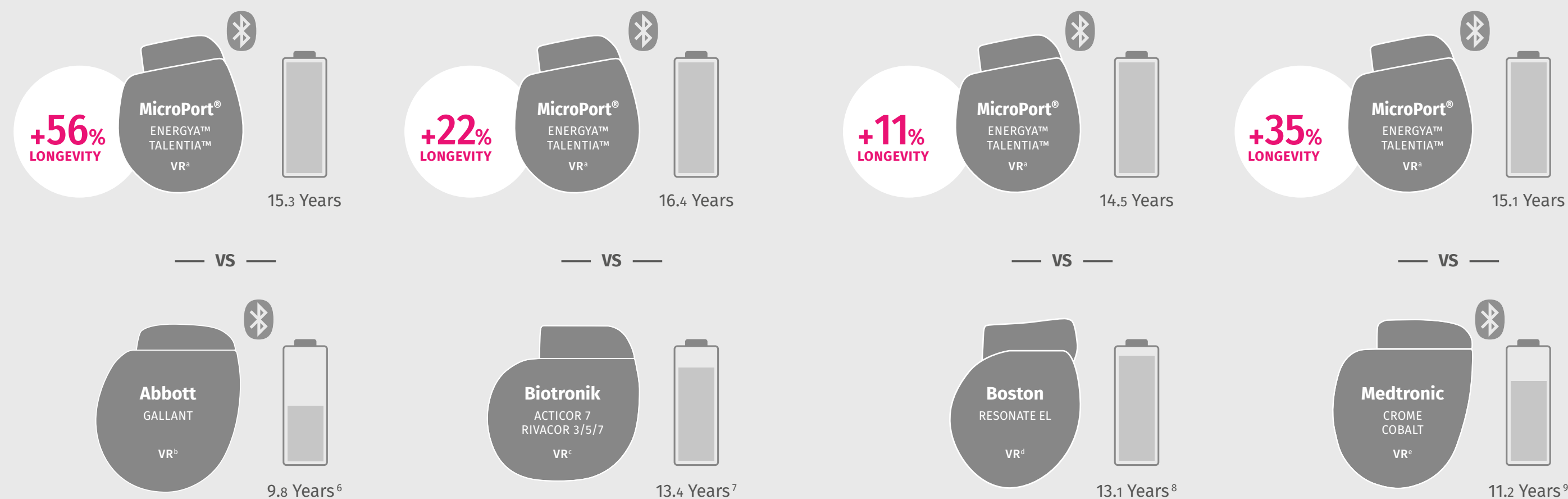Expected average savings per patient implanted over a 15-year time period.[8]

UP TO

21% SAVINGS

FROM 9 TO 14 YEARS LONGEVITY

ICDs

UP TO

26% SAVINGS

FROM 6 TO 10 YEARS LONGEVITY

CRT-Ds

WHICH ONE REALLY LASTS THE LONGEST?

Compare the comparable.

This longevity comparison has been developed using similar conditions and settings across device models and manufacturers.
Settings have been extracted from the official device manuals and longevity simulators of manufacturers in order to ensure the most accurate longevity estimations and precise comparison.[1]

VR DEVICE MODELS

+56% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
VR[a]

15.3 Years

— VS —

Abbott
GALLANT

VR[b]

9.8 Years[6]

+22% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
VR[a]

16.4 Years

— VS —

Biotronik
ACTICOR 7
RIVACOR 3/5/7

VR[c]

13.4 Years[7]

+11% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
VR[a]

14.5 Years

— VS —

Boston
RESONATE EL

VR[d]

13.1 Years[8]

+35% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
VR[a]

15.1 Years

— VS —

Medtronic
CROME
COBALT

VR[e]

