

Supplemental Material

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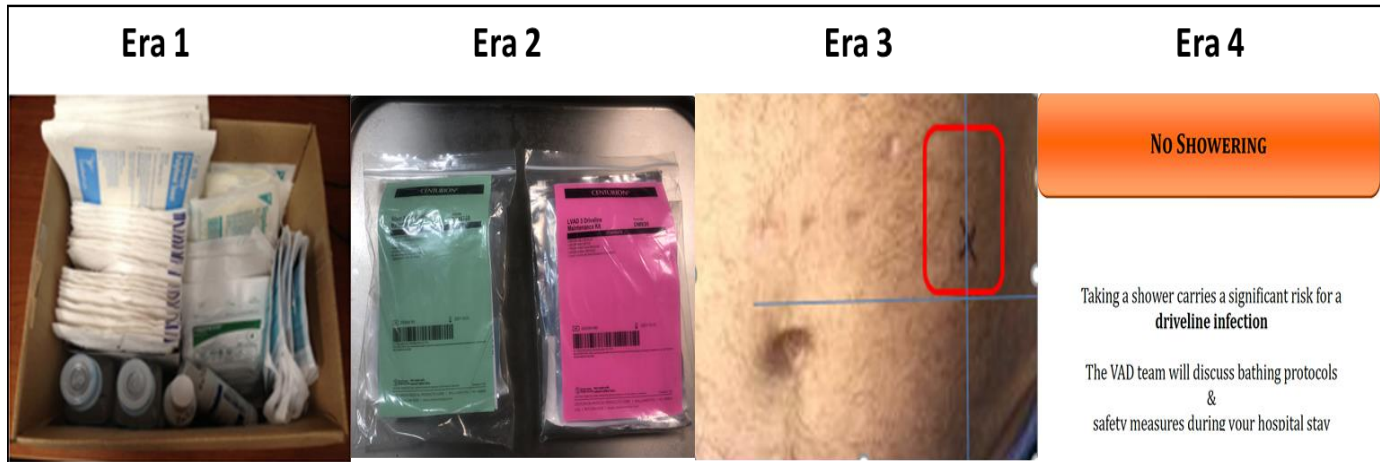
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SUPPLEMENTAL METHODS

Majority of the patients included had driveline implanted using the technique below.

Driveline tunneling technique: Driveline is tunneled to right upper quadrant between the costal margin and iliac crest. The blunt tunneling tool is used to pass driveline. The driveline velour is buried below the skin and single anchoring suture is placed around the skin hole.

1. Description of Temporal Changes in Driveline Care Protocol



Era 1: Original Care

All materials for driveline change were sent to patients separately to be assembled by the patients and /or caregivers.

Era 2: Standardized Driveline Dressing Protocol

A. Standardized Device Specific Dressing Kits:

Driveline dressing kit included (2 masks, 2 pairs of gloves, 10 gauze sponges 2.00x2.00, 1 wrap):

- 1-step cleansing stick (ChloroPrep One-Step; CareFusion, El Paso, TX),
- Bacteriostatic silver gauze dressing, (SILVERCEL Antimicrobial Alginate Dressing),
- Hydrofilm, Hartmann,
- Adhesive **pump specific anchoring devices** – HeartMate (HM)3 (UniGrip Hydrocolloid Universal Securement Device; CathGrip, Largo, FL); and HMII/HeartWare (HVAD) (Foley Catheter Securement Device; Centurion, Williamston, MN)).



B. Educational Videos: To educate on driveline dressing change and anchor application.



DRESSING CHANGE HM3 ANCHOR.MOV
video.MOV

C. Detailed standardized operative procedure (SOP): To provide step-by-step instruction for driveline dressing change.

DRIVELINE DRESSING CHANGE



SETTING UP THE STERILE FIELD

1. Wash hands
2. Get a dressing kit and bring it over to a table, tray or other firm, clean surface
3. Remove all items from ziplock bag



4. Put the Centurion anchor aside
This is not part of the sterile dressing change
5. Place the Silvercel and Hydrofilm aside but nearby
These will be added to the sterile field



6. Open the plastic package and remove contents including BLUE Sterile folded cloth.
7. Take the blue folded cloth and place it on a table or other firm surface
8. Put mask on (bendy side around nose)
9. Put on non-sterile gloves



10. Begin unfolding the sterile package, being careful not to touch the white inside portion (which is sterile)

DRIVELINE DRESSING CHANGE contd.



11. Carefully open the Silvercel and drop it onto the sterile field
12. Carefully open the Hydrofilm and drop it onto the sterile field



REMOVING THE OLD DRIVELINE DRESSING

1. While wearing the non-sterile gloves, carefully remove the dressing from the driveline site
2. Discard the dressing and the non-sterile gloves
3. Wash hands

DRIVELINE DRESSING CHANGE contd.



CLEANING AND DRESSING THE SITE

- Carefully take the sterile gloves off the sterile field by removing from the closest side
- Place the sterile glove package on a firm surface



- Open the package using the folds in the middle
 - Do not touch the inside of the package
 - The inside of the package is another sterile field**
 - Apply sterile gloves (you can touch the cuff)
- Once the sterile gloves are on, you can touch anything on your sterile field.



- Snap the ChloroPrep wand and hold the sponge down so the fluid is released into the sponge

DRIVELINE DRESSING CHANGE contd.



