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Welcome readers. This is our 2022/2023 round up newsletter where we hope to highlight some of the incredible work that happened last year and look forward to the projects that are lined up for this year.

Young ERC is having a management change! Our wonderful Chair Anna Bichmann has taken on a role working with Laerdal on enhancing their virtual reality simulation training. As such, she can no longer continue to be Chair of the Young ERC and while we will miss her leadership greatly it is a fantastic opportunity that we hope will lead to future collaborations and a growing network.

An interim chair has been voted in by our committee and that is Johannes Wittig! Johannes has been with Young ERC for several years now and has taken on many projects including the upcoming masterclass series and the Young ERC survey. We are excited to see where his vision takes the Young ERC.

## WHO ARE WE:

- 16 young professionals
- 12 countries
- 8 specialities/roles  
enthusiastic about resuscitation
- A supporting committee of the ERC



[facebook.com/YoungERC.resus](https://facebook.com/YoungERC.resus)



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[Instagram.com/young\\_erc/](https://Instagram.com/young_erc/)



[linkedin.com/groups/8835936/](https://linkedin.com/groups/8835936/)



[youngerc1989@gmail.com](mailto:youngerc1989@gmail.com)



<https://young-erc.webflow.io/>



## YERC survey!

Give us your feedback and tell us how we can improve for you

<https://forms.gle/CT9qq3Ryh5iGVwnY7>

# LOOKING BACK - 2022 at a Glance

2021 came to an end and most of us were pleased to see in 2022 with an optimism that the worst of the COVID pandemic would be behind us and a new normality would resume. Gradually face masks disappeared and restrictions were lifted as we began to be able to meet colleagues again at conferences around the world.

The Young ERC saw in 2022 with Dr. Jessica Rogers chairing and the regular newsletters being published with clinical updates. The ERC continued with their regular webinars with some familiar Young ERC members making appearances. The first of the year was co-moderated by the Vice Chair Dr. Anna Bichmann moderating a discussion about 'Temperature Control after Cardiac Arrest' with senior authorities on the subject such as Prof. Jerry Nolan discussing TTM-2.

May brought a celebration of International Nurses Day by the Young ERC alongside the next webinar on 'The Skill of Teaching Skills', again expertly moderated by our very own Dr. Sabine Nabecker. We were lucky enough to have a second webinar in May with 'Pediatric Early Warning Scores: updates and recommendations' moderated by Dr. Franziska Merkel, the Young ERC becoming more prominent throughout the year.

June came and was what we had all been waiting for – the return of the ERC Congress in a hybrid format, enabling the return of the face-to-face conference (unless you had COVID unluckily)! Antwerp hosted and it was great for those who went to finally see each other and catch up. The Young ERC continued to go from strength to strength with co-moderating posters, talks and the return of the FIRST competition. Also it was time for Dr. Jessica Rogers to step down and Dr. Anna Bichmann to take the helm as Chair. Dr. Jessica Rogers did a fantastic job and we all thanked her for her wonderful contribution to help further establish the Young ERC.

June was a busy month with the Utstein Masterclass taking place in Norway prior to the Congress with Young ERC members taking part, and participants from 10 countries overall. Hopefully 2023 will bring an opportunity for more members to participate.

The summer, whilst quieter in the world of conferences, continued with highlighted learning on topical subjects of hyperthermia and drowning in the Young ERC newsletter. September placed the spotlight on toxicology and linked in with Suicide Prevention Month.

In October ILCOR released new CoSTRs and World Restart a Heart Day returned fully with a bang! The Young ERC hosted Instagram Live Sessions with a number of members hosting, and many members being involved in the dissemination of CPR locally too. There was a further webinar in October with the interesting topic of 'Virtual Reality in CPR', all these sessions are available to view on the ERC website.

Without blinking December was suddenly here and the memories of lockdowns faded rapidly as we looked forward to 2023. Before we could do that there was the AGM for the ERC in Brussels where the Young ERC was represented and involved brainstorming to look at the future of the ERC. Hopefully these thoughts (or at least some of them) will become reality.

2023 will hopefully continue as the end of 2022 did with a renewed optimism and looking forward to all the exciting opportunities 2023 has to offer.