11.2 Years[9]

Conditions

- **Pacing Mode**: VVI
- **Rate**: 60bpm
- **Counters**: 100% VP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[b]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 1[a] / 1 every 9 months + 4 at implant[b]
- **Remote monitoring**: ON, daily check, 4 FU and 5 full alert reports per year[a] / ON (no additional information available)[b]
- **RF telemetry**: 45min implantation + 15min in-clinic FU[a] / 2hrs of RF communication at implant[b]

- **Pacing Mode**: VVI
- **Rate**: 40bpm
- **Counters**: 100% VP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[c]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 2
- **Remote monitoring**: ON, daily check, 4 FU and 5 full alert reports per year[a] / ON, 1 device message each day and 24 IEGM-online HD transmissions per year[c]
- **RF telemetry**: 45min implantation + 15min in-clinic FU[a] / ON, (no additional information available)[c]

- **Pacing Mode**: VVI
- **Rate**: 60bpm
- **Counters**: 100% VP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[d]
- **Impedance**: 500Ω
- **Sensor**: ON
- **Max shocks/year**: 2
- **Remote monitoring**: ON, quarterly scheduled remote telemetry transmissions with daily check[a,d], with 5 full alerts reports per year[a]
- **RF telemetry**: 45min implantation + 15min in-clinic FU[a] / 1hr ZIP telemetry at implant and 40min in-clinic[d]

- **Pacing Mode**: VVI
- **Rate**: 60bpm
- **Counters**: 100% VP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[e]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 2
- **Remote monitoring**: ON, quarterly scheduled remote telemetry transmissions with daily check[a,e], with 5 full alerts reports per year[a]
- **RF telemetry**: 45min implantation + 15min in-clinic FU[a] / 1hr of wireless telemetry during implantation, 1hr of in-clinic wireless telemetry annually[e]
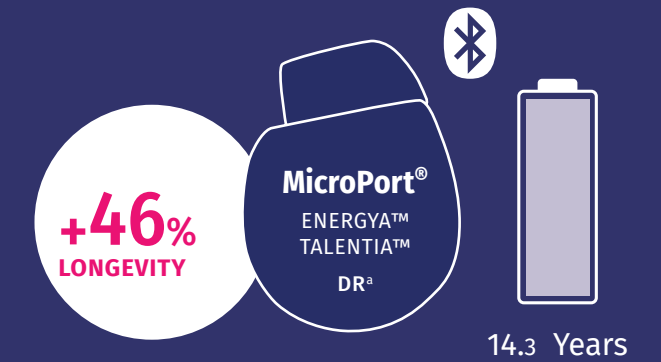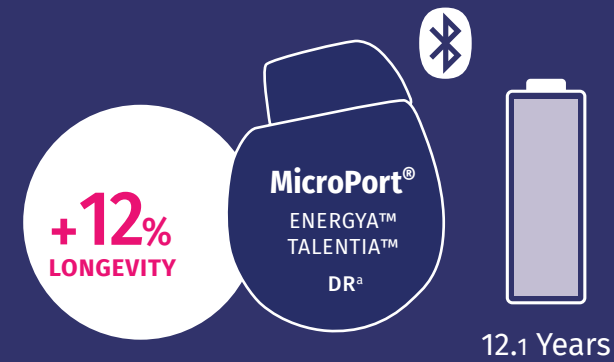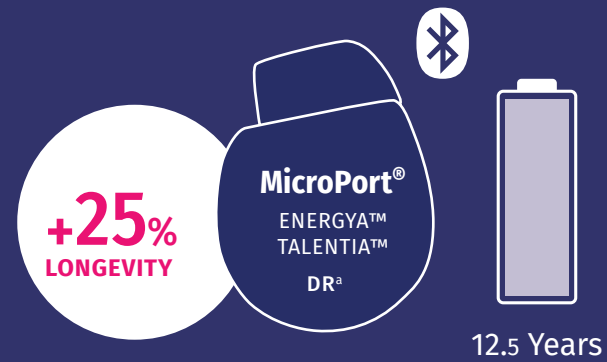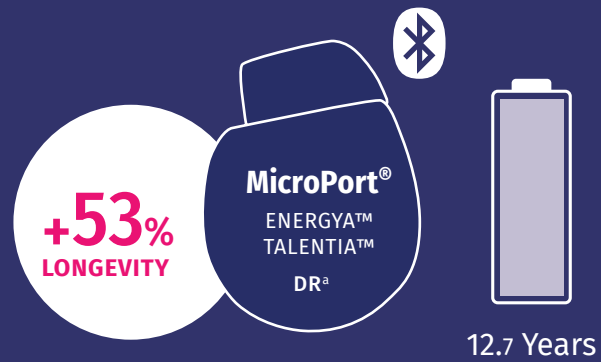
WHICH ONE REALLY LASTS THE LONGEST?

