



Schweizerische Pädiatrische Onkologie Gruppe  
Groupe d'Oncologie Pédiatrique Suisse  
Gruppo d'Oncologia Pediatrica Svizzera  
Swiss Paediatric Oncology Group



# Annual report

## 2022

Research – giving a future  
to children with cancer

## **Imprint**

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# Editorial

## Dear readers

2022 was yet another year marked by crises. In addition to the COVID-19 pandemic, something unimaginable happened – a war right here in Europe. The war that has been raging in Ukraine since February 2022 showed us how vulnerable our world can be. The international paediatric oncology community quickly organised itself and was able to provide help very rapidly. Children and adolescents with cancer were evacuated via Lviv and a hospital in Poland acting as a hub, and they were transferred to various countries in Europe and other parts of the world (SAFER Ukraine). All nine SPOG hospitals helped to provide care and admitted many children and adolescents with their families for further therapy. My sincere thanks go to the interdisciplinary teams at all nine SPOG hospitals, Dr. Jeanette Greiner, President of the Swiss Society of Paediatric Haematology and Oncology (SSPHO), for coordinating nationally, Rega Swiss Air-Rescue for providing transport, Kinderkrebshilfe Schweiz and Zoé4life for the generous support provided to the families in Switzerland and all the other national and international partners and volunteers. However, the children and adolescents with cancer and their families continue to need our support as there is no end to the war in sight.

We are very aware that the pandemic and the war in Ukraine have resulted in major financial losses and limitations in many areas. We are therefore extremely grateful that, in spite of these difficulties, all our sponsors were able to maintain their commitment in 2022 – thank you so much! We were also delighted at the funding that has already been promised for 2023 – without this support the work done by SPOG for children and adolescents with cancer would not be possible.

## What else happened in 2022?

At the end of 2022, a total of 30 studies, 14 of them research projects, were open for patient recruitment. The global COVID-19 pandemic continued to cause substantial delays in the opening of new studies. We and our international partners will work hard to catch up with the backlog.

It is crucially important to encourage the next generation of scientists, and since 2021 this has taken the form of the SPOG Young Investigator (YI) initiative. A monthly online lecture with speakers from Switzerland and abroad was arranged. Topics included specific areas of oncology and regulatory aspects of opening and performing studies. Young Investigators at the various SPOG hospitals were able to get to know each other and network, while also learning about the re-

search focuses of the individual SPOG hospitals. The SPOG YI Award was presented for the second time: Dr. Christine Schneider of Inselspital Bern and Dr. Rahel Kasteler of Cantonal Hospital Aarau are this year's winners – many congratulations! We look forward to the results of their research projects.

The research-focused restructuring of SPOG was completed in November and its membership now comprises just the nine SPOG hospitals. All other tasks will now be performed by the SSPHO.

I have now completed my third year as President and was elected for a second term in November. I would like to thank everyone at the SPOG CC, my colleagues on the SPOG Board and all our colleagues at the nine SPOG hospitals for their outstanding collaboration and dedication. Only by working together can we continuously improve the chances of recovery for children and adolescents with cancer and minimise the late effects. •



**Prof. Katrin Scheinemann, M.Sc.**

President of SPOG



**Prof. Katrin Scheinemann, M.Sc.**

is a specialist in paediatric and adolescent medicine working in paediatric oncology/haematology and medical director of the Haematology/Oncology Centre at the Children's Hospital of Eastern Switzerland. She has been President of SPOG since 2020.

Contact

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# Patient-related clinical research

## Number of patients included in studies in 2022

A total of 303 new patients were recruited to SPOG studies in 2022. 32 of them are taking part in two studies; one patient is taking part in three studies. They will each be counted in all the studies in which they are participating. [▶](#)