# Already looking forward to #RESUS23 ?

**2-3-4 NOVEMBER 2023**  
**SAVE THE DATE**



... see you in **Barcelona** !

[www.resuscitation.eu](http://www.resuscitation.eu)

Dear **Young ERC community!**

The Young ERC has taken many important steps over the last year and is currently developing exciting projects that will benefit the Young ERC community. These are made possible by our committee members who invest their time and energy to work towards a shared goal. I feel fortunate to work with so many dedicated and fantastic people. Together, we hope to strengthen young resuscitation enthusiasts everywhere.

As we move forward to implement projects that aim to connect our community and provide opportunities, we are looking to hear **your feedback**. Let us know if you have ideas that we should consider or if you want to work with us – and tell us when you think we could do better!

In 2023 a new Young ERC committee will be formed and I aim to make this process open and inviting to all our community's members. We are already looking forward to **your participation**.

Stay up-to-date by following our social media channels and by subscribing to this newsletter! To get in touch just send an email to [youngerc1989@gmail.com](mailto:youngerc1989@gmail.com)

I'm looking forward to hear from you!

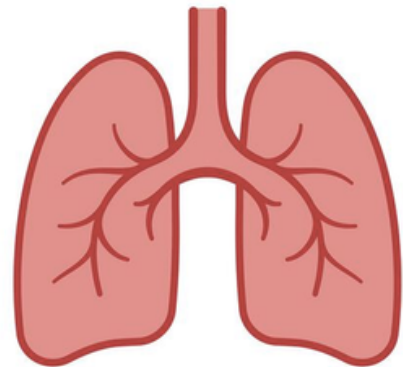
Johannes  
(Young ERC Interim Chair)

# Your Latest ALS Update

 @JeleonoraEk

With the weather being recently colder, this month we're focussing on the **lungs** and looking into cardiac arrest caused by **obstructive lung disease**.

Remember, your **ALS Algorithm stays the same!** Preempting reversible causes and rhythm by knowing what to look for can help you organise your team.



## What are we expecting?

### Preempting rhythm:

- Usually **non-shockable**.



### Preempting reversible causes:

- Mostly due to **hypoxia!**
- **Hypovolaemia**
- **Toxins** (e.g. arrhythmias from beta-adrenergic agonists, aminophylline)
- **Electrolyte disturbance**
- **Tension pneumothorax (& gas trapping)**.

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## What are the key recommendations in the ABCDE approach?

### Airway:

- Give priority to high-concentration **oxygen**.
- **Intubate** as soon as possible during cardiac arrest caused by asthma.

### Breathing:

- Check for **tension pneumothorax** and treat accordingly.
- **Disconnect** from **positive pressure ventilation** if **air-trapping** and **hyperinflation** occur and apply pressure to manually reduce the hyperinflation.

### Circulation:

- Give **IV fluids** due to the risk of dehydration due to reduced oral intake and/or increased insensible losses.
- Consider **ECPR**: **ECMO** has been used successfully in patients with life-threatening asthma.



# On Networks and Networking with Prof. Dr. Bernd W. Böttiger



by Johannes Wittig

 @johannes\_wittig

estimated reading time:

**10 minutes**

The ERC networks were very successful in 2022 and celebrated major milestones:

- 10th anniversary of the **European Cardiac Arrest Awareness Week** at the European Parliament
- The **ERC Research NET** comfortably surpassed the mark of 100 publications since 2016. (Magic number of 112 was reached in December!)

Read more about the ERC Research NET and about the importance of networks for “young resuscitators” in the interview with **Prof. Dr. Bernd W. Böttiger** from Cologne, Germany!

Early career scientists and young medical professionals sometimes struggle to build their own network or are intimidated by networking at larger events. In this interview, **Prof. Dr. Bernd W. Böttiger** shared his experience, perspective, and advice on the important topic of networks in the resuscitation community.

**We hope the interview is useful to you and inspires you to grow your network.**

*Prof. Böttiger, without doubt you are part of many important networks in the global resuscitation community. What impact had networks on your early work and professional development?*



At the beginning of my career, I thought that good clinical work and good research were the most important factors. But the more senior I became the more I realized that networking is equally important if not more important.