- Cleanse the exit site with the ChloroPrep wand by placing the wet sponge on top of the driveline exit site
- Press down and gently "rotate" back and forth releasing the fluid onto the driveline site. Get the area nice and wet with the ChloroPrep solution
- Scrub gently around the entire opening. Remember, this is the most important area. Move the sponge under the driveline without actually lifting the driveline
- Once the driveline exit site has been thoroughly cleansed, clean in a circular motion away from the driveline exit site. Do not go back to the driveline site
- Throw away the ChloroPrep wand



- Put Silvercel under the driveline, flat and then bring Silvercel around driveline in bowtie fashion

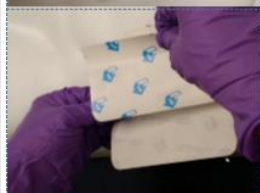


- Place white gauze over the Silvercel and exit site

DRIVELINE DRESSING CHANGE contd.



- Hold the Hydrofilm with the number "3" upside down facing toward you while you position it over the sterile dressing change site. (Angle the Hydrofilm to cover a several inches of the driveline.)



- Hold the Hydrofilm with "3" facing you over the dressing. Carefully remove paper from #1 and place this part of Hydrofilm on the skin. (The Arrows tell you which way to peel.)



- Press down on gauze through the Hydrofilm allowing you to lift the Hydrofilm up to expose the "2" tab. Grab the fold and gently pull off



- Carefully Peel the "3" off next and then the "4"

ANCHOR CHANGE (NOT STERILE)



- Remove all 3 contents of the package: Anchor, Alcohol Prep, BioPlus



- Clean skin where anchor will be placed - using alcohol prep. Allow this to air dry.



- Use BioPlus on skin where anchor will be placed "paint" it on skin - allow this to dry

ANCHOR CHANGE contd.



4. Place the anchor where it will be secured ensuring it lets driveline naturally pass through its middle.



5. Remove one wing of anchor sticker and press on skin. Then remove the other wing while gently pressing the anchor to adhere to the skin

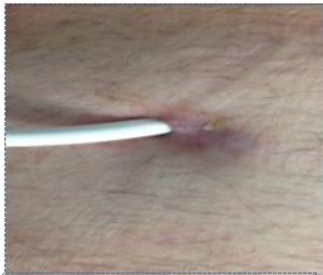


ANCHOR CHANGE contd.



Secure driveline to anchor by passing the plastic tab through the hole on the other tab and pull them both ensuring that one tab is all the way through the hole exposing tiny wings that prevent it from passing back.
Make sure the driveline has some slack and is NOT pulled taut.

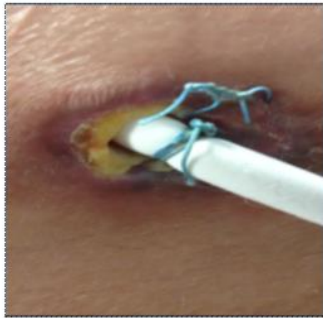
DRIVELINE EXIT SITE PICTURES



Little redness with no drainage. Skin is healing well.
Continue dressing changes as usual



Crusting exit site. Some drainage noted and increasing redness. Slightly tender
***If new - Call office!**



Skin fully open at driveline site. Occurs from dropping controller/trauma. Skin has yellow infection type appearance.
Start using Silvercel and call office



Skin pulled away from driveline with a lot of drainage.
Very red, swollen and painful
Start using Silvercel and call office

If there is any change in drainage or trauma (pulling on the driveline, dropping the controller) start using the Silvercel immediately and call the LVAD team

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KEY POINTS TO REMEMBER

- Keep driveline secure with anchoring device at all times (unless otherwise directed)
- Dressing should be changed after patient cleanses
- Please notify LVAD team if there are any new signs of infection, such as redness, drainage or crusting.

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Era 3: Marking of the Driveline Exit Site

Exit site marking is performed in order to minimize trauma, by avoiding the belt line, as well as to facilitate self-care and application of the anchor(s):

1. Avoid skin folds.
2. Avoid belt line or clothing line.
3. Consider body habitus, sitting vs. standing.
4. Driving (driveline placement in relation to seat belt).
5. Consider potential for future weight gain.

Era 4: "No shower" policy

A. Supplies Needed:

1. Shower Bag for LVAD equipment.
2. Non-skid floor mat.
3. Occlusive dressing to cover DL site.

4. Chair.
5. Two towels (one for patient and one for shower bag).
6. Clothing.
7. Driveline dressing kit.

B. Bathing Routine (**NO SHOWER, NO TUB BATH**):

1. Gather clothing and towels that will be needed after bathing routine.
2. Ensure non-skid mat is in-place.
3. Secure LVAD gear in shower bag.