SPOG hospitals	Aarau	Basel	Bellinzona	Berne	Geneva	Lausanne	Lucerne	St. Gallen	Zurich	Total
<b>Total number of study participations</b>	<b>28</b>	<b>22</b>	<b>8</b>	<b>72</b>	<b>19</b>	<b>23</b>	<b>23</b>	<b>37</b>	<b>71</b>	<b>303</b>
<b>Number of study patients</b> (excluding multiple references)										<b>269</b>
<b>Treatment studies</b>	<b>10</b>	<b>15</b>	<b>2</b>	<b>26</b>	<b>10</b>	<b>14</b>	<b>17</b>	<b>12</b>	<b>28</b>	<b>134</b>
AIEOP-BFM ALL 2017	5	8	1	14	3	7	10	6	14	68
ALL SCTped 2012 FORUM		1			3				2	6
B-NHL 2013				2	1		1			4
EsPhALL2017				1						1
FaR-RMS	2	1		1	1	2	2	1	1	11
HR-NBL2/SIOPEN				1			1	1	1	4
LBL 2018		1	1							2
LCH-IV	1			2				1	3	7
LINES		2		2		1		1	1	7
ML-DS 2018									1	1
MyeChild 01						1	1		1	3
PHITT		1			2	1	1	1		6
rEECur							1		1	2
SIOPE ATRT01				1				1		2
SIOP Ependymoma II	1	1		2		2			1	7
SIOP PNET 5 MB									1	1
SIOP Randomet 2017	1								1	2
<b>Research projects</b> <b>(registry studies and biology studies)</b>	<b>18</b>	<b>7</b>	<b>6</b>	<b>46</b>	<b>9</b>	<b>9</b>	<b>6</b>	<b>25</b>	<b>43</b>	<b>169</b>
ALL-REZ BFM				2				1	4	7
COSS Registry	1		2	1				1	3	8
CWS Registry SoTiSaR	3	1		3			2	2	3	14
EU-RHAB		1		1	1				1	4
EWOG-MDS 2006	2	1				1	1		2	7
GPOH-MET Registry								1	1	2
INFORM				6	4	2	2	3	10	27
KRANIOPHARYNGEOM Registry 2019	4		1	2						7
LOGGIC Core	4	1		6	2	1		5	5	24
MNP2.0		2		15	2	1		6	5	31
NHL-BFM Registry 2012		1	1	5				2	3	12
PTT2.0			1			1		2	2	6
STEP	1			2				1		4
UMBRELLA SIOP-RTSG 2016	3		1	3		3	1	1	4	16



### Studies open at the end of 2022

The 16 clinical studies and 14 research projects listed in the following tables were open for patient recruitment at the end of 2022. SPOG endeavours to offer open studies at as many of the nine member hospitals in Switzerland as possible so that the largest possible number of children and adolescents with cancer can benefit from SPOG studies. [•](#)

## Overview of clinical studies open on 31 December 2022

Study code	Condition under investigation	Number of participating SPOG member hospitals	Study open since
AIEOP-BFM ALL 2017	Acute lymphoblastic leukaemia	9	2019
ALL SCTped 2012 FORUM	Allogeneic stem cell transplant in children and adolescents with acute lymphoblastic leukaemia	3	2015
B-NHL 2013	Mature aggressive B-cell non-Hodgkin lymphoma and B-cell leukaemia	9	2019
EsPhALL2017	Philadelphia chromosome-positive acute lymphoblastic leukaemia	9	2019
FaR-RMS	Rhabdomyosarcoma	9	2021
HR-NBL2/SIOPEN	High-risk neuroblastoma	9	2021
IntReALL HR 2010	High-risk relapsed acute lymphoblastic leukaemia	9	2019
LBL 2018	Lymphoblastic lymphoma	9	2020
LCH-IV	Langerhans' cell histiocytosis	9	2014
ML-DS 2018	Acute myeloid leukaemia associated with Down syndrome	9	2022
PHITT	Liver tumours (hepatoblastoma and hepatocellular carcinoma)	9	2018
rEECur	Recurrent and primary refractory Ewing sarcoma	9	2018
SIOPE ATRT01	Atypical teratoid/rhabdoid tumours	8	2022
SIOP Ependymoma II	Ependymoma	9	2018
SIOP-HRMB	High-risk medulloblastoma	9	2021
SIOP Randomet 2017	Kidney tumours with metastases	9	2022





## Overview of research projects open on 31 December 2022

Study code	Condition under investigation	Number of participating SPOG member hospitals	Study open since
ALL-REZ BFM	Relapsed acute lymphoblastic leukaemia	7	2013
COSS Registry	Osteosarcomas and other bone sarcomas	7	2012
CWS Registry SoTISaR	Soft tissue sarcoma and other soft tissue tumours	7	2011
EU-RHAB	Rhabdoid tumours	9	2013
EWOG-MDS 2006	Myelodysplastic syndrome and juvenile myelomonocytic leukaemia	8	2006
EWOG-SAA 2010	Acquired severe aplastic anaemia	7	2012
INFORM	Tumours that are recurrent or progressing under therapy	9	2017
KRANIOPHARYNGEOM Registry 2019	Craniopharyngioma	9	2020
LOGGIC Core	Low-grade gliomas	9	2020
MNP2.0	Brain tumours	9	2018
NHL-BFM Registry 2012	Non-Hodgkin lymphoma	9	2012
PTT2.0	Brain tumours, sarcomas or peripheral tumours of the nervous system that are recurrent or progressing under therapy	9	2021
STEP	Rare tumours in children and adolescents	7	2013
UMBRELLA SIOP-RTSG 2016	Kidney tumours	9	2020

### More information about the studies



<https://www.spog.ch/projects/studien/?lang=en>



# Highlights / Achievements in the SPOG network

In this annual report, SPOG wishes to draw attention for the second time to members of its network with responsibilities on international committees and to important events during the year. The intention is to underline the significance of these individuals in the national and international context and the quality of the network.