Unfortunately, networks can have a very good but also a very bad impact. We can see this when we look at powerful networks in global politics that are not very beneficial to our planet and the people who want to live on it in peace.

But when we talk about the networks in research and medicine, they almost always make a positive impact.

The most important network I'm part of is the **European Resuscitation Council (ERC)**. About 25 years ago, I approached the ERC board members to ask them how I could connect with the ERC. They asked me to send my CV with my publication list and soon I took responsibility for a research group within the ERC. Later, I became a member of the ERC board and many good developments followed. For example, I had the opportunity to serve as the ERC chair and I became part of the **International Liaison Committee on Resuscitation (ILCOR)** task forces.

Since 2012, I have been serving as chair of the **German Resuscitation Council** and in 2021 I was honored to become the federal medical advisor of the **German Red Cross** – another very strong network. That shows how important it is to connect to a network early and to grow in this network over many years.

From the beginning of my medical career, I was most interested in resuscitation. Therefore, the ERC was the ideal network for me. You should only join a network if you are enthusiastic about the mission of the network. This way the network can have a positive impact on you and in turn enable you to have a positive impact on the world.

# On Networks and Networking with Prof. Dr. Bernd W. Böttiger



by Johannes Wittig

 @johannes\_wittig

## *Do you remember experiencing any challenges when you first wanted to join a network?*



Every time you enter a network you will be met with established people, and you might question if they will accept you as a new part of their network. You will have to learn what the group dynamics are and convince the established people that you can positively impact their network.

The following might be something younger researchers or medical professionals might not realize before joining networks, but I would stress that it is important to consider the values and ethics of a network and never blindly follow leaders. There will be good leaders and bad leaders. It is important to stand up to bad leaders – something that is very important in any kind of network.

## *Why are networks particularly important for early career healthcare professionals and researchers?*



When you are young and not yet experienced you cannot develop everything all on your own. You need to develop within a network of support and exchange of ideas. Being part of a network can also be very motivational to build your scientific career and strengthen your personality. A network is to a clinician or researcher what water is to a plant. Networks are everywhere in nature and our lives.

## *Which networks exist within the ERC or are closely connected to it?*



Under the umbrella of the ERC, we have established several networks.

The **ERC Research NET** connects more than 350 researchers right now. It has produced more than 100 interdisciplinary, interprofessional and international publications. Together, we have grown the ERC Research NET into one of the most successful international research networks in resuscitation and post-resuscitation care. The network continues to grow with its own dynamics and energy as it enables collaboration between many international researchers.

## *What are the goals and activities of the ERC Research NET?*



The goal of the ERC Research NET is to further develop knowledge in the interests of our patients through research. It aims to establish and maintain a network of researchers engaged in clinical research and basic science. Additionally, the ERC Research NET works to create visibility of the scientific findings of its members in Europe and around the world.

We want to directly connect senior researchers with young investigators. For this reason, we established a summer school where we invite 15-20 young investigators and up to 20 more senior investigators for two days of interactive exchange of ideas on different resuscitation science topics each year.

## *How can interested researchers join the ERC Research NET?*



The ERC Research NET is open to everyone who wants to join. Just send an e-mail to me or to the ERC office and then you will be added to the list – simple as that. You will receive information about recent publications from members of the ERC Research NET and you will be kept up to date about research opportunities.

# On Networks and Networking with Prof. Dr. Bernd W. Böttiger



by Johannes Wittig

 @johannes\_wittig

## *What other networks have been established together with the ERC?*



In collaboration with many colleagues, we have built the **KIDS SAVE LIVES** network which is not only very visible within the ERC community but also around the whole world. We were able to convince the **World Health Organization (WHO)** to support KIDS SAVE LIVES. Therefore, the WHO endorsed teaching CPR to schoolchildren worldwide. Federico Semeraro, I and many others have worked very hard to implement it in Europe. Today, six European countries have introduced legislation to make CPR training a mandatory part of school education and another 23 European countries issued a recommendation to teach CPR to school children.

