AN INTRODUCTION TO CRYOPRESERVATION

Headquartered in the heart of Europe, Berlin, our mission is simple yet profound: to help people choose how long they want to live.

Discover who, how, when, why.

WORLD-LEADING HUMAN CRYOPRESERVATION,
Safely made in Europe

What is “cryonics” or “Biostasis”?

Cryonics, also called Biostasis or cryopreservation, is an experimental procedure in cases where current medical technology can not save a patient, e.g., terminal cancer. This procedure offers the opportunity to preserve the patient after legal death for the chance that future, advanced medical technology allows resuscitation and the continuation of the patient’s life.

At the time of legal pronouncement, a specialized cryopreservation team cools down the body as quickly as possible, supports the brain with oxygen, and replaces the blood and water in the body with a so-called cryoprotective agent to allow further cooling without freezing. The body is then placed in a long-term storage dewar at -196°C in liquid nitrogen at our cryopreservation facility in Switzerland. There is no degradation or aging, and once/if future technology advances enough, it might be possible to revive the patient.

Important: Cryopreservation is not a guarantee by any means. We can not yet say when of even if revival from cryostasis will be possible in the future. The only strong statement we are able and willing to make is that the probability is higher that with the alternatives, i.e., burial or cremation. Extensive informed consent is required before cryopreservation should or can be chosen.

Who we are

Tomorrow.bio was founded in 2020 by Dr. Emil F. Kendziorra (a medical doctor) and Fernando Pinheiro (an engineer), and is the globally leading cryopreservation provider. Headquartered in the heart of Europe, Berlin, our mission is simple yet profound: to help people choose how long they want to live. Our vision is that this choice should not depend on where someone lives, their background, or financial resources.

WHY CHOOSE CRYONICS?

A legacy of hope

More and more people are unwilling to accept death from causes that might be solved when technology and medicine advances. Cryonics is the best hope for life extension in the future.

Avoid death from preventable causes

Today's incurable disease might be curable in the future. Human cryopreservation is your best chance for a revival and cure once medicine has sufficiently advanced.

Benefit from science

As scientists have gained a greater understanding of biology, it has become clear that diseases and aging are not inevitabilities but problems that science can solve. Cryopreservation is for those who are excited to be a part of the future and live extended lives.

Live without a time constraint

Of all the possible careers, hobbies, cultures, and lifestyles that exist, there are very few that can be explored in an 80-year life span. Which activities have you given up exploring because you didn't feel there was enough time?

See the world of the future

Some of our members are simply curious to see the world of the future. What wonders will be brought on by great advancements in fields like space travel, robotics, and consciousness?

What is death?

Death doesn't occur at the snap of a finger, it is a process. Modern civilization and medical advancements have made it increasingly routine to distinguish between legal, medical, and biological definitions of death, which evolve as our knowledge progresses. Advancements like CPR led to the observation that what was once considered irreversible was, in fact, just a scientific discovery yet to be made. Now, death is viewed as a multi-stage process with many routes for intervention and treatment. This evolution caused cryonicists to develop the "information-theoretic" understanding of death:

IT'S NOT FREEZING!

Why Biostasis is a technically plausible future

What Biostasis does - and why it's not "freezing" people

When organic matter is kept extremely cold, it can be preserved for very, very long periods of time. But there's a problem with freezing an organism normally: Its cellular structure becomes vulnerable to severe damage through the formation of ice crystals inside the cells, leading to the potential destruction of the entire organism. We don't freeze people, even though we keep them at incredibly low temperatures. Instead, we keep them preserved using a procedure called vitrification.

Short scientific argument for Biostasis

Biostasis is based on the premise that there are no known biological laws or principles that fundamentally prevent the successful long-term preservation and eventual revival of human beings at cryogenic temperatures. Scientifically, cellular degradation and irreversible damage after death occur primarily due to biochemical processes, enzyme activity, and microbial decay. Rapid cooling and administration of cryoprotectants effectively halt these destructive biochemical and metabolical activities.