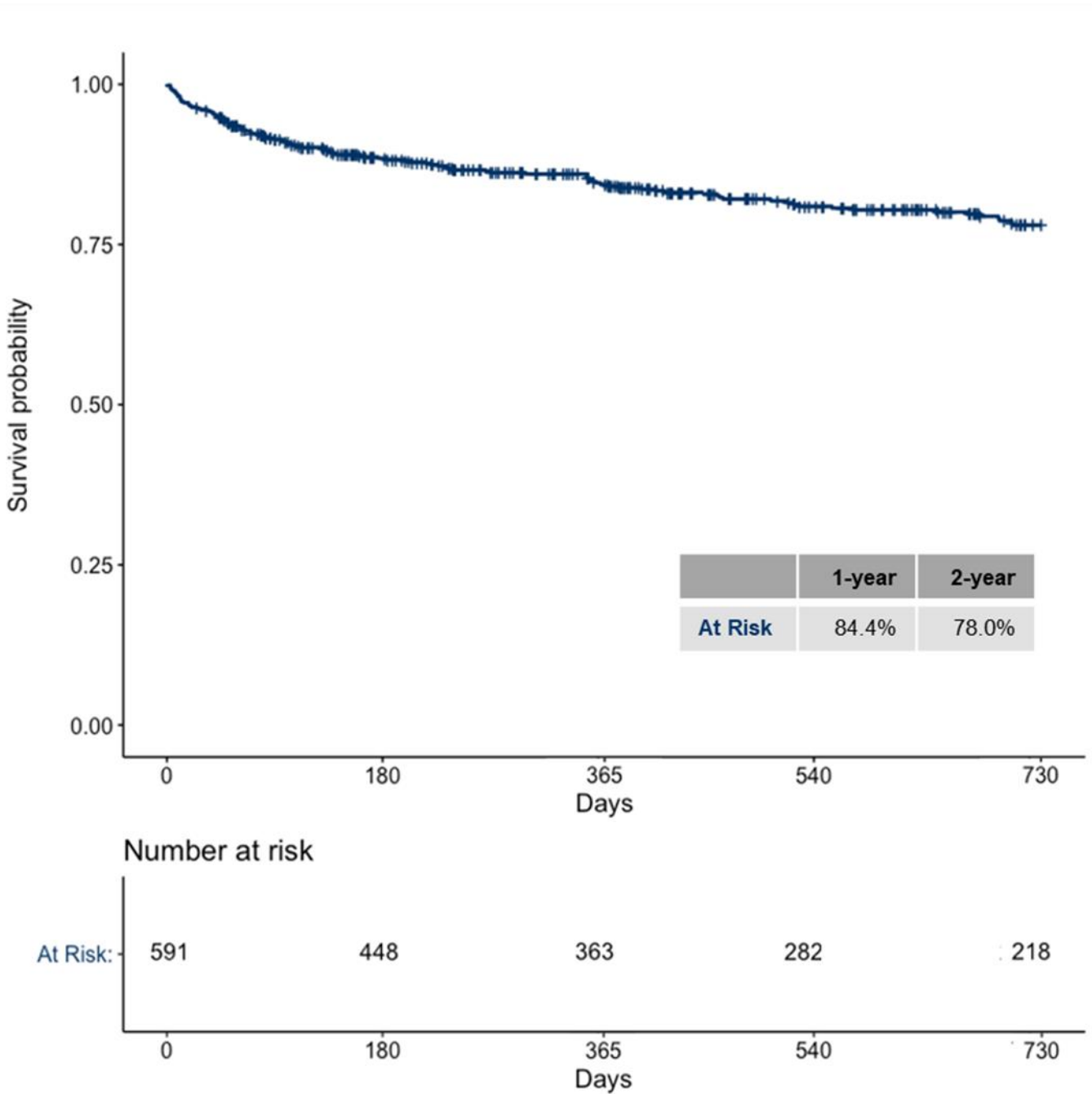


4. Secure LVAD driveline exit site dressing (& modular cable HM3) with occlusive cover.
5. Complete bathing routine using handheld shower for lower body/head and sponge baths for the torso.
6. Dry body and dry shower bag.
7. Remove controller and batteries from the protective shower bag.
8. Complete a sterile driveline dressing change.
9. Get dressed.

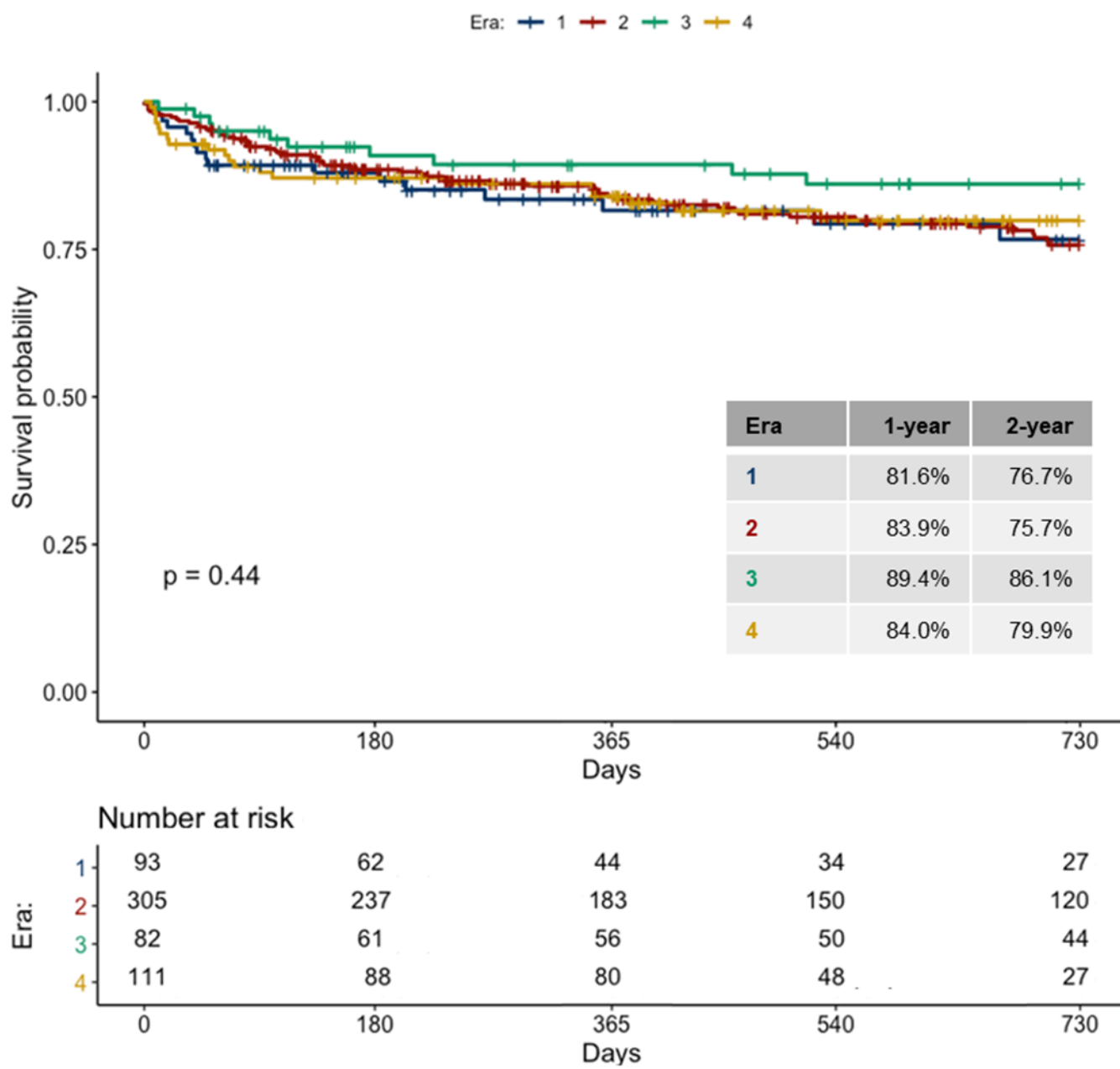
C. Key Points:

1. **Sterile driveline dressing must be changed immediately after bathing routine.**
2. Dry shower bag BEFORE opening it after use. This prevents any moisture from coming into contact with the equipment when you open the shower bag after it has been used.
3. Use a non-skid floor mat near sink so you can safely stand when bathing. Towels are not acceptable because they crease a fall risk.

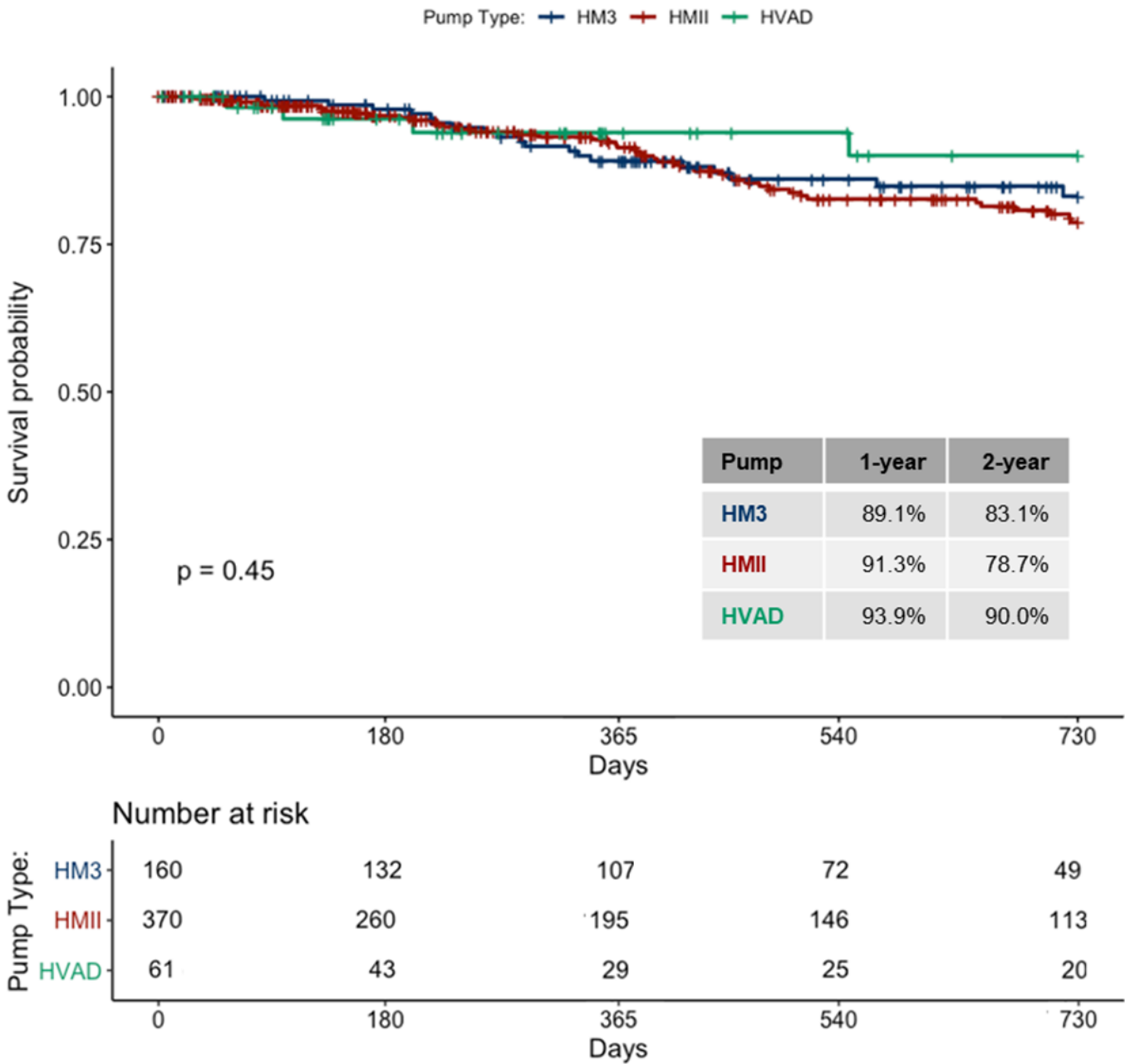
SUPPLEMENTAL FIGURES



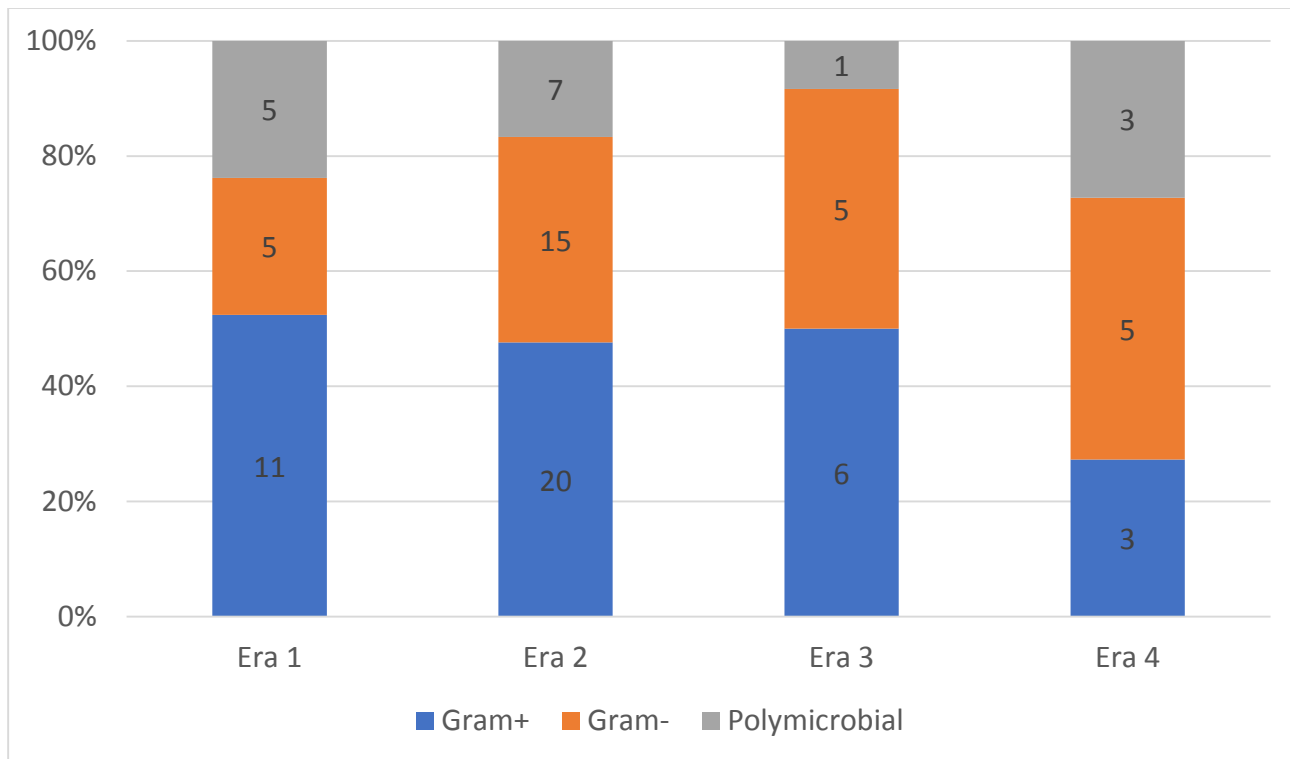
Supplemental Figure 1: Two-year survival for the overall cohort (N=591).



Supplemental Figure 2: Survival curves for the entire cohort stratified by era. (Era 1: non-standardized driveline care protocol; Era 2: standardized driveline care protocol; Era 3: Era 2 and marking of the positioning of driveline exit site; Era 4: Era 3 and “no shower” policy)



Supplemental Figure 3. Two-year freedom from driveline infection stratified by pump type (Heartmate II (HM II), Heartmate 3 (HM3), Heartware (HVAD)).



Supplemental Figure 4. Microbial Distribution Stratified by Era

Era 1: original non-standardized care; Era 2: standardized dressing protocol; Era 3: E2 and marking of the driveline exit site; Era 4: E3 and “no-shower” policy.

SUPPLEMENTAL TABLES

Supplemental Table 1. Baseline Characteristics of Patients With vs. Without DLI

	Total Cohort N=591	DLI N=87 (14.72%)	No DLI N=504 (85.28%)	p-value
Preoperative characteristics				
Age, years	55.99 ± 13.88	53.61 ± 13.21	56.40 ± 13.96	0.0833
Male, n (%)	476 (80.54)	67 (77.01)	409 (81.15)	0.4509
Race, n (%)				0.0429
White	376 (63.95)	47 (54.02)	329 (65.67)	
Black	131 (23.98)	30 (34.48)	111 (22.16)	