The network spans across the globe so that many other follow our recommendations. A very nice example is the state of São Paulo in Brazil where legislation was introduced to educate schoolchildren and I had the opportunity to visit them and see how the network is growing around the world. The KIDS SAVE LIVES network has had an entirely positive impact around the world and has been very rewarding for everyone involved. This is a rare thing to achieve.

The **World Restart A Heart** network is another important part of the larger ERC network. It has grown from a European initiative into a global network that is now lead by the International Liaison Committee on Resuscitation (ILCOR).

In 2012, we had the idea to have a day or week that focuses on CPR and awareness of cardiac arrest. In Europe alone, we have more than 350,000 deaths due to sudden cardiac arrest with unsuccessful resuscitation every year. That is equal to two jumbo jets crashing without any survivors every single day in Europe. If it really were two jumbo jets crashing daily, we would quickly see investment of billions of Euros to solve that issue. Unfortunately, cardiac arrest hasn't received the attention it deserved. Therefore, we decided to change that and to directly approach the politicians. In 2012, we asked the Members of the European Parliament (MEPs) for their support of having a week or day dedicated to cardiac arrest. In this effort, led by Marios Georgiou from Cyprus, we received signatures from more than 50% of MEPs, which resulted in the first European Restart A Heart Day on October 16, 2013.

In 2017, Professor Andy Lockey from the United Kingdom, and I approached the ILCOR Board and General Assembly to expand the European Restart A Heart Day into the World Restart A Heart Day. Fortunately, they shared our vision. We implemented the first two World Restart A Heart Days in 2018 and 2019. Thanks to a dedicated, international network it was a real success from the beginning. We arranged video conferences with members from all the different areas and continents of the world to coordinate our efforts. We managed to train 5.4 million laypersons in CPR and reached more than 206 million people on social media in 2019 alone. These numbers continue to grow – surpassing a total social media reach of several hundred millions!

During the pandemic we had to adapt our strategy and managed to reach many people with the help of coordinated social media campaigns. Our global World Restart A Heart cooperation has enabled us to reach and train almost as many persons in 2021 and 2022 as we did during the pre-pandemic years.

# On Networks and Networking with Prof. Dr. Bernd W. Böttiger



by Johannes Wittig

 @johannes\_wittig

*How are EuReCa and the ESCAPE-NET connected to the ERC network?*



**EuReCa** is the **European Registry of Cardiac arrest** and it is a project that was developed under the umbrella of the ERC. It is a European collaboration we are all very proud of. EuReCa-TWO for example focused on data collection of the epidemiology, treatment and outcomes of patients suffering an out-of-hospital cardiac arrest from 27 European countries.

The **ESCAPE-NET** is a network of different European universities and organizations, mostly lead by cardiologists, that invited the ERC and other large scientific organizations to participate in their network. The ESCAPE-NET aims to investigate genomics and risk factors for sudden cardiac arrest. A significant part of this is building a large DNA sample database. To accomplish this, many individual researchers, universities, the European Society of Cardiology, the European Heart Rhythm Association and the ERC participate in this network.

*What would you recommend to new members of the resuscitation community that might be a bit shy to approach more senior members?*



I was a bit shy in the beginning as well, and sometimes I can still be a bit shy. But I would recommend to just start with connecting to a group that best matches your interests and capabilities. The easiest first step is to send an e-mail or become a member of your national Resuscitation Council and the European Resuscitation Council. You can quickly become a member of the ERC Research NET or participate in the KIDS SAVE LIVES or World Restart A Heart activities.

Once you get involved, observe what others are doing and soon you will realize that there are many different opportunities. Then you can decide what is most interesting and start directly approaching people.

An alternative way to get started is to get a group of people from your institution together to teach resuscitation at a school. This will quickly motivate you to do more and connect to others with the same mission.

However, the pandemic has changed how we build networks and interact in the resuscitation community. We have become more accustomed to meeting virtually and that has removed some barriers but can also be challenging if you are trying to connect with a network for the first time.

*Is there a final message you would like to give to young healthcare professionals and early career researchers about networking and networks?*



Networks are critically important. Join a network and focus on the positive aspects of it. Connect with several networks and many different individuals. But always make sure that all your activities have a positive impact on our world.