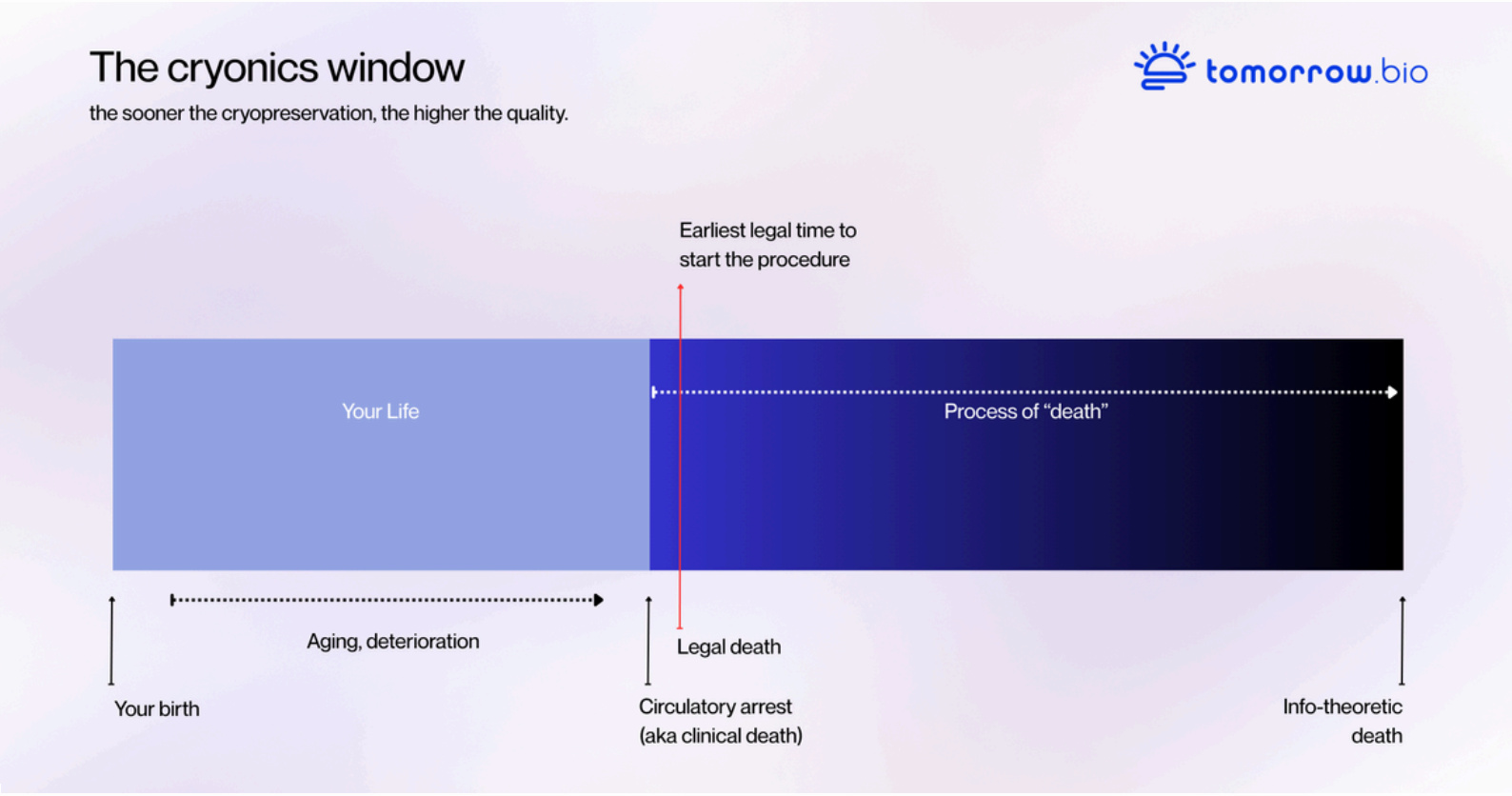
Advancements in medical and biological sciences consistently demonstrate improved understanding and manipulation of cellular function, repair mechanisms, and revival of tissue viability following extreme preservation conditions (Humans have been doing this for decades, for instance, through the cryopreservation of sperm, human eggs and embryos). Modern vitrification methods have already demonstrated successful preservation and recovery of tissues and small biological systems. Therefore, with ongoing technological advancement, there is strong scientific rationale supporting the feasibility of biostasis.