## **New role in the Brain Tumour Group at the European Society for Paediatric Oncology (SIOPE)**

We would like to congratulate Prof. Katrin Scheinemann, medical director of the Haematology/Oncology Centre at the Children's Hospital of Eastern Switzerland in St. Gallen and the current President of SPOG, on her new role as Chair of the SIOPE Brain Tumour Group. The SIOPE Brain Tumour Group (BTG) elected Prof. Scheinemann to this role in June 2022 for a four-year term.

**Prof. Katrin Scheinemann, M.Sc.**  
Children's Hospital of Eastern Switzerland,  
St. Gallen



## **Appointment as Senior Lecturer**

Dr. André von Büren was appointed Senior Lecturer at the University of Geneva on 16 December 2022 after several years in the role of lecturer. Only individuals who are highly qualified in research and teaching and who aspire to a permanent professorship are appointed Senior Lecturer at the University of Geneva. Dr. von Büren will work in this role in the Faculty of Medicine in Geneva from February 2023. We would like to congratulate Dr. von Büren on this achievement.

**Dr. André von Büren**  
Geneva University Hospital



## **Initial certification of the paediatric oncology centre at Cantonal Hospital Aarau**

SPOG is delighted to announce that the paediatric oncology centre at Cantonal Hospital Aarau, which is a member of SPOG, was awarded initial certification as a paediatric oncology centre in August 2022 under the direction of Prof. Katrin Scheinemann, on the recommendation of the German Cancer Society. Congratulations on this milestone!

### New winners of the SPOG YI Award

The SPOG Young Investigator (YI) initiative is intended to encourage young researchers in the field of paediatric oncology. In 2022, for the second time, SPOG presented two YI awards for projects by young researchers. Dr. Rahel Kasteler, Ph.D., works as a Fellow in paediatric oncology/haematology at Cantonal Hospital Aarau. She impressed the Board and the Advisory Board with her research project on the subject of «Needs and quality of life in Ukrainian children with cancer in the context of the Ukrainian-Russian war and subsequent migrant movement to Switzerland». Dr. Christine Schneider is a Ph.D. candidate working in paediatric oncology/haematology at Inselspital in Bern. She was awarded one of the two YI grants for her research project titled «Early pulmonary dysfunction in paediatric cancer patients». We would like to congratulate both winners and wish them every success with their research projects. •

**Dr. Rahel Kasteler, Ph.D.**  
Cantonal Hospital Aarau



**Dr. Christine Schneider**  
Inselspital Bern



### Scientific Meeting 2022



The Scientific Meeting 2022 took place on 28 and 29 January and was held online due to the pandemic. The keynote speaker was Prof. Rubin of the Department of Biomedical Research (DMBR) at the University of Bern, who held a fascinating lecture on «Early Lessons from Precision Medicine». The approximately 80 participants enjoyed two days of lively discussion despite their physical separation.



# Publication highlights

## Clinical study

**Ceppi F**, Gotti G, Möricke A, Silvestri D, Poyer F, Lentès J, Bergmann A, Trka J, Alten J, Elitzur S, Barbaric D, Buldini B, Dell'Acqua F, Schumacher F, Casazza G, Tchinda J, Nebral K, Conter V, Attarbaschi A, Schrappe M. Near-tetraploid T-cell acute lymphoblastic leukaemia in childhood: Results of the AIEOP-BFM ALL studies. *Eur J Cancer*. (2022); 175, 120-124. doi: 10.1016/j.ejca.2022.08.013.

This publication compared the treatment outcomes of patients with newly diagnosed T-cell acute lymphoblastic leukaemia (T-ALL) treated in the AIEOP-BFM ALL 2000 and 2009 studies. A distinction was made between near-tetraploid T-ALL patients and T-ALL patients without near-tetraploidy (a rare gene mutation the significance of which has not yet been determined). It can be said in summary that near-tetraploid T-ALL in newly diagnosed paediatric patients is associated with a lower risk, a more favourable response to treatment and a good outcome.

### How does this study help patients?



The treatment of T-cell acute lymphoblastic leukaemia in childhood is determined by its risk classification (known as stratification) on the basis of the minimal residual disease and genetic mutations. This study identified a new genetic prognostic factor in T-ALL patients and will allow a better stratification of children with this subtype of leukaemia.

## What influence does genetics have on complications after cancer treatment in childhood?

**Waespe N, Strebel S, Nava T, Uppugunduri CRS, Marino D, Mattiello V, Otth M, Gumy-Pause F, Von Bueren AO, Baleyrier F, Mader L, Spoerri A, Kuehni CE, Ansari M.** Cohort-based association study of germline genetic variants with acute and chronic health complications of childhood cancer and its treatment: Genetic Risks for Childhood Cancer Complications Switzerland (GECCOS) study protocol. *BMJ Open*. (2022); 12(1), e052131. doi: 10.1136/bmjopen-2021-052131.