**And don't be discouraged if something doesn't work out the way you hoped. If you persist over many years – you will be successful.**



# Publication and Research Highlights 2022



By Johannes Wittig

@johannes\_wittig

## TOP 10 CARDIAC ARREST RANDOMIZED TRIALS OF 2022

INFOGRAPHIC BY  
Tommaso Scquizzato  
@tscquizzato  
@tscquizzato\_med  
References and details  
of selected trials are available  
at tscquizzato.com

OHCA/HCA POST-ARREST

### Treating Rhythmic and Periodic EEG Patterns in Comatose Survivors of Cardiac Arrest

Ruijter BJ et al. *N Engl J Med.*

#### INTERVENTION

Suppressing rhythmic and periodic EEG activity with antiseizure medications for at least 48 hours **versus** standard care alone

#### PRIMARY OUTCOME

CPC score of 3, 4, or 5 at 3 months  
**90% vs 92%** (2%; 95% CI -7% to 11%; P=0.68)

#### MAIN FINDINGS

In comatose patients after cardiac arrest with rhythmic and periodic EEG activity, intensive antiseizure treatment for at least 48 hours did not improve neurologic outcomes at 3 months

OHCA INTRA-ARREST

### Functional Neurologic Outcomes After Early Invasive Management of Out-of-Hospital Cardiac Arrest

Belohlavek J et al. *JAMA.*

#### INTERVENTION

Early intra-arrest transport, ECP, and invasive assessment **versus** continued ALS on site in refractory OHCA

#### PRIMARY OUTCOME

CPC score of 1 or 2 at 180 days  
**32% vs 22%** (OR 1.63; 95% CI 0.93-2.85; P=0.09)

#### MAIN FINDINGS

In refractory OHCA, early intra-arrest transport, ECP, and invasive assessment did not significantly improve survival with neurologically favorable outcome at 180 days

OHCA POST-ARREST

### Emergency vs Delayed Coronary Angiogram in Survivors of Out-of-Hospital Cardiac Arrest

Hauw-Berlemont C et al. *JAMA Cardiol.*

#### INTERVENTION

Emergency **versus** delayed (48 to 96 hours) coronary angiography (CAG) in survivors of an OHCA without ST-segment elevation on ECG

#### PRIMARY OUTCOME

CPC score of 1 or 2 at 180 days  
**34% vs 31%** (I-R 0.87; 95% CI 0.65-1.15; P=0.32)

#### MAIN FINDINGS

In patients resuscitated after OHCA without ST elevation, emergency CAG was not better than delayed CAG with respect to the 180-day survival rate with no or minimal neurologic sequelae

OHCA POST-ARREST

### Effect of Lower vs Higher Oxygen Saturation Targets on Survival to Hospital Discharge After OHCA

Bernard SA et al. *JAMA.*

#### INTERVENTION

Oxygen titration to achieve a saturation of 90-94% (intervention) **versus** 98-100% (standard care) after ROSC and until arrival in the ICU

#### PRIMARY OUTCOME

Survival to hospital discharge  
**38% vs 48%** (OR 0.68; 95% CI 0.46-1.00; P=0.05)

#### MAIN FINDINGS

Among OHCA patients with ROSC, targeting an O<sub>2</sub> saturation of 90-94%, compared with 98-100%, until admission to the ICU did not significantly improve survival to discharge

OHCA POST-ARREST

### Blood-Pressure Targets in Comatose Survivors of Cardiac Arrest

Kjaergaard J et al. *N Engl J Med.*

#### INTERVENTION

MAP target of 77 mmHg **versus** 62 mmHg in comatose adults resuscitated from OHCA of cardiac cause

#### PRIMARY OUTCOME

Death or CPC of 3 or 4 at discharge within 90 day  
**34% vs 32%** (I-R 1.08; 95% CI 0.84-1.37; P=0.56)

#### MAIN FINDINGS

Targeting a MAP of 77 or 63 mmHg in patients resuscitated from OHCA did not result in significantly different percentages of patients dying or having severe disability or coma