Historically, medical interventions once deemed impossible have become routine practice due to technological and scientific advancements. For instance, several decades ago, the concept of heart transplantation was regarded with skepticism, perceived as medically improbable or simply impossible. Today, heart transplants, as well as transplantation of other vital organs, are standard, widely accepted medical procedures that save thousands of lives annually. Similarly, while biostasis may currently face skepticism, it stands upon a scientifically plausible foundation. The barriers are primarily technical rather than biological, suggesting that with sufficient progress in nanotechnology, molecular repair, and regenerative medicine, revival from cryopreservation may eventually become not only possible but routine.

A broad body of experimentation supports cryonics on a theoretical basis. There is no indication that it is scientifically impossible to resuscitate someone from preservation. Rather, science has just not advanced yet. This is why Tomorrow Biostasis and the EBF both lead and invest in the forefront of research, testing, and engineering to accelerate progress.

TIMING IS EVERYTHING

Why early cryopreservation matters most



The graph above demonstrates these nuances further, and, combined with the quote, demonstrate the logic used by cryonicists to preserve the structure of the body - even though someone has already been declared dead.

Clinical death, or the cessation of blood circulation and breathing, is the first step. It is potentially reversible by CPR. It is considered "the first step" - at this point, no neurological or physiological decay is present, and the body's cellular tissue is still in a state of general functionality. Then comes legal and biological death - the time after which the body may still have some biological functions, but has endured a (currently) irreversible cessation of either circulatory and respiratory functions or all functions of the entire brain. Note that even a century ago, what is now understood as reversible would have then had the same label. The patient is then declared "legally" dead, and this is ideally the point at which SST Teams intervene to preserve the patient.

> *"A person is dead...if their memories, personality, hopes, dreams, etc. have been destroyed...That is, if the structures in the brain that encode memory and personality have been so disrupted...that it is no longer possible in principle to restore them to an appropriate functional state. If the structures that encode memory and personality are sufficiently intact...and restoration to an appropriate functional state is likewise feasible...then the person is not dead."*
>
> - Merkle 89

THE CORE OF OUR COMPANY

The SST procedure

How does it work?

Tomorrow.bio is specialized in **field cryoprotection**, initiating cryopreservation immediately after legal death, before significant cellular degradation occurs. The process begins directly in one of our specialized ambulances (mobile operating rooms), with an open-chest procedure performed onsite. During this procedure, the patient's aorta is cannulated and perfused with cryoprotectant agents (medical-grade antifreeze solutions) to protect tissues from ice crystal damage during cooling.

After reaching the right concentration of cryoprotectant in the cells, we rapidly cool the patient's body to approximately -80°C, a temperature at which biological degradation is effectively halted. The patient is then transported to our long-term storage facility in Switzerland, the non-profit European Biostasis Foundation (EBF).

Once at our facility, we initiate a computer-monitored cooling process over several days, slowly bringing the patient's temperature from -80°C to -196°C. At temperatures below -130°C, the patient's tissues transition into a stable, glass-like vitrified state, effectively preventing ice formation and further cellular degradation. Once the patient's body temperature reaches -196°C, the patient is then securely placed into a Dewar containing liquid nitrogen, maintaining a stable cryogenic temperature of approximately -196°C indefinitely.