The national GECCOS project researches genetic risk factors associated with complications after childhood cancer therapies. It is being managed by the Geneva University Hospital and the University of Bern. Genetic samples are collected from children with cancer and survivors of childhood cancer throughout Switzerland. The genetic (i.e. heritable) information is studied in conjunction with medical data to gain a better understanding of why certain people experience complications after cancer treatment and others do not. The objective of this research is to identify patients at high risk of complications at an early stage and to adapt their therapy and aftercare accordingly. So far, more than 500 childhood cancer survivors from all over Switzerland have been recruited to this project. The information derived from it will be analysed in conjunction with data from the Swiss Childhood Cancer Registry and studies of childhood cancer survivors. The genetic

### How does this study help patients?



The GECCOS research project is investigating the influence of genetics on health complications after cancer therapy. This should allow patients at high risk of complications to be identified at an early stage so that they can be provided with the best possible care. In the longer term this will enable aftercare to be adapted to the personal needs of childhood cancer survivors.

information can be used not just for a single study or complication; it will also be made available to researchers for further analyses in the future. The project is therefore an investment in future childhood cancer research.

## Discovery of a new type of congenital neutropenia and myelodysplasia in children

**Renella R**, Gagne K, Beauchamp E, Fogel J, Perlov A, Sola M, Schlaeger T, Hofmann I, Shimamura A, Ebert BL, Schmitz-Abe K, Markianos K, Murphy K, Sun L, Rockowitz S, Sliz P, Campagna DR, Springer TA, Bahl C, Agarwal S, Fleming MD, Williams DA. Congenital X-linked neutropenia with myelodysplasia and somatic tetraploidy due to a germline mutation in SEPT6. *Am J Hematol.* (2022); 97(1), 18-29. doi: 10.1002/ajh.26382.

### How does this study help patients?



The findings from this study are interesting for several reasons. First of all, a better understanding of this genetic disease can help to diagnose it, and the findings also pave the way to new approaches to the therapy of leukaemia and myelodysplasia. Moreover, during this research the team also discovered that septins, a little-researched group of proteins, play a role in the production of white blood cells in the bone marrow.

A research project led by Dr. Raffaele Renella (University Hospital Lausanne CHUV, University of Lausanne UNIL) showed a causal relationship between a previously unidentified genetic mutation and a cell production anomaly in the bone marrow. Ten years ago, Dr. Raffaele Renella and Dr. David Williams treated an infant at Boston Children's Hospital with very severe neutropenia (an immunodeficiency characterised by the lack of a certain type of white blood cell) with no discernible cause, and they subsequently began investigating the condition to learn more about it. The unusual clinical picture of this patient led the researchers to sequence his genome, and they identified a new mutation in SEPT6, a gene that plays a role in cell division. A very different connection had already been made between this gene and leukaemia in infants, but it had never previously been associated with a congenital genetic disorder in humans. The researchers used pluripotent stem cells derived directly from the patient, in vitro gene editing methods and artificial intelligence to demonstrate that the mutation was indeed the cause of the child's condition. Since these findings were published, mutations in SEPT6 have also been identified in other children with similar clinical presentations. •

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on Facebook at **spog.switzerland** or  
on **LinkedIn**.

# Clinical Project Management and Quality Management

Clinical Project Management and Quality Management are central tasks of the SPOG Coordinating Center (SPOG CC). The main task of Clinical Project Management is to oversee studies, from their preparation and opening, followed by the implementation of amendments during the study, right through to the conclusion and archiving of the study. Quality Management is independent of Project Management and carries out quality assurance in accordance with the overarching objectives of the mandatory ICH GCP Guideline, to ensure that the rights, safety and wellbeing of study participants are upheld, along with the integrity of the study results.

## Clinical Project Management

### Opening of new studies

SPOG opened the clinical studies SIOP Randomet 2017, ML-DS 2018 and SIOPE ATRT01 in 2022. Additional centres were also opened for the clinical studies FaR-RMS and SIOP-HRMB and the research project NHL-BFM Registry 2012. These studies are now open for patient recruitment at all SPOG member hospitals. This meant that a total of 34 centre openings took place in 2022.

- SIOP Randomet 2017 (a randomised Phase III clinical study for children and adolescents with a stage IV nephroblastoma): The clinical study was opened at all SPOG member hospitals in 2022.
- ML-DS 2018 (a Phase III clinical study with CPX-351 for the treatment of myeloid leukaemia in children with Down syndrome): The clinical study was opened at all SPOG member hospitals in 2022.

- SIOPE-ATRT01 (an international clinical study for children and adolescents with atypical teratoid/rhabdoid tumours): The clinical study was opened at eight of the nine SPOG member hospitals in 2022.