Compare the comparable.

This longevity comparison has been developed using similar conditions and settings across device models and manufacturers.
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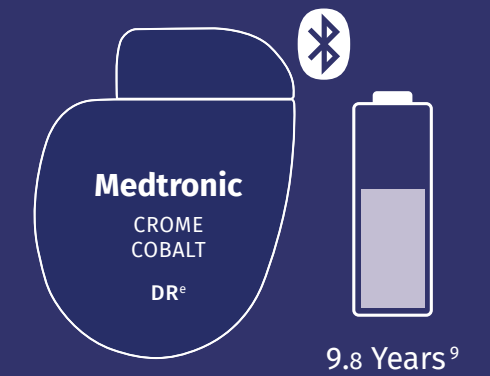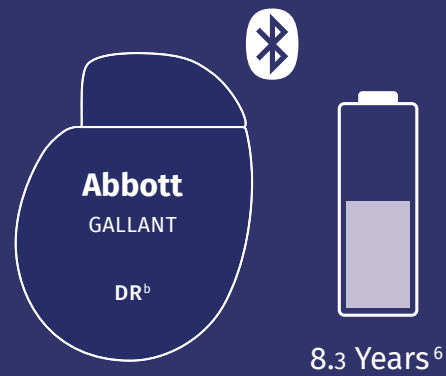
DR DEVICE MODELS

+53% LONGEVITY

MicroPort®
ENERGYA™ TALENTIA™
DR[a]
12.7 Years

— VS —

Abbott
GALLANT
DR[b]
8.3 Years [6]

- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 100% AP, 100% VP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[b]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 1[a] / 1 every 9 months + 4 at implant[b]
- **Remote monitoring**: ON, daily check, 4 FU and 5 full alert reports per year[a] / ON (no additional information available)[b]
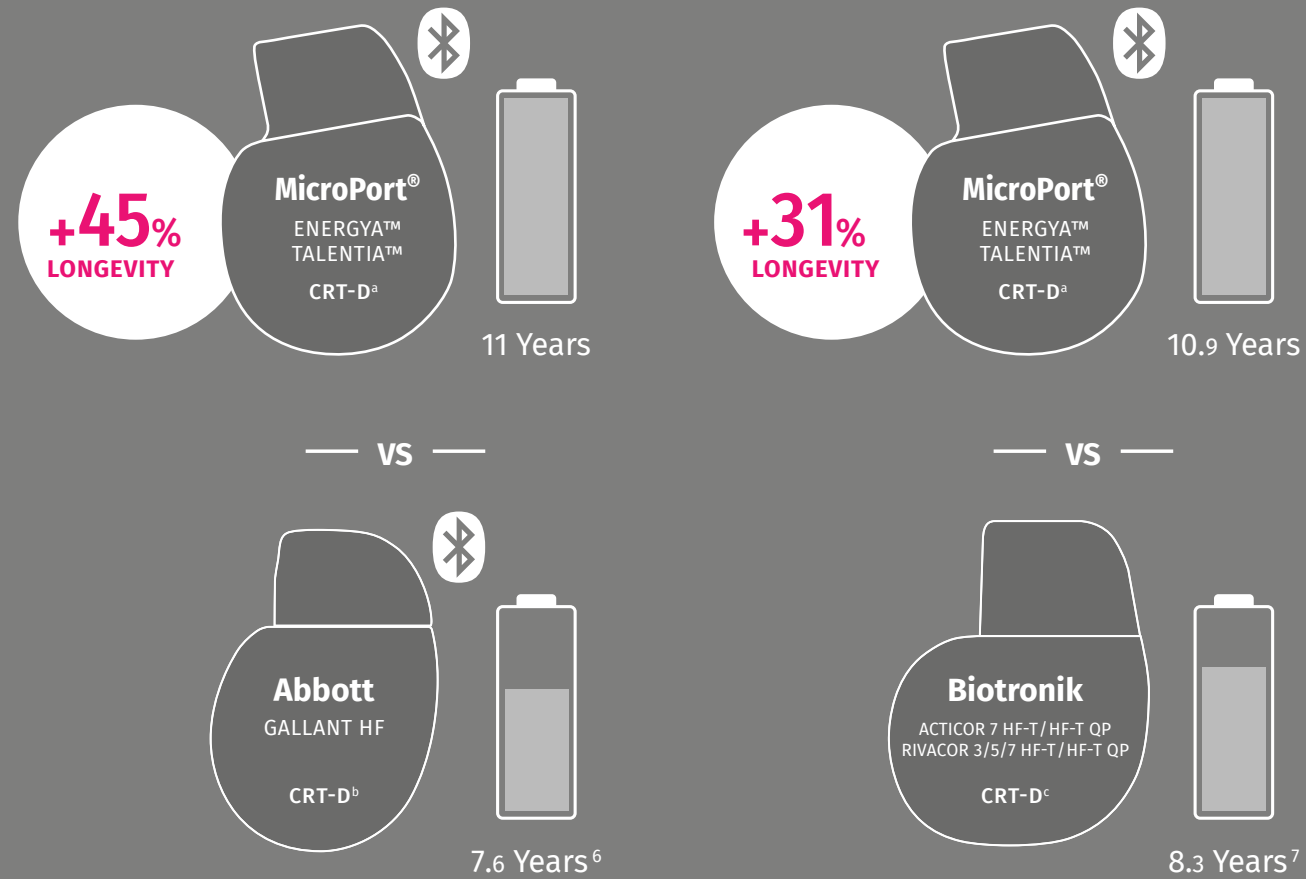- **RF telemetry**: 45min implantation + 15min in-clinic FU[a] / 2hrs of RF communication at implant[b]

+25% LONGEVITY

MicroPort®
ENERGYA™ TALENTIA™
DR[a]
12.5 Years

— VS —

Biotronik
ACTICOR 7
RIVACOR 3/5/7
DR[c]
10 Years [7]

- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 100% AP, 100% VP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[c]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 2
- **Remote monitoring**: ON, daily check, 4 FU and 5 full alert reports per year[a] / ON, 1 device message each day and 24 IEGM-online HD transmissions per year[c]
- **RF telemetry**: 45min implantation + 15min in-clinic FU[a] / ON, (no additional information available)[c]

+12% LONGEVITY

MicroPort®
ENERGYA™ TALENTIA™
DR[a]
12.1 Years

— VS —

Boston
RESONATE EL
DR[d]
10.8 Years [8]

- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 100% AP, 100% VP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[d]
- **Impedance**: 500Ω
- **Sensor**: ON
- **Max shocks/year**: 2
- **Remote monitoring**: ON, quarterly scheduled remote telemetry transmissions with daily check[a,d], with 5 full alerts reports per year[a]
- **RF telemetry**: 45min implantation + 15min in-clinic FU[a] / 1hr ZIP telemetry at implant and 40min in-clinic[d]