INSIDE THE DEWAR

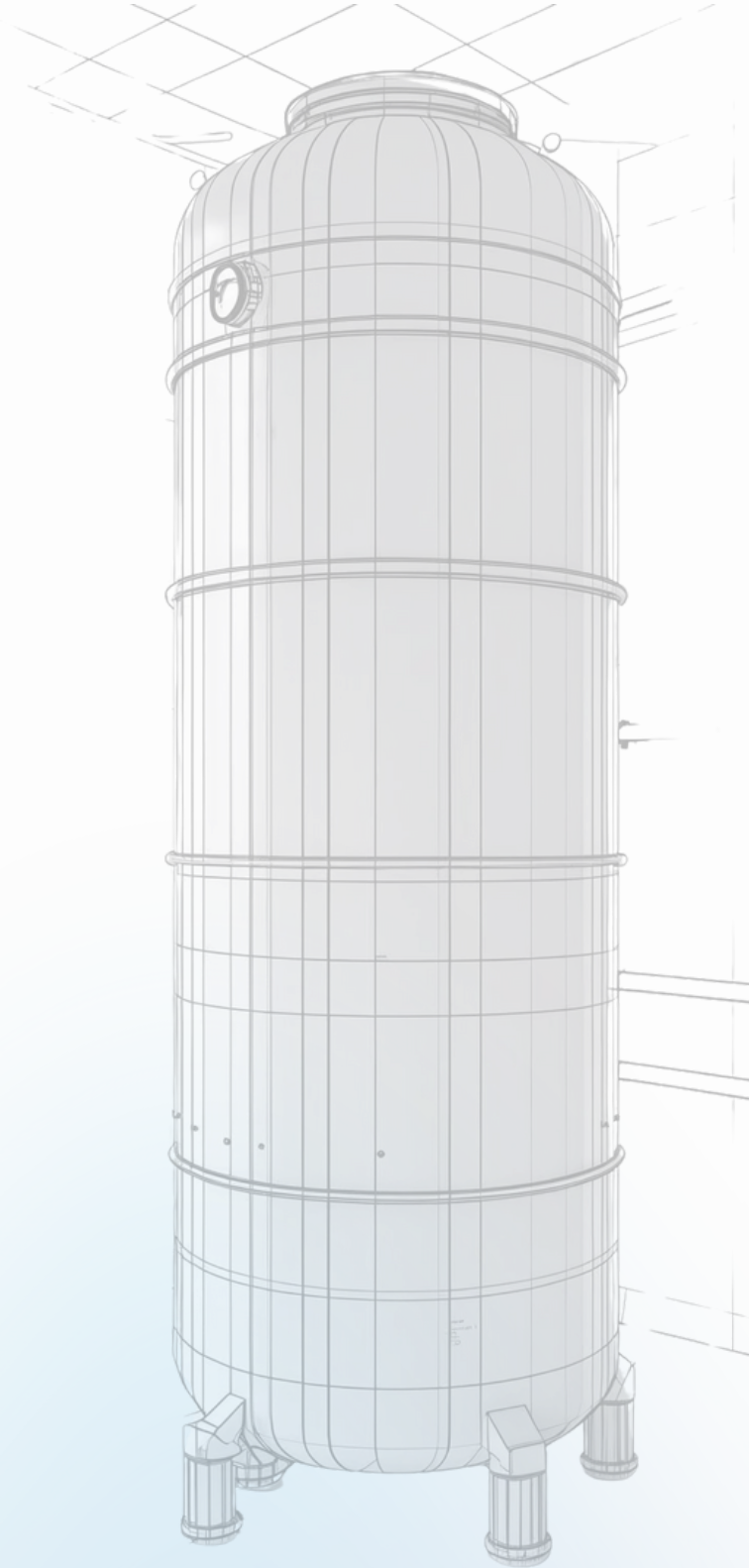
How patients are stored and preserved

What is a cryogenic storage Dewar?

When organic matter is kept extremely cold, it can be preserved for very, very long periods of time. But there's a problem with freezing an organism normally: Its cellular structure becomes vulnerable to severe damage through the formation of ice crystals inside the cells, leading to the potential destruction of the entire organism. We don't freeze people, even though we keep them at incredibly low temperatures. Instead, we keep them preserved using a procedure called vitrification. Cryopreserved patients are stored in specialized cryogenic storage dewars, which are more like advanced thermoses than freezers. These vacuum-insulated containers use liquid nitrogen to maintain ultra-low temperatures without the need for electricity, minimizing heat transfer to preserve biological material.

Cryogenic dewars are designed to safely store cell cultures, tissues, and even cryopreserved patients, either whole-body or brain-only.

Made from durable stainless steel, each dewar can hold up to 4 patients and 10 brains and requires regular refilling with liquid nitrogen to compensate for inevitable losses due to evaporation. This system is both efficient and cost-effective, ensuring patients are securely preserved for as long as needed until potential revival becomes possible in the future.



When will I be revived?

Given that the revival of cryopreserved patients requires significant scientific advancement, it's not possible to say if and when revival will be possible. However, there is no fundamental biological reason why revival is not possible. And the good news is that there is no time limit to how long you can be cryopreserved without degradation!