### Looking ahead to new studies

Preparations were also made in 2022 for the opening of new studies over the next year. There are plans to open clinical studies and research projects focusing on brain and bone marrow tumours (MNP Int-R), solid tumours (SIOPEN Bioportal, iEwing Register, INTER-Ewing-1) and on leukaemia, lymphoma and bone marrow disease (Interfant-21, ALLCL-VBL, EW-OG-SAA 2020 Registry). The MAKEI V clinical study for children and adolescents with malignant extracranial germ cell tumours was submitted to the ethics committee and Swissmedic at the end of 2022 and is expected to open at all SPOG member hospitals in 2023.

The SPOG General Assembly takes decisions on the opening of further studies on an ongoing basis, in response to study proposals following assessment by the SPOG PWG (Protocol Working Group).

### CRC Meeting

25 participants from seven SPOG member hospitals, the Childhood Cancer Registry (ChCR) and the SPOG CC were represented at this year's SPOG CRC (Clinical Research Coordinators) Meeting in Bern at the end of November. Various topics relating to clinical project management, monitoring and quality management were discussed and information from the Childhood Cancer Registry (ChCR) was presented.



## Overview of submissions to the authorities

The following table shows all relevant submissions to the authorities in 2022.

	Ethics committees	Swissmedic	Federal Office of Public Health	Total
Non-substantial amendments	27	10	0	37
Substantial amendments	47	5	0	52
Annual safety reports (ASR and DSUR)	32	22	1	55
Initial submissions	3	3	0	6
<b>Total submissions</b>	<b>109</b>	<b>40</b>	<b>1</b>	<b>150</b>

## Quality Management

SPOG has undertaken to have the SPOG CC and the SPOG member hospitals audited regularly by external service providers. The most recent audits took place in 2018–2019, so organisation of the audit of the SPOG CC and three member hospitals was started in early 2022. The SPOG CC and three SPOG member hospitals were audited successfully in the second and third quarters of 2022. The direct interaction between the individual SPOG member hospitals, the auditors and SPOG CC Quality Management was perceived by everyone involved as supportive and helpful in improving the quality of clinical research on an ongoing basis.

The SPOG hospital in Lausanne was also inspected by Swissmedic in the spring of 2022. The optimisation plan subsequently put together by the SPOG CC in conjunction with the SPOG hospital in Lausanne was approved by Swissmedic in the summer of 2022. •



### Lead QM and CPM

**Dr. Michael Zeller**  
Head Clinical Operations



**Lara Fux**  
Team Leader Clinical Project Management



# Partner Relations

SPOG's fundraising efforts were once again successful in 2022. It was possible to hold the charity concert in the French Church in Bern again after a long pause due to the pandemic; it was a great success. SPOG hosted a stand at various fun runs in Switzerland for the first time. And a particular highlight with a view to future communications was the appointment of two ambassadors for SPOG.

The «Partner Relations» team is responsible for fundraising and communications. As a non-profit organisation, SPOG relies on new sources of funding each year if it is to open new clinical trials in Switzerland and recruit patients for research projects.

« Since I became a mother my heart has been beating outside my body. It's an incredible privilege to have a healthy child. Let's support everyone who is not so fortunate. »

Yonni Moreno Meyer  
aka Pony M



The fundraising unit is responsible for obtaining these resources. In 2022 this was achieved mainly through requests to various foundations and organisations. A somewhat smaller amount came from companies. The largest single contribution, however, came through a service level agreement with the State Secretariat for Education, Research and Innovation (SERI) which runs for several years. SPOG also receives generous support from private donors, sometimes in the form of patronage.

SPOG deployed new communications activities to increase its reach and presence in the public eye, among them cooperation with ambassadors and information stands at a number of fun runs. New fundraising tools were also used. SPOG carried out a door-to-door fundraising campaign for the first time. These new fundraising activities enabled SPOG to meet its budgetary needs for 2022.

## Highlights in 2022

### Childhood Cancer Day, 15 February

The communication year began for SPOG with the preparations for Childhood Cancer Day on 15 February. In 2022, SPOG was able to draw attention to its work by issuing a press release, posting on social media and placing a variety of advertisements to tie in with this event.

### Charity concert

Every other year, SPOG organises a charity concert for the benefit of clinical childhood cancer research. The event had to be cancelled in 2020 and 2021 because of the pandemic. It finally took place again on 7 May 2022. A number of choirs sang a varied programme of well-known songs from all over the world for children and adolescents with cancer. Entry was free, a collection was taken for donations. All proceeds were used to support children from Ukraine with cancer.



### SPOG at popular runs

SPOG hosted a stand at a number of fun runs with the aim of raising awareness of the challenges posed by childhood cancer among people with an interest in health-related topics. The first event with a SPOG stand was the Chäsitzer Louf in Kehrsatz (Canton Bern) on 30 April 2022. SPOG then attended the Münsiger Louf on 13 August and the Allschwiler Klausenlauf in early December. SPOG was present at each event with a stand at which children could colour fabric bags and adults were able to learn about research activities and enter competitions.