OHCA POST-ARREST

### Oxygen Targets in Comatose Survivors of Cardiac Arrest

Schmidt H et al. *N Engl J Med.*

#### INTERVENTION

Restrictive oxygen target of a PaO<sub>2</sub> of 9-10 kPa (68-75 mmHg) **versus** a liberal oxygen target of a PaO<sub>2</sub> of 13-14 kPa (98-105 mmHg)

#### PRIMARY OUTCOME

Death or CPC of 3 or 4 at discharge within 90 day  
**32% vs 34%** (I-R 0.95; 95% CI 0.75-1.21; P=0.69)

#### MAIN FINDINGS

Targeting of a restrictive or liberal oxygenation strategy in comatose patients after OHCA resulted in a similar incidence of death or severe disability or coma

OHCA POST-ARREST

### Duration of Device-Based Fever Prevention after Cardiac Arrest

Hassager C et al. *N Engl J Med.*

#### INTERVENTION

Temperature control at 36°C for 24h followed by device-based fever prevention (target 37°C) until 12h or awakening **versus** until 48h or awakening

#### PRIMARY OUTCOME

Death or CPC of 3 or 4 at discharge within 90 day  
**32% vs 34%** (I-R 0.89; 95% CI 0.77-1.02; P=0.70)

#### MAIN FINDINGS

Active device-based fever prevention for 36 or 72 hours after OHCA did not result in significantly different percentages of patients dying or having severe disability or coma

OHCA INTRA-ARREST

### Defibrillation Strategies for Refractory Ventricular Fibrillation

Cheskes S et al. *N Engl J Med.*

#### INTERVENTION

Standard **versus** vector-change (VC) **versus** double sequential external defibrillation (DSED) in patients who remained in VF after 3 shocks

#### PRIMARY OUTCOME

Survival to hospital discharge  
**13% (standard) vs 22% (VC) vs 30% (DSED)**  
aRR 1.71; 95% CI, 1.01-2.88 (VC vs standard)  
aRR 2.21; 95% CI, 1.33-3.67 (DSED vs standard)

#### MAIN FINDINGS

In patients with refractory ventricular fibrillation, survival to hospital discharge occurred more frequently with DSED or VC defibrillation than standard defibrillation

IHCA POST-ARREST

### Temperature Control After In-Hospital Cardiac Arrest

Wolfrum S et al. *Circulation.*

#### INTERVENTION

Hypothermic temperature control (32-34°C) for 24 h **versus** normothermia (≤37.5°C)

#### PRIMARY OUTCOME

All-cause mortality at 180 days  
**73% vs 71%** (RR 1.03; 95% CI 0.79-1.40; P=0.82)

#### MAIN FINDINGS

Hypothermic temperature control as compared with normothermia did not improve survival nor functional outcome at day 180 in patients with coma after IHCA

OHCA INTRA-ARREST

### Effect of Smartphone Dispatch of Volunteer Responders on Automated External Defibrillators and OHCA

Berglund E et al. *JAMA Cardiol.*

#### INTERVENTION

Smartphone dispatch of volunteer responders to retrieve nearest AED on their way to the OHCA **versus** to go directly to the OHCA to perform CPR

#### PRIMARY OUTCOME

Bystander-attached AED  
**13% vs 9.5%** (RR 1.40; 95% CI 0.97-2.01; P=0.08)

#### MAIN FINDINGS

Smartphone dispatch of volunteer responders to OHCA to retrieve nearby AEDs vs instructions to directly perform CPR did not significantly increase bystander AED use

TOP 10 CARDIAC ARREST RANDOMIZED TRIALS OF 2022 infographic by Tommaso Scquizzato @tscquizzato

Want to read up on these randomized trials from 2022? - [Linked articles below!](#)