Other	71 (12.07)	10 (11.49)	61 (12.18)	
BMI, kg/m²	27.13 ± 5.83	26.96 ± 5.51	17.15 ± 5.89	0.7739
Etiology, Ischemic, n (%)	269 (45.52)	30 (34.48)	239 (47.42)	0.0339
HTN, n (%)	335 (56.68)	58 (66.67)	277 (54.96)	0.0551
A fib/flutter, n (%)	302 (51.10)	38 (43.68)	264 (52.38)	0.1665
Stroke, n (%)	66 (11.17)	6 (6.90)	60 (11.90)	0.2359
Dialysis, n (%)	13 (2.22)	0 (0.00)	13 (2.59)	0.2321
Smoking, n (%)	306 (52.22)	47 (55.95)	259 (51.59)	0.5338
Diabetes, n (%)	227 (38.41)	30 (34.48)	197 (39.09)	0.4864
INTERMACS Profile, n (%)				>.9999
≤2	429 (72.59)	63 (72.41)	366 (72.62)	
>2	162 (27.41)	24 (27.59)	138 (27.38)	
Treatment strategy				0.2362
BTT, n (%)	262 (44.33)	33 (37.93)	229 (45.44)	
MCS support pre-LVAD, n (%)[†]	272 (46.02)	33 (37.93)	239 (47.42)	0.1276
Laboratory data*				
Serum creatinine, mg/dL*	1.46 ± 0.73	1.44 ± 0.50	1.47 ± 0.76	0.7634
Serum albumin, g/dL*	3.58 ± 0.58	3.72 ± 0.57	3.55 ± 0.58	0.0129
Serum total bilirubin, mg/dL*	1.28 ± 1.05	1.17 ± 0.86	1.30 ± 1.08	0.3053
INR*	1.31 ± 0.33	1.35 ± 0.44	1.30 ± 0.30	0.2174
Platelet count (1000/uL)*	195.68 ± 74.57	196.11 ± 71.18	195.60 ± 75.21	0.9527
Hemoglobin, g/dL*	11.16 ± 2.17	11.44 ± 1.99	11.11 ± 2.20	0.1982
WBC (1000/uL)*	8.80 ± 3.68	8.27 ± 3.23	8.89 ± 3.75	0.1514
Intraoperative data				
Device type				0.1178
HM II, n (%)	370 (62.61)	61 (70.11)	309 (61.31)	
HM 3, n (%)	160 (27.07)	22 (25.29)	138 (27.38)	
HVAD n (%)	61 (10.31)	4 (4.60)	57 (11.31)	
Bypass time, min	102.08 ± 18.92	96.71 ± 37.69	103.01 ± 51.62	0.2770
Postoperative data				
ICU length of stay, days*	15.27 ± 18.92	12.60 ± 10.91	15.76 ± 20.02	0.1555
Total length of stay, days*	49.66 ± 37.73	43.74 ± 26.27	50.73 ± 39.37	0.1140