+46% LONGEVITY

MicroPort®
ENERGYA™ TALENTIA™
DR[a]
14.3 Years

— VS —

Medtronic
CROME
COBALT
DR[e]
9.8 Years [9]

- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 15% AP, 100% VP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[e]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 2
- **Remote monitoring**: ON, quarterly scheduled remote telemetry transmissions with daily check[a,e], with 5 full alerts reports per year[a]
- **RF telemetry**: 45min implantation + 15min in-clinic FU[a] / 1hr of wireless telemetry during implantation, 1hr of in-clinic wireless telemetry annually[e]

Conditions

CRT-D DEVICE MODELS

With the automatic CRT optimization system deactivated

+45% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
CRT-D[a]

11 Years

— VS —

Abbott
GALLANT HF

CRT-D[b]

7.6 Years[6]

+31% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
CRT-D[a]

10.9 Years

— VS —

Biotronik
ACTICOR 7 HF-T / HF-T QP
RIVACOR 3/5/7 HF-T / HF-T QP

CRT-D[c]

8.3 Years[7]

Conditions

- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 100% AP, 100% BiVP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[b]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 1[a] / 1 every 9 months + 4 at implant[b]
- **Remote monitoring**: ON, daily check, 4 FU and 5 full alert reports per year[a] / ON (no additional information available)[b]
- **RF telemetry**: 120min implantation + 15min in-clinic FU[a] / 2hrs of RF communication at implant[b]

- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 100% AP, 100% BiVP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[c]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 2
- **Remote monitoring**: ON, daily check, 4 FU and 5 full alert reports per year[a] / ON, 1 device message each day and 24 IEGM-online HD transmissions per year[c]
- **RF telemetry**: 120min implantation + 15min in-clinic FU[a] / ON, (no additional information available)[c]

References

1. Competition comparison made as of March 2020, refer to manufacturers manuals and Boston Scientific longevity calculator available online.

2. Munawar DA, Mahajan R, Linz D, Wong GR, Khokhar KB, Thiyagarajah A, Kadhim K, Emami M, Mishima R, Elliott AD, Middeldorp ME, Roberts-Thompson KC, Young GD, Sanders P, Lau DH. Predicted longevity of contemporary cardiac implantable electronic devices: A call for industry-wide «standardized» reporting. Heart Rhythm. 2018 Dec;15(12):1756-1763.

3. Swedish ICD and Pacemaker Registry – Annual statistic report 2019. https://www.pacemakerregistret.se/icdpmr/start.do.

4. Ramachandra I. Impact of ICD battery longevity on need for device replacements-insights from a Veterans Affairs database. Pacing Clin Electrophysiol. 2010 Mar;33(3):314-9.

5. Borleffs CJ, Thijssen J, de Bie MK, van Rees JB, van Welsenes GH, van Erven L, Bax JJ, Cannegieter SC, Schalij MJ. Recurrent implantable cardioverter-defibrillator replacement is associated with an increasing risk of pocket-related complications. Pacing Clin Electrophysiol. 2010 Aug;33(8):1013-9.

6. Lovelock JD, Cruz C, Hoskins MH, Jones P, El-Chami MF, Lloyd MS, Leon A, DeLurgio DB, Langberg JJ. Generator replacement is associated with an increased rate of ICD lead alerts. Heart Rhythm. 2014 Oct;11(10):1785-9.

7. For more details please refer to the following document: Limited Warranty for MicroPort® CRM ICD and CRT-D devices available at www.microportmanuals.com.