MORE THAN A SERVICE:

A mission to redefine the future

A commitment to high-quality service and transparency.

Cryopreservation is a complex process, and we believe transparency is essential. Every step of our operations is open and accessible, ensuring our members and their families fully understand the service they are investing in. This commitment extends across our partnerships, research efforts, and the care we provide to each patient.

A global reach with local quality standards.

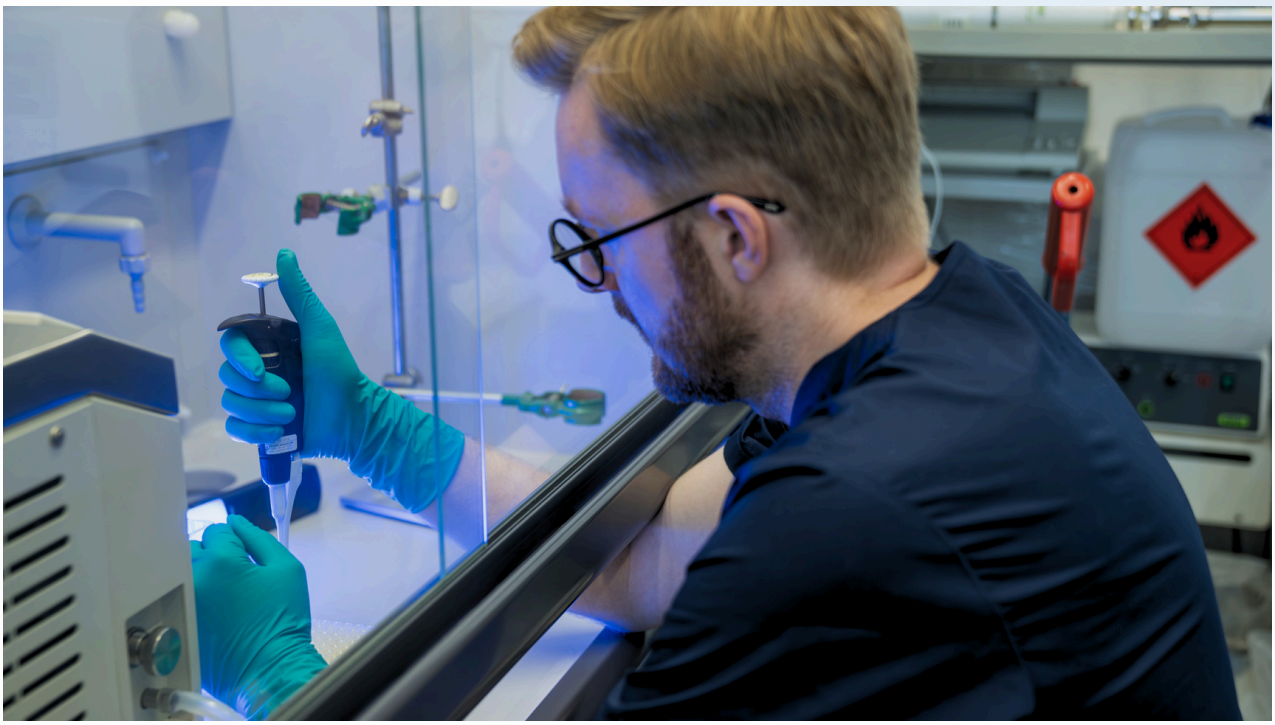
In July 2024, Tomorrow.bio expanded operations to the US, bringing the same rigorous German and Swiss quality standards that have earned us a reputation for excellence in Europe. No matter where our members are located or traveling, we ensure they are covered by the highest standards in cryopreservation services.

Our research focus.

Our research efforts are aimed at continuously improving the quality and outcomes of cryopreservation. We develop engineering solutions for immediate improvements in preservation cases and conduct long-term research to advance biostasis science and cryonics for future generations.