### International Childhood Cancer Awareness Month (September)

In September, International Childhood Cancer Awareness Month, SPOG aims to raise public awareness of the subject of childhood cancer, while at the same time drawing attention to the importance of its research activities for children and adolescents with cancer. This year SPOG drew attention to the need for research by placing numerous advertisements in different media, running a campaign on public transport, advertising in a number of cinemas in and around Bern and posting on social media. By raising awareness this way, SPOG achieved a substantial increase in donations.

### Door-to-door fundraising campaign (August to October)

SPOG deployed a new fundraising tool for the first time in 2022 in the form of a door-to-door campaign throughout German-speaking Switzerland. SPOG gained a large number of new supporters for childhood cancer research between the end of August and mid-October as a result of this campaign.

«As a father I know how terrible it is to imagine losing a child. That's why I'm supporting SPOG and childhood cancer research, so that as many parents as possible are spared this fate.»

Jann Billeter



### Two new ambassadors

In future, SPOG will have even more support in its quest to illustrate the importance of clinical research into childhood cancer and to make the subject more accessible to the public: last year two celebrities from German-speaking Switzerland agreed to become ambassadors. Yonni Moreno Meyer, also known as Pony M, is a regular columnist and blogs on a wide range of topics. Jann Billeter, a presenter and former ice-hockey player, is a familiar face in Switzerland. Both have a personal commitment to improving the quality of life of children and adolescents with cancer and their chances of recovery. •



### Lead Partner Relations

Fabian Dreher  
Team Leader Partner Relations





# Fundraising

SPOG is grateful to all the individuals, charities, organisations, companies and institutions that have assisted it. It is thanks to their generous support that SPOG is able to carry out its research, thus giving a future to children with cancer.

## Funding partners

### State Secretariat for Education, Research and Innovation (SERI)

In 2022 SERI was once again the major funding partner of SPOG. Following a dispatch from the Federal Council to Parliament on the promotion of education, research and innovation, SERI awarded performance mandates to SPOG (cancer research for children) and SAKK (cancer research for adults) covering the period 2021 to 2024.

Art. 15 of the Federal Act on the Promotion of Research and Innovation (RIPA) forms the legal basis of this promotion of research by the federal government. The federal contribution may not legally exceed 50 percent of requirements. SPOG is considered to be a research institute of national importance.

### Swiss Cancer Research (KFS)

KFS has been a reliable research funding partner of SPOG for many years. Swiss Cancer Research and the federal government are the most important sources of funding for SPOG.

### Zoé4life

In 2022, Zoé4life again gave SPOG significant donations for its research into the especially challenging treatment of relapses in children and adolescents with cancer.

### Swiss Clinical Cancer Research Foundation (SSKK)

This Foundation is another partner which has been providing SPOG with reliable support for many years. Substantial funding is awarded to selected SPOG projects every year.

### Kinderkrebshilfe Schweiz

Kinderkrebshilfe Schweiz has undertaken to make generous donations to SPOG between 2020 and 2023. This commitment illustrates the high value placed on SPOG's research activities by those who are directly affected.

### Kinderkrebshilfe Zentralschweiz

Kinderkrebshilfe Zentralschweiz, always a reliable partner, continued to support SPOG in 2022 with a generous donation for childhood cancer research. This support also comes from families who are directly affected.

### Childhood Cancer Switzerland (Kinderkrebs Schweiz)

The umbrella organisation Childhood Cancer Switzerland also gave SPOG generous financial support in 2022.

### Stiftung für krebskranke Kinder, Regio Basiliensis

The Stiftung für krebskranke Kinder, Regio Basiliensis, has been supporting projects for children with cancer and their families in the Basel region for over 30 years and has now become a loyal and valued funding partner for SPOG, to which it made another generous donation in 2022.