8. Boriani G, Braunschweig F, Deharo JC, Leyva F, Lubinski A, Lazzaro C. Impact of extending device longevity on the long-term costs of implantable cardioverter-defibrillator therapy: a modelling study with a 15-year time horizon. Europace. 2013 Oct;15(10):1453-62.
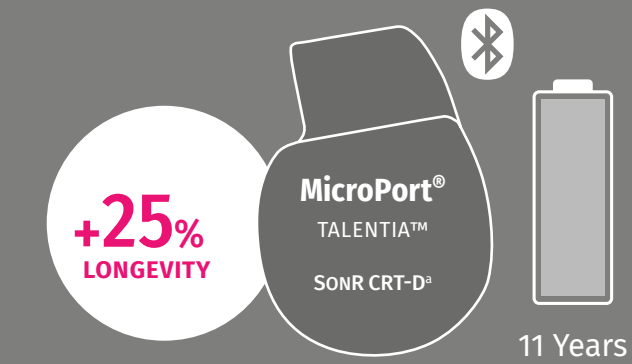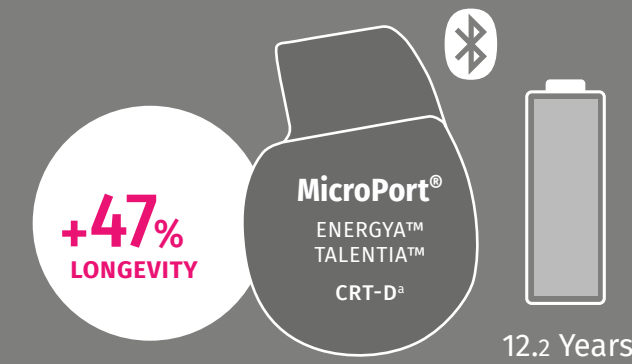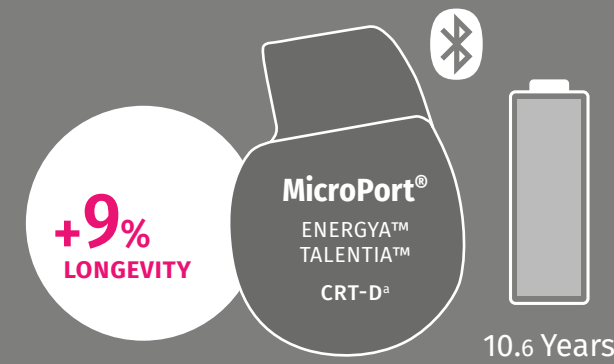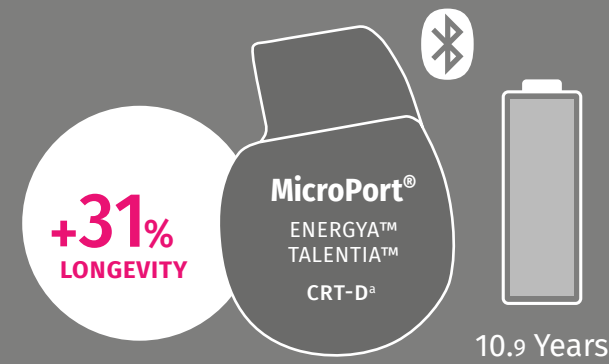
CRT-D DEVICE MODELS