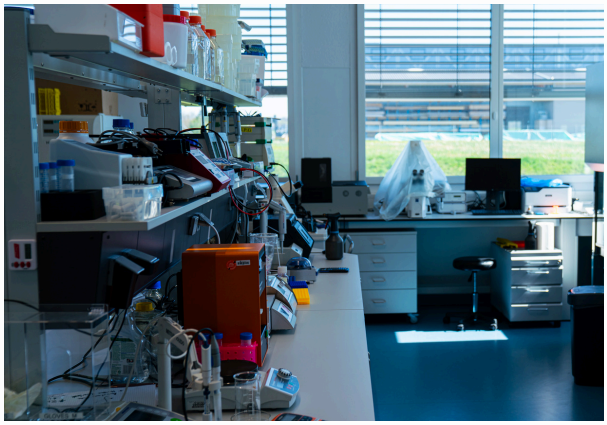
Storage and security.

Our patients are stored in state-of-the-art facilities at the European Biostasis Foundation (EBF) in Switzerland. This underground facility is run by EBF, a non-profit organization that works in partnership with Tomorrow.bio to ensure high-quality, secure, and ethically managed cryopreservation services.



BUILT FOR PEACE OF MIND

Long-term cryopreservation in Switzerland



Tomorrow.bio stores its patients at the European Biostasis Foundation's underground facility in Switzerland. This facility was specially designed for long-term stability and security: Switzerland is Europe's most stable country, politically, financially, and socially. It's extremely safe, with no natural disasters.

Mission integrity

Operating as a non-profit in Switzerland means that any changes to the mission of an organization are incredibly difficult, if not impossible. This legal framework ensures that EBF remains committed to its purpose, providing long-term security for its goals.

Environmental security

Geographically, Switzerland is one of the safest countries in the world, with minimal risk of natural disasters. This contributes to the country's stability, ensuring a secure environment.

DRIVEN BY SCIENCE,
Guided by purpose

Meet the founders

Tomorrow.bio was founded by Dr. Emil F. Kendziorra and Fernando Azevedo Pinheiro. Dr. Kendziorra, a medical doctor and former cancer researcher, transitioned to the field of biostasis after realizing that traditional longevity science wasn't advancing fast enough to solve the challenges of life extension.

Fernando Pinheiro, an industrial and civil engineer with extensive experience as a tech entrepreneur, brought his expertise in large-scale operations and innovation to Tomorrow.bio. Together, they have built a company focused on scientific excellence and personalized service, ready to guide you toward a future filled with possibilities.

"We are making a bet on future technologies. I don't want anyone to choose cryopreservation if they are not fully aware of the uncertainties involved."

- Dr. Emil Kendziorra

Statistics

Our numbers speak for themselves: More and more people are becoming Tomorrow.bio members every day.

