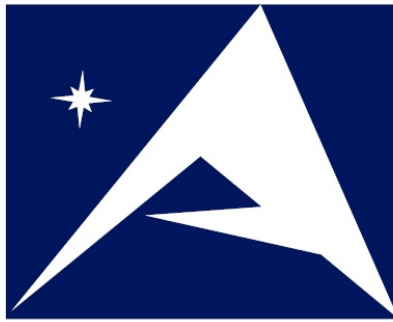


Alcor A-3627

Case Report

ALCOR



LIFE EXTENSION FOUNDATION
The World's Leader in Cryonics

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Table of Contents

1. Summary	3
2. Patient Assessment.....	3
3. Deployment.....	3
4. Patient Transport.....	4
5. Cooling to Liquid Nitrogen Temperature	4
6. Timeline and Time Summaries	5
7. Discussion	6
8. Cryoprotection and Temperature Graphs.....	6
9. CT Scans	6

1. Summary

Information was derived from multiple sources and was all converted to Mountain Standard Time (MST). For de-identification, dates are not shown. T-0 represents the date of cardiac arrest, T-X represents occurrences before T-0, and T+X represents occurrences following T-0.

A-3627 was an 86-year-old member with neuro cryopreservation arrangements who was a last-minute, third-party sign-up. The patient had suffered from end-stage chronic obstructive pulmonary disease (COPD), which was the cause of death shown on the death certificate. Alcor was notified on T+2 days about the death. Cardiac arrest was estimated to be at 16:35 hrs on T-0 days and the member was pronounced legally deceased in Nevada at 16:37 hrs on T-0 days in 2023. This was a cryopreservation without cryoprotection (a straight freeze procedure).

After retrieval, the patient was transported to Alcor for cryogenic cooldown. The patient arrived at Alcor on T+13 days at 11:47 hrs on dry ice. The cryogenic cooldown was initiated on T+14 days at 19:18 hrs and terminated on T+20 days at 12:56 hrs. The patient was transferred to long-term care at liquid nitrogen temperature on T+90 days at 14:43 hrs.

2. Patient Assessment

T+3 days

This post-mortem patient happened to be in Las Vegas when Alcor's Medical Response Director (MRD), Director of Development (DOD), and three members of the DART Team were already deployed there on standby for another member. A family member of this patient contacted Alcor at 19:00 hrs to negotiate third-party arrangements. Because the patient had died three days prior to Alcor being contacted, this would be a cryopreservation without cryoprotection, a straight-freeze procedure.

Per the death certificate the patient was pronounced legally deceased at 16:37 hrs on T-0 days and the family told Alcor that the patient had gone into cardiac arrest at 16:35 hrs.

3. Deployment

The Alcor Board of Directors approved this last minute, third-party, neuro cryopreservation sign-up. The Alcor team obtained dry ice while enroute to the funeral home and packed the patient in dry ice while Alcor contracts were signed, and funding received by Alcor. At 20:18 hrs, while enroute, the funeral director was contacted to gain access to patient, which was denied.

The Alcor Team dropped off 40 lbs. dry ice at the funeral home at 21:10 hrs, and because the team was not allowed access to the patient, instructed the funeral home staff on how to pack the member in the dry ice. The patient was packed with dry ice by the funeral home personnel starting at approximately 21:13 hrs. Proper packing was verified with photographs. The team left the funeral home at approximately 22:00 hrs.

T+4 days

At 08:19 hrs the legal paperwork had been signed and at 11:27 hrs Alcor had received the funding.

Three of the Team members delivered 50 lbs. of dry ice to the funeral home staff at 17:00 hrs to ensure the dry ice supply was sufficient for the patient to stay at dry ice temperature. The funeral home staff agreed to check the dry ice every four hours and add more dry ice as needed. The funeral home personnel were very cooperative.

T+5 days

The Alcor Team arrived at the funeral home at approximately 11:15 hrs to perform the cephalic isolation. The cephalic isolation was started at 11:45 hrs and completed at 12:35 hrs.

The cephalon was placed in a Styrofoam cooler at 12:55 hrs, and then placed inside a Yeti ice cooler. Both coolers were packed with dry ice (30 lbs. inside the Styrofoam cooler and approximately 100 lbs. of dry ice surrounding the Yeti cooler. The dry ice was checked approximately every 12 hours and replenished with 25-50 lbs. of dry ice as needed. The cooler combination was stored in the Alcor mobile operating vehicle (MOV) until the standby for A-3328 was concluded and both patients could be transported to Alcor together.

4. Patient Transport

T+13 days

The MOV with the patient left Nevada at 06:58 hrs and arrived at Alcor at 11:47 hrs still packed in dry ice. Since this patient had been packed in dry ice for several days, it is assumed that dry ice temperature (-80°C) had been reached. Because this was a straight freeze, there were no thermocouple probes measuring temperature.

5. Cooling to Liquid Nitrogen Temperature

T+14 days

Computer controlled cryogenic cooldown was initiated at 19:18 hrs, plunging to -80°C to match the patient temperature, and descending thereafter at -1°C/hour to liquid nitrogen temperature. On T+20 days at 12:56 hrs, an uneventful cooldown was terminated. On T+90 days the patient was transferred to long-term care at liquid nitrogen temperature.