With the automatic CRT optimization system deactivated
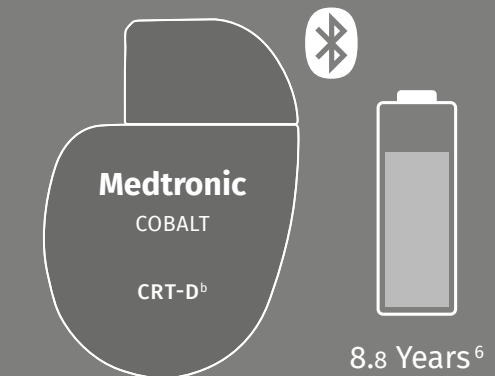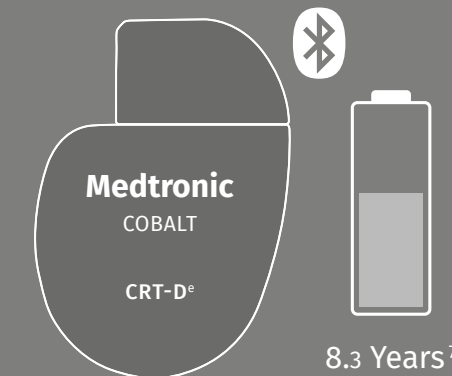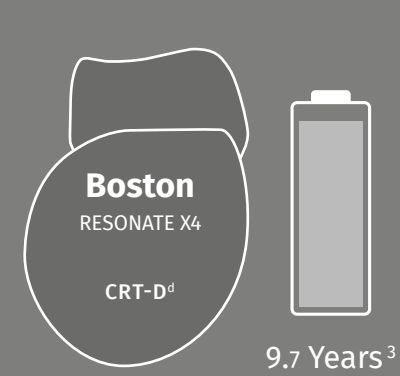
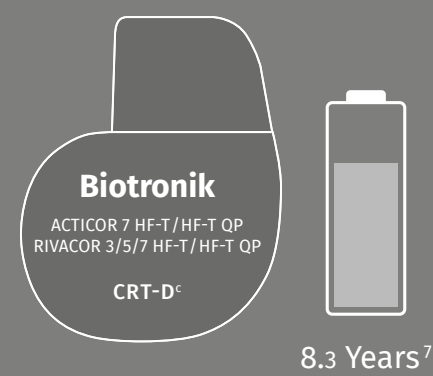With the automatic CRT optimization system activated

+45% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
CRT-D[a]

11 Years

— VS —

Abbott
GALLANT HF

CRT-D[b]

7.6 Years[6]

+31% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
CRT-D[a]

10.9 Years

— VS —

Biotronik
ACTICOR 7 HF-T / HF-T QP
RIVACOR 3/5/7 HF-T / HF-T QP

CRT-D[c]

8.3 Years[7]

+9% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
CRT-D[a]

10.6 Years

— VS —

Boston
RESONATE X4

CRT-D[d]

9.7 Years[3]

+47% LONGEVITY

MicroPort®
ENERGYA™
TALENTIA™
CRT-D[a]

12.2 Years

— VS —

Medtronic
COBALT

CRT-D[e]

8.3 Years[7]

+25% LONGEVITY

MicroPort®
TALENTIA™
SonR CRT-D[a]

11 Years

— VS —

Medtronic
COBALT

CRT-D[b]

8.8 Years[6]

Conditions

- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 100% AP, 100% BiVP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[b]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 1[a] / 1 every 9 months + 4 at implant[b]
- **Remote monitoring**: ON, daily check, 4 FU and 5 full alert reports per year[a] / ON (no additional information available)[b]
- **RF telemetry**: 120min implantation + 15min in-clinic FU[a] / 2hrs of RF communication at implant[b]

- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 100% AP, 100% BiVP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[c]
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- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 100% AP, 100% BiVP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[d]
- **Impedance**: 500Ω
- **Sensor**: ON
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- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 15% AP, 100% BiVP
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[e]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 2
- **Remote monitoring**: ON, quarterly scheduled remote telemetry transmissions with daily check[a,e], with 5 full alerts reports per year[a]
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- **Pacing Mode**: DDD
- **Rate**: 60bpm
- **Counters**: 15% AP, 50% RVP[b], 100% LVP[b] / 100% BiVP[a]
- **Output**: 2.5V @ 0.35ms[a] / 0.4ms[b]
- **Impedance**: 500Ω
- **Sensor**: OFF
- **Max shocks/year**: 2
- **Remote monitoring**: ON, quarterly scheduled remote telemetry transmissions with daily check[a,b], with 5 full alerts reports per year[a]
- **RF telemetry**: 120min implantation + 15min in-clinic FU[a] / 1hr of wireless telemetry during implantation, 1hr of in-clinic wireless telemetry annually[b]

Manufactured in Europe
by MicroPort CRM