1000+
members

200+
cities

45+
countries

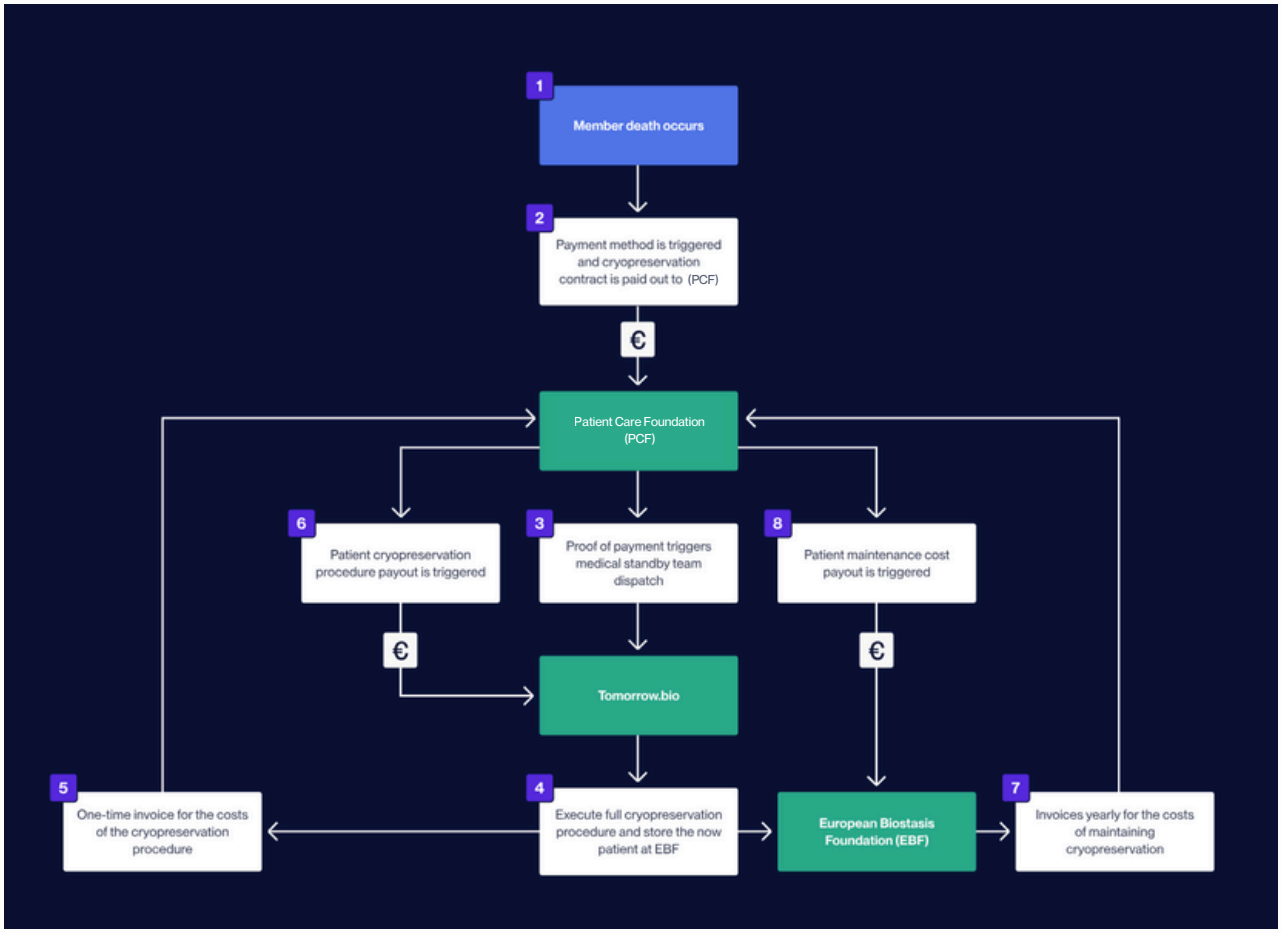
20+
cryopreserved patients

10+
cryopreserved pets

OUR ORGANIZATIONAL STRUCTURE

Designed for stability, transparency, and growth

Tomorrow Biostasis GmbH is a German cryopreservation provider offering medical teams for standby and preservation, managing patient contracts, and ensuring A to Z high-quality services, while the **Patient Care Foundation** (PCF), a Swiss private benefit organization, safeguards patients' bodies and funds, ensures secure long-term cryopreservation, and oversees the activities of the **European Biostasis Foundation** (EBF), a Swiss non-profit dedicated to managing the underground storage facility for cryopreserved patients and advancing biostasis research.



And why this structure?

To provide the best cryopreservation service, both growth and stability are important. Growth is important because it will allow us to significantly decrease the cost of cryopreservation in the long run, invest in important cryopreservation research, and make the overall field more stable.

For the security of our cryopreserved patients, long-term care must be done with non-profit organizations that are specifically optimized for maximum stability and security. This is why cryopreservation maintenance is handled by the PCF and EBF. The division of responsibilities between these three organizations allows our members to benefit from the effects of growth without any compromise in long-term stability.

HOW MUCH DOES CRYOPRESERVATION COST?

Different options for different needs

Our pricing is designed to offer value, flexibility, and savings to all our members and is made up of two types of fees: the **Membership Fee** and the **Standby & Storage Fee**.

Membership fee

Pays for the ongoing operation of Tomorrow.bio and ensures 24/7 availability of our medical teams, as well as the essential equipment.

You pay it until you are cryopreserved.

Covers:

- 24/7 readiness of our standby teams.
- Medical equipment (ambulances, heart-lung machine, etc.) and training in the latest cryoprotection procedures.
- Ongoing staff instruction and business costs.
- Continuous customer support.
- Furthering the mission and research of Tomorrow.bio and cryonics in general.

Monthly plan

Pays as you go: The monthly plan allows you to pay for the membership in instalments.