DLI, driveline infection; BMI, Body Mass Index; HTN, Hypertension; INTERMACS, Interagency Registry for Mechanically Assisted Circulatory Support; BTT, bridge to transplantation; MCS, Mechanical Circulatory Support; LVAD, Left ventricular assist device; INR, international normalized ratio; WBC, white blood cell count; HM, HeartMate; HVAD, Heartware ventricular assist device; ICU, intensive care unit.

*data presented as mean ± standard deviation.

[†]MCS support: includes intra-aortic balloon pump, Impella, extracorporeal membrane oxygenation (ECMO), and CentriMag biventricular assist device.

Supplemental Table 2. Baseline Characteristics of Patients With vs. Without I&D

	DLI Patients N=87	I&D N=31 (35.63%)	No I&D N=56 (64.37%)	p-value
Preoperative characteristics				
Age, years	53.61 ± 13.21	55.10 ± 12.52	52.78 ± 13.62	0.4374
Male, n (%)	67 (77.01)	23 (74.19)	44 (78.57)	0.8425
Race, n (%)				0.9502
White	47 (54.02)	17 (54.84)	30 (53.57)	
Black	30 (34.48)	10 (32.26)	20 (35.71)	
Other	10 (11.49)	4 (12.90)	6 (10.71)	
BMI, kg/m²	26.96 ± 5.51	28.6 ± 5.44	26.05 ± 5.37	0.0375
Etiology, Ischemic, n (%)	30 (34.48)	10 (32.26)	20 (35.71)	0.9288
HTN, n (%)	58 (66.67)	20 (64.52)	38 (67.86)	0.9369
A fib/flutter, n (%)	38 (43.68)	13 (41.94)	25 (44.64)	0.9855
Stroke, n (%)	6 (6.90)	2 (6.54)	4 (7.14)	>.9999
Dialysis, n (%)	0 (0.00)	0 (0.00)	0 (0.00)	-
Smoking, n (%)	47 (55.95)	19 (61.29)	28 (52.83)	0.5989
Diabetes, n (%)	30 (34.48)	16 (51.61)	14 (25.00)	0.0235
INTERMACS Profile, n (%)				>.9999
≤2	63 (72.41)	22 (70.97)	41 (73.21)	
>2	24 (27.59)	9 (29.03)	15 (26.79)	
Treatment strategy				0.2974
BTT, n (%)	33 (37.93)	9 (29.03)	24 (42.86)	
MCS support pre-LVAD, n (%)[†]	33 (37.93)	10 (32.36)	23 (41.07)	0.5614
Laboratory data*				
Serum creatinine, mg/dL*	1.44 ± 0.50	1.41 ± 0.50	1.46 ± 0.50	0.6881
Serum albumin, g/dL*	3.72 ± 0.57	3.68 ± 0.52	3.74 ± 0.60	0.6006
Serum total bilirubin, mg/dL*	1.17 ± 0.86	1.15 ± 1.03	1.19 ± 0.77	0.8208
INR*	1.35 ± 0.44	1.26 ± 0.22	1.40 ± 0.52	0.1468
Platelet count (1000/uL)*	196.11 ± 71.18	208.39 ± 91.83	189.32 ± 56.49	0.2337
Hemoglobin, g/dL*	11.44 ± 1.99	11.06 ± 2.10	11.64 ± 1.91	0.1968
WBC (1000/uL)*	8.27 ± 3.23	8.48 ± 3.22	8.16 ± 3.26	0.6645
Intraoperative data				
Device type				0.2193
HM II, n (%)	61 (70.11)	21 (67.74)	40 (71.43)	
HM 3, n (%)	22 (25.29)	10 (32.26)	12 (21.43)	
HVAD n (%)	4 (4.60)	0 (0.00)	4 (7.14)	
Bypass time, min	96.71 ± 37.69	98.74 ± 42.43	95.59 ± 35.14	0.7110
Postoperative data				
ICU length of stay, days*	12.60 ± 10.91	11.94 ± 9.10	12.98 ± 11.88	0.6721
Total length of stay, days*	43.74 ± 26.27	46.90 ± 33.87	41.96 ± 20.98	0.4057

BMI, Body Mass Index; HTN, Hypertension; INTERMACS, Interagency Registry for Mechanically Assisted Circulatory Support; BTT, bridge to transplantation; MCS, Mechanical Circulatory Support; LVAD, Left ventricular assist device; INR, international normalized ratio; WBC, white blood cell count; HM, HeartMate; HVAD, Heartware ventricular assist device; ICU, intensive care unit.