6. Timeline and Time Summaries

Timeline

T-0	16:35	Estimated Time of cardiac arrest
T-0	16:37	Time of Pronouncement of legal death
T+3	19:00	Alcor notified
T+3	21:10	Start of dry ice cooling at funeral home
T+4	21:10	Dry ice temperature achieved (estimated at 24 hrs)
T+5	11:45	Cephalic isolation started
T+5	12:35	Cephalic isolation completed
T+13	06:58	Start of patient transport from remote location
T+13	11:47	Arrival of patient at Alcor
T+14	19:18	Start of patient cryogenic cooldown from -80°C to -196°C
T+20	12:56	End of cooldown to LN2
T+90	14:43	Transfer of patient to long-term care at LN2 temperature

Time Summaries

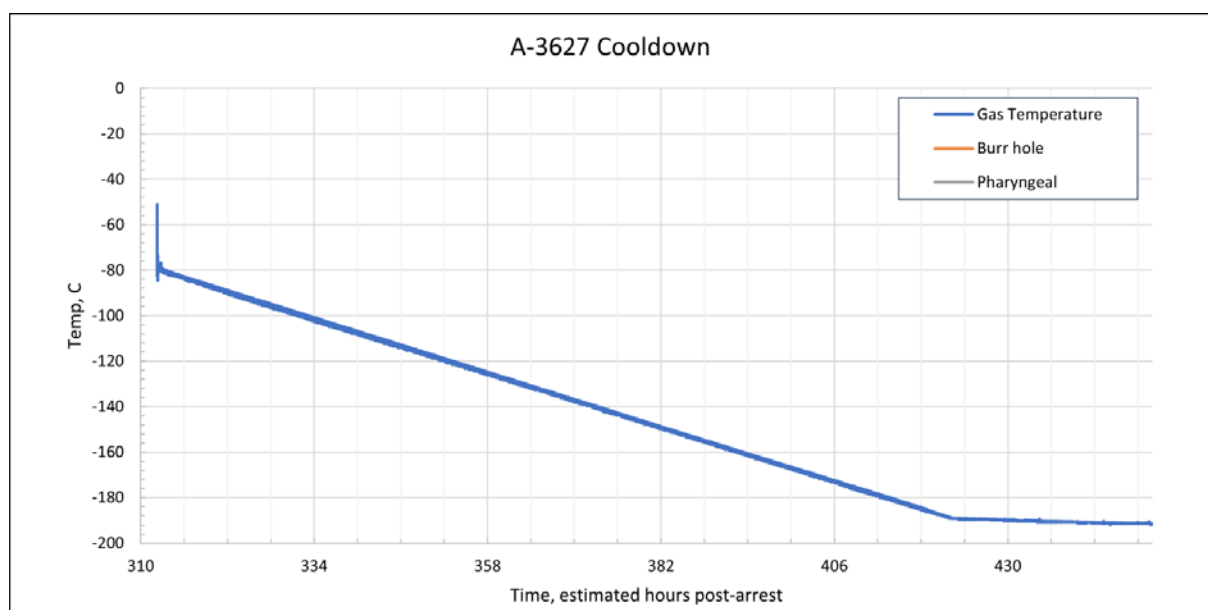
Event Duration hr:min		days	time	
Patient Recovery				
00:02	From:	T-0	16:35	Estimated Time of cardiac arrest
	Till:	T-0	16:37	Time of Pronouncement of legal death
74:25	From:	T-0	16:35	Estimated Time of cardiac arrest
	Till:	T+3	19:00	Alcor notified
100:35	From:	T-0	16:35	Estimated Time of cardiac arrest
	Till:	T+4	21:10	Dry ice temperature achieved (estimated at 24 hrs)
115:10	From:	T-0	16:35	Estimated Time of cardiac arrest
	Till:	T+5	11:45	Cephalic isolation started
00:50	From:	T+5	11:45	Cephalic isolation started
	Till:	T+5	12:35	Cephalic isolation completed
307:12	From:	T-0	16:35	Estimated Time of cardiac arrest
	Till:	T+13	11:47	Arrival of patient at Alcor
31:31	From:	T+13	11:47	Arrival of patient at Alcor
	Till:	T+14	19:18	Start of patient cryogenic cooldown from -80°C to -196°C
338:43	From:	T-0	16:35	Estimated Time of cardiac arrest
	Till:	T+14	19:18	Start of patient cryogenic cooldown from -80°C to -196°C

7. Discussion

Alcor personnel were not allowed in the back of the funeral home to place the member on dry ice. However, the funeral home personnel were very cooperative, and it was felt that they did everything that was asked of them.

The cephalic isolation was delayed two days because the funeral home was closed on the weekends, and the team was not allowed on site. Because the patient was covered with dry ice, this did not affect the patient adversely.

8. Cryoprotection and Temperature Graphs



9. CT Scans

Cryoprotectant Distribution (Post-cryopreservation CT scan)

Because this was a cryopreservation without cryoprotection, no post-cryopreservation CT scans were obtained.