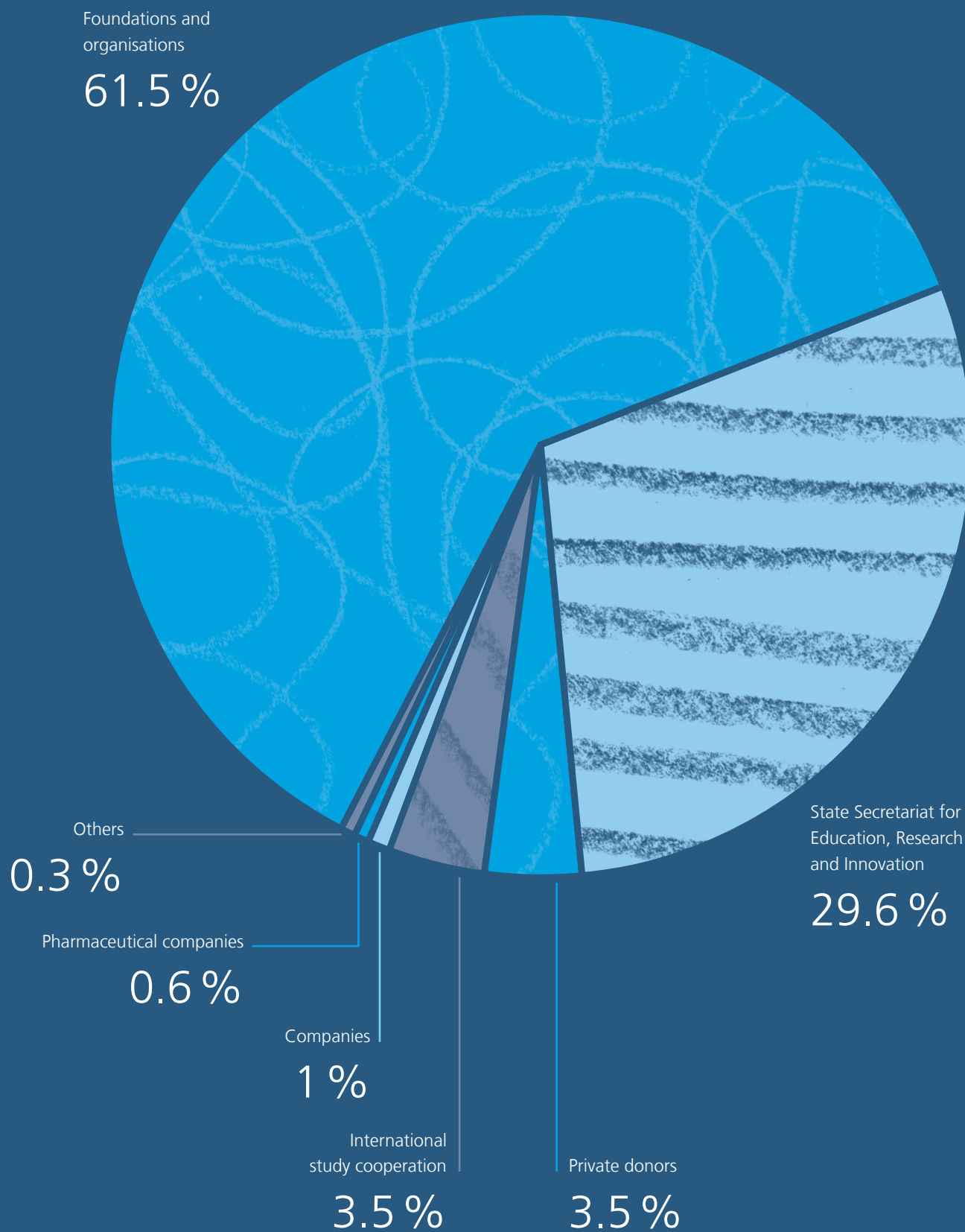
### Various foundations and organisations

SPOG received generous funding from 41 foundations and organisations, including nine in French-speaking Switzerland. It currently has an agreement spanning several years with the [Stiftung Domarena](#), which provides SPOG with a high level of funding.

### Private donations

Each year, SPOG receives support from private donors old and new. SPOG is particularly grateful to the new donors who intend to support research into childhood cancer for several years. Every donation makes a difference and helps to improve the treatment options and quality of life of affected children and adolescents. •

## Sources of funding in 2022



# Protocol Working Group (PWG)

The main task of the Protocol Working Group is to evaluate new study proposals and submit its recommendation to the SPOG Research Council.

The Protocol Working Group held all of its meetings virtually in 2022. The members of the PWG attended four Zoom meetings in 2022.

## Main outcomes of the PWG meetings in 2022

In 2022, several major studies were discussed and evaluated as SPOG studies and submitted to the Research Council for approval. Additionally, the PWG evaluated and recommended to the Research Council candidacies for National Study Chair (NSC) and Vice National Study Chair (Vice-NSC) positions for several studies in 2022. The following NSCs and Vice-NSCs were subsequently elected by the Research Council:

- SIOPEN Bioportal: Marie-Louise Choucair (Lausanne) as NSC and Sabine Kroiss (Zurich) as Vice-NSC.
- Interfant-21: Nicole Bodmer (Zurich) as NSC and Jean-Pierre Bourquin (Zurich) as Vice-NSC.
- ALCL-VBL: Francesco Ceppi (Lausanne) as NSC.
- INTER-EWING-1: Willemijn Breunis (Zurich) as NSC and Eva Brack (Berne) as Vice-NSC.