- [Treating Rhythmic and Periodic EEG Patterns in Comatose Survivors of Cardiac Arrest.](#) Ruijter BJ et al. *N Engl J Med.* 2022;386(8):724-734.
- [Effect of Intra-arrest Transport, Extracorporeal Cardiopulmonary Resuscitation, and Immediate Invasive Assessment and Treatment on Functional Neurologic Outcome in Refractory Out-of-Hospital Cardiac Arrest: A Randomized Clinical Trial.](#) Belohlavek J et al. *JAMA.* 2022;327(8):737-747.
- [Emergency vs Delayed Coronary Angiogram in Survivors of Out-of-Hospital Cardiac Arrest: Results of the Randomized, Multicentric EMERGE Trial.](#) Hauw-Berlemont C et al. *JAMA Cardiol.* 2022;7(7):700-707.
- [Effect of Lower vs Higher Oxygen Saturation Targets on Survival to Hospital Discharge Among Patients Resuscitated After Out-of-Hospital Cardiac Arrest: The EXACT Randomized Clinical Trial.](#) Bernard SA et al. *JAMA.* 2022;328(18):1818-1826.
- [Blood-Pressure Targets in Comatose Survivors of Cardiac Arrest.](#) Kjaergaard J et al. *N Engl J Med.* 2022;387(16):1456-1466.
- [Oxygen Targets in Comatose Survivors of Cardiac Arrest.](#) Schmidt H et al. *N Engl J Med.* 2022;387(16):1467-1476.
- [Duration of Device-Based Fever Prevention after Cardiac Arrest.](#) Hassager C et al. *N Engl J Med.* 2022;10.1056/NEJMoa2212528.
- [Defibrillation Strategies for Refractory Ventricular Fibrillation.](#) Cheskes S et al. *N Engl J Med.* 2022;387(21):1947-1956.
- [Temperature Control After In-Hospital Cardiac Arrest: A Randomized Clinical Trial.](#) Wolfrum S et al. *Circulation.* 2022;146(18):1357-1366.
- [Effect of Smartphone Dispatch of Volunteer Responders on Automated External Defibrillators and Out-of-Hospital Cardiac Arrests: The SAMBA Randomized Clinical Trial.](#) Berglund E et al. *JAMA Cardiol.* 2022:e224362.

# Conferences and Courses for 2023

## March 2023

**21st-24th:** International Society of Intensive Care and Emergency Medicine (ISICEM), Brussels, Belgium.

## April 2023

**18th-20th:** Spring CPD Conference, Royal College of Emergency Medicine, London, U.K.

## June 2023

**13th - 16th:** International Conference of Emergency Medicine (ICEM) Annual Congress, Amsterdam, Netherlands.

**27th-29th:** Intensive Care Society presents State of the Art 2023, Birmingham, U.K.

## September 2023

**16th -20th:** European Society of Emergency Medicine (EUSEM) Congress, Barcelona, Spain.

**18th - 20th:** Cardiology World Congress, Valenica, Spain.

**26th-28th:** Royal College of Emergency Medicine (RCEM) Annual Scientific Conference 2023, Glasgow.

## October 2023

**15th-19th:** 17th Annual Meeting of DGINA (International Disciplines of Emergency and Acute Medicine), Berlin, Germany.

## November 2023

**2nd-4th:** European Resuscitation Council (ERC) Congress, Barcelona, Spain.

**10th-12th:** American Heart Assciation (AHA) Resuscitation Science, Philadelphia, U.S.A.

## December 2023

**TBC:** Resuscitation Council UK Annual Scientific Symposium, London, U.K.

**26th-28th:** Royal College of Emergency Medicine (RCEM) Annual Scientific Conference 2023, Glasgow.



# External Event Announcement:

By Johannes Wittig

 @johannes\_wittig



## Masterclass: Intensive Care Medicine

Get Connected Through Our Global Classroom and Learn From Experts in Critical Care

### Improve your knowledge about modern intensive care medicine

- 3 interactive and video based cases, 5 lectures each
- Realistic case progress and additional materials (e.g. daily video visit, Curves, emergency protocols etc.)
- Expert speakers from 10 different hospitals
- Video demonstrations of intensive care procedures (e.g. tracheotomy, ECMO canulation, RSI etc.)
- Internal area with downloads, video recordings and links to medical knowledge platform
- Get 2 ECTS points and participation certificate
- Get connected with participants from all over the world

visit [www.masterclassICM.com](http://www.masterclassICM.com) for more information and registration

Register here:



Department of Anaesthesiology, Intensive Care and Pain Therapy

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