€50/month

Yearly plan

The yearly plan gives you two months for free and unlocks a 5% discount on insurance quotes from our european insurance partner.

€500/year

Lifetime plan

The lifetime plan locks in your membership with one-time payment, meaning you never need to worry about additional payments.

€9.999/one-time fee*

*€15.000 from 01.02.2026

+

Standby & Storage

Paid at the time of death, it pays for the cost of the preservation process, the transport and indefinite storage in our Swiss facility.

For members, the cost is €200,000 for whole-body or €75,000 for brain-only.

Covers:

- Dispatch of medical teams to the patient's location at the event of death.
- Full cryopreservation procedure.
- Indefinite patient storage at our Swiss facility.
- Future revival, once available.

PLANNING FOR THE FUTURE

Funding options

Non-members pricing

For anyone deciding on cryopreservation at the last minute without being a Tomorrow.bio member, we have introduced special prices to cover last-minute legal fees, stand-by teams, and procurement of cryoprotectants.

- Whole-body €230.000
- Brain-only €115.000

How do people fund the cryopreservation fee?

The cryopreservation can be funded through various methods: in most cases we recommend the term life insurance, a risk insurance that provides immediate and full coverage for the €200,000.00 or €75,000.00 needed.

Most of our members will live past the end of their term life insurance, so they will need to provide a funding method that can take over once the term ends: Extend the term life insurance, fund the Transport & Storage directly, a last will and testament or whole life insurance and many more.

Get your price in under a minute

You can use our calculator to figure out the expected cost of your cryopreservation plan including membership and life insurance. Get your personalized quote by clicking HERE.

WE'RE OFTEN ASKED...

- **What happens to cryopreserved patients if Tomorrow.bio ceases its operations?**

Tomorrow's cryopreserved patients are stored at the European Biostasis Foundation (EBF) in Switzerland. EBF is a non-profit organization with complete financial independence. The funds to keep patients cryopreserved are managed by the Patient Care Foundation, a private benefit organization. This means that cryopreserved patients would not be affected if Tomorrow ever ceased its operations.

- **When will revival be possible? How likely is it that revival will work?**

It is unfortunately not possible to answer either of those two questions definitively. Revival depends on significant advances in medical technology that can not be predicted. The only strong statement that we are able and willing to make is that the probability is higher that with the alternatives, i.e., burial or cremation. Cryopreservation is not a guarantee by any means, but it is a chance.

- **Do my relatives need to pay anything while I'm in cryopreservation?**

All funds for the cryopreservation procedure and indefinite long-term storage of a patient must be available (via life insurance, etc.) at the time of their legal death. Nothing is or needs to be paid after a person is in cryopreservation.

- **I cannot afford the €50 membership fee. Do you have solutions?**

We understand financial situations can vary, and we strive to make our services accessible to everyone. We offer a reduced membership fee upon demonstrating financial need. Please contact us to discuss your situation confidentially, and we will work together to find a suitable solution!

- **How long will my body be kept in cryopreservation?**

Cryopreservation is maintained with liquid nitrogen (which is naturally at −196°C). No electricity is used, which secures patients against power outages and makes long-term maintenance economically feasible. The largest portion of funds is given to the Patient Care Foundation (PCF). The PCF puts the cryopreservation funds into long-term investments with a goal of an annual return of >= 1-2% above inflation. This return covers the running costs of maintenance (such as liquid nitrogen). This ensures that there are always enough resources to keep patients cryopreserved indefinitely, for however long is necessary for revival to be possible.

- **Do you offer pet cryopreservation?**

Yes. Choosing cryopreservation for your pet gives you the chance to meet again in the future when medical advances make it possible. It's a powerful way to hold on to the bond you share, offering hope for tomorrow. Every pet entrusted to us receives precise handling, respect, and rigorous safety standards.
The price of cryopreservation depends on the size of your pet: Larger animals may require more resources, which can affect the cost, while smaller pets typically have a lower price. Contact us to get a quote or information.

- **Which countries does Tomorrow.bio cover?**

Mainland EU and UK / Ireland, and the US. Of course, we cover you as well if you travel anywhere in the world via flight teams and/or local partners.

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