*data presented as mean ± standard deviation.

†MCS support: includes intra-aortic balloon pump, Impella, extracorporeal membrane oxygenation (ECMO), and CentriMag biventricular assist device.

Supplemental Table 3. Driveline Infections Organized by Pathogen Type

	Organisms	n (%)
Gram-positive	<i>Coagulase negative staphylococcus</i>	3(2.8)
	<i>Corynebacterium striatum</i>	1(0.9)
	<i>Diphtheroid</i>	3(2.8)
	<i>Enterococcus faecalis</i>	1(0.9)
	<i>Staphylococcus aureus, methicillin-resistant</i>	9(8.3)
	<i>Staphylococcus aureus, methicillin-sensitive</i>	31(28.4)
	<i>Staphylococcus epidermidis</i>	1(0.9)
	<i>Staphylococcus hominus</i>	1(0.9)
	<i>Staphylococcus lugdunensis</i>	1(0.9)
	<i>Viridans group Streptococcus</i>	2(1.8)
	<i>Streptococcus pyogenes</i>	1(0.9)
	<i>Streptococcus constellatus subsp.</i>	1(0.9)
		TOTAL Gram Positive
Gram-negative	<i>Acinetobacter Pittii</i>	1(0.9)
	<i>Acinetobacter baumannii complex</i>	2(1.8)
	<i>Achromobacter xylosoxidans</i>	1(0.9)
	<i>Burkholderia Cepacia complex</i>	1(0.9)
	<i>Escherichia coli</i>	2(1.8)
	<i>Enterobacter aerogenes</i>	2(1.8)
	<i>Enterobacter cloacae</i>	3(2.8)
	<i>Klebsiella oxytoca</i>	2(1.8)
	<i>Pseudomonas aeruginosa</i>	18(16.5)
	<i>Serratia liquefaciens</i>	1(0.9)
	<i>Serratia marcescens</i>	11(10.1)
	<i>Klebsiella pneumoniae</i>	6(5.5)
	<i>Stenotrophomonas maltophilia</i>	4(3.7)
	TOTAL Gram-negative	54(49.5)
	TOTAL Organisms	109

Supplemental Table 4. Driveline Infections Stratified by Pathogen Type and Era

	Organism	Era 1 n (%)	Era 2 n (%)	Era 3 n (%)	Era 4 n (%)	
Gram-positive	Coagulase negative <i>Staphylococcus</i>	3 (9.1)	0	0	0	
	<i>Corynebacterium striatum</i>	0	0	0	1 (7.1)	
	<i>Diphtheroids</i>	2 (6.1)	1 (2.0)	0	0	
	<i>Enterococcus faecalis</i>	0	1 (2.0)	0	0	
	<i>Streptococcus pyogenes</i>	1 (3.0)	0	0	0	
	<i>Staphylococcus aureus</i>, methicillin-resistant	1 (3.0)	1 (2.0)	5 (38.5)	2 (14.3)	
	<i>Staphylococcus aureus</i>, methicillin-sensitive	7 (21.2)	21 (42.9)	1 (7.7)	2 (14.3)	
	<i>Staphylococcus epidermidis</i>	1 (3.0)	0	0	0	
	<i>Staphylococcus hominus</i>	0	1 (2.0)	0	0	
	<i>Staphylococcus lugdunensis</i>	0	1 (2.0)	0	0	
	<i>Streptococcus agalactiae</i>	0	0	0	0	
	<i>Streptococcus constellatus</i> subsp <i>constellatus</i>	1 (3.0)	0	0	0	
	<i>Streptococcus dysgalactiae</i>	0	0	0	0	
	<i>Viridans group Streptococcus</i>	2 (6.1)	0	0	0	
		TOTAL gram positive	18	26	6	5
	Gram-negative	<i>Achromobacter xylosoxidans</i>	1 (3.0)	0	0	0
<i>Acinetobacter baumannii</i> complex		0	0	0	2 (14.3)	
<i>Acinetobacter Pittii</i>		0	0	1 (7.7)	0	
<i>Burkholderia Cepacia</i> complex		0	0	0	1 (7.1)	
<i>Enterobacter aerogenes</i>		1 (3.0)	1 (2.0)	0	0	
<i>Enterobacter cloacae</i>		2 (6.1)	1 (2.0)	0	0	
<i>Escherichia coli</i>		1 (3.0)	1 (2.0)	0	0	
<i>Klebsiella oxytoca</i>		1 (3.0)	1 (2.0)	0	0	
<i>klebsiella pneumoniae</i>		3 (9.1)	2 (4.1)	1 (7.7)	0	
<i>Pseudomonas aeruginosa</i>		1 (3.0)	11 (22.5)	1 (7.7)	5 (35.7)	
<i>Serratia marcescens</i>		3 (9.1)	6 (12.2)	2 (15.4)	0	
<i>Stenotrophomonas</i> <i>maltophilia</i>		2 (6.1)	0	1 (7.7)	1 (7.1)	
		TOTAL Gram negative	15	23	7	9
		TOTAL Organisms	33	49	13	14

Supplemental Table 5. Causes of Death Among Patients with DLI (N=27)

Cause of Death	N
brain - intracranial hemorrhage	4
cardiopulmonary - heart failure	2
cardiopulmonary - RV failure	2
cardiopulmonary - ventricular arrhythmia, RV failure	1
device related - device thrombosis	3
device related - pump failure	2
elective LVAD deactivation	1
infection	6
infection; bleeding	1
infection; other - multiorgan failure	1
other - multiorgan failure	1
other – unknown	3
TOTAL	27

Supplemental Table 6: Baseline Characteristics of Patients On vs Not On CAS

	DLI Patients N=83**	CAS N=57 (68.67%)	No CAS N=26 (31.33%)	p-value
Preoperative characteristics				
Age, years	53.15 ± 13.31	51.24 ± 13.58	57.33 ± 11.92	0.0525
Male, n (%)	64 (77.11)	43 (75.44)	21 (80.77)	0.7991
Race, n (%)				0.4329
White	44 (53.01)	29 (50.88)	15 (57.69)	
Black	30 (36.14)	23 (40.35)	7 (26.92)	
Other	9 (10.84)	5 (8.77)	4 (15.38)	
BMI, kg/m ²	26.90 ± 5.61	27.75 ± 5.23	25.01 ± 6.05	0.0384
Etiology, Ischemic, n (%)	28 (33.73)	19 (33.33)	9 (34.62)	>.9999
HTN, n (%)	56 (67.47)	37 (64.91)	19 (73.08)	0.6285
A fib/flutter, n (%)	35 (42.17)	21 (36.84)	14 (53.85)	0.2242
Stroke, n (%)	6 (7.23)	4 (7.02)	2 (7.69)	0.9068
Dialysis, n (%)	0 (0.00)	0 (0.00)	0 (0.00)	-
Smoking, n (%)	46 (57.50)	26 (48.15)	20 (76.92)	0.0280
Diabetes, n (%)	30 (36.14)	21 (36.84)	9 (34.62)	>.9999
INTERMACS Profile, n (%)				0.1527
≤2	60 (72.29)	38 (66.67)	22 (84.62)	
>2	23 (27.71)	19 (33.33)	4 (15.38)	
Treatment strategy BTT, n (%)	29 (34.94)	22 (38.60)	7 (26.92)	0.4316
MCS support pre-LVAD, n (%) [†]	32 (38.55)	19 (33.33)	13 (50.00)	0.2287
Laboratory data*				
Serum creatinine, mg/dL*	1.45 ± 0.50	1.40 ± 0.50	1.54 ± 0.51	0.2546
Serum albumin, g/dL*	3.74 ± 0.55	3.76 ± 0.57	3.69 ± 0.49	0.5968
Serum total bilirubin, mg/dL*	1.16 ± 0.87	1.19 ± 0.99	1.11 ± 0.54	0.7205
INR*	1.35 ± 0.45	1.37 ± 0.50	1.30 ± 0.33	0.4975
Platelet count (1000/uL)*	195.54 ± 71.68	209.54 ± 74.68	164.85 ± 54.12	0.0076
Hemoglobin, g/dL*	11.45 ± 1.98	11.57 ± 2.16	11.18 ± 1.53	0.4057
WBC (1000/uL)*	8.13 ± 2.74	8.49 ± 2.85	7.36 ± 2.33	0.0823
Intraoperative data				
Device type				0.5513
HM II, n (%)	58 (69.88)	38 (66.67)	20 (76.92)	
HM 3, n (%)	22 (26.51)	16 (28.07)	6 (23.08)	
HVAD n (%)	3 (3.61)	3 (5.26)	0 (0.00)	
Bypass time, min	95.54 ± 37.22	97.89 ± 38.19	90.38 ± 35.17	0.3972
Postoperative data				
ICU length of stay, days*	12.78 ± 11.14	13.41 ± 12.12	11.42 ± 8.71	0.4554
Total length of stay, days*	43.41 ± 26.31	45.39 ± 29.60	39.15 ± 16.92	0.3206
Time to DLI, days*	520.54 ± 420.81	445.25 ± 331.51	685.62 ± 541.64	0.0149
Microorganisms[#]				
Pseudomonas, n (%)	18 (21.69)	15 (26.32)	3 (11.54)	0.2194
MSSA, n (%)	28 (33.73)	21 (36.84)	7 (26.92)	0.5246
MRSA, n (%)	9 (10.84)	7 (12.28)	2 (7.69)	0.7130
Other, n (%)	31 (37.35)	17 (29.82)	14 (53.85)	0.0638
Data on IV antibiotic treatment for DLI prior to CAS				
IV antibiotic recipient, n (%)	31(37.34)	23(40.35)	8(30.76)	0.4691

Length of IV antibiotic usage, days*	14.13 ± 11.50	15.57 ± 12.47	10.00 ± 7.19	0.2447
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**Four DLI patients were excluded due to early OHT, death, or device exchange. DLI, driveline infection; CAS, chronic antibiotic suppression antibiotics; BMI, Body Mass Index; HTN, Hypertension; INTERMACS, Interagency Registry for Mechanically Assisted Circulatory Support; BTT, bridge to transplantation; MCS, Mechanical Circulatory Support; LVAD, Left ventricular assist device; INR, international normalized ratio; WBC, white blood cell count; HM, HeartMate; HVAD, Heartware ventricular assist device; ICU, intensive care unit.

*data presented as mean ± standard deviation.

**Four DLI patients were excluded due to early OHT, death, or device exchange.

†MCS support: includes intra-aortic balloon pump, Impella, extracorporeal membrane oxygenation (ECMO), and CentriMag biventricular assist device.

#n (%) accounted for polymicrobial infections (i.e. one patient may have ≥ 1 microorganism).