## Highlights in 2022

Jochen Rössler, who was involved in various protocols either as NSC or Vice-NSC, left Berne for a position outside the network. These positions therefore had to be covered by colleagues, who applied officially as defined in the PWG procedure. Thus, Sabine Kroiss (Zurich) was elected for the position of NSC for UMBRELLA SIOP RTSG 2016, Frédéric Baleyrier (Geneva) as NSC for LCH-IV, Cécile Adam (Lausanne) as Vice-NSC for LCH-IV, Nicolas Waespe (Berne) as NSC for STEP, Tobias Dantonello (Berne) as NSC for CWS Registry SoTiSaR, Eveline Stutz-Grunder (Zurich) as Vice-NSC for MAKEI V and Manuel Diezi (Lausanne) as Vice-NSC for FaR-RMS. •



### PWG Lead

**Prof. Maja Beck Popovic**  
PWG Chair



**Dr. Nicolas Gerber**  
PWG Vice-Chair



## What does the PWG do?



This working group evaluates all studies submitted by members of SPOG with respect to their adoption as group-wide protocols. After a prior review of relevant regulatory aspects by SPOG Coordinating Center employees, checking for conformity with research guidelines, laws and protection of study participants, the medical, methodological and financial aspects of the study are discussed. Following this the working group formulates a recommendation concerning the participation or non-participation for the SPOG Research Council, which ultimately decides on the recognition of a study as a group-wide SPOG protocol.



# Translational research / Biobank

## Swiss Pediatric Hematology and Oncology Group (SPHO) Biobank Network

The Swiss Pediatric Hematology and Oncology (SPHO) Biobank Network was established as a national project for the collection of samples from paediatric patients who have been treated in SPOG member hospitals. The biobank infrastructure is located in the Oncology Research Laboratory of the University Children's Hospital Zurich, at the Balgrist Campus.

### What does the Biobank do?

In the SPOG member hospitals, samples are collected with the consent of the patients or their parents. Haematological samples are processed by the oncology diagnostic laboratory of the Children's Hospital Zurich, which acts as the national reference laboratory for leukaemia clinical studies. For solid tumours, collaborations have been established with Pathology tissue banks at four university hospitals (Zurich, Berne, Basel and Geneva). Tumour samples are stored locally in the tissue banks and only the clinical data and the declaration of consent are archived centrally in the SPHO biobank. These collaborations allow the highest quality in sample processing.

### Link to SPOG



The SPHO Biobank Network's activity is strictly connected to the SPOG member hospitals. The biobank collects viable cells and tumour material from patients treated at SPOG member hospitals and is able to professionally store them and provide them for future research projects. Thanks to our collaborations with pathology institutes in some of the SPOG member hospitals, solid tumours are now also available as fresh frozen tissues, allowing allowing for studies previously impossible to be performed. Review Boards, whose members are appointed by the SPOG General Assembly, govern the review process of the biobank.

### Highlights in 2022

The SPHO biobank is now certified by the Swiss Biobanking Platform (SBP) with the NORMA and VITA labels. The SPHO biobank has been the pilot biobank at the University Children's Hospital Zurich to implement the use of the CentraXX biobank software (by Kairos GmbH). This is fully functional and all legacy data of the biobank from the previous years have been transferred. Regarding the Biobank project, all the grant objectives have been achieved, with the creation of the Minimal Database, the setup of two new databases at SwissRDL, including web services for direct receipt of data from BISKIDS and SPHO. The Minimal Database has a web interface that allows researchers to search for samples based on a minimal dataset of clinical data. Through this interface, any researcher can place a request of samples to the Biobank consortium. The Contact DB also includes a web app for patient registration by SPOG clinics and a function to link records from the various sources. All components have been thoroughly tested and are technically functional. The web services needed for data transfers to the Minimal DB are in place and functional in both BISKIDS and the SPHO biobank. For the query tool, SwissRDL created the website and implemented the search functions, and the workflows for the submission of queries have been defined.

A contract with the Pathology Institute and the Children's Hospital at Geneva University Hospital (HUG) has been signed to extend the biobank network. The first exchange of data is expected for 2024. •



### SPHO Biobank Network

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# News from the Childhood Cancer Registry (ChCR)

The national Childhood Cancer Registry in Switzerland (ChCR) records cancer in children and adolescents up to and including 19 years of age. In addition to new cases and information about the diagnoses, it also documents the treatment offered, the course of the disease and late effects. The ChCR evaluates the data collected and provides information on the incidence and course of different types of cancer in children and adolescents and on the efficacy of treatments.

## Highlights in 2022

- «Childhood cancer» on the Federal Statistical Office (FSO) website: Every year the ChCR provides the FSO with incidence and mortality statistics for childhood cancer that are published on the FSO website. These statistics are calculated using data from the ChCR.
- Statistical analyses on the ChCR website: The ChCR publishes on its website figures showing the number of children diagnosed with cancer (incidence), classified according to diagnostic groups, sex and age. It also provides data on the survival rates of children with cancer.
- Method standardisation: In 2022 the ChCR, the Federal Statistical Office (FSO) and the National Agency for Cancer Registration (NACR) together completed the documentation of the harmonised method for national reporting on cancer in adults, children and adolescents. The documentation contains a description of the data sources and standards for routine statistical analyses and for cancer reporting. The final document Statistical Methods for Cancer Reporting in Switzerland is available on the ChCR website.

- International cooperation: The ChCR works with international organisations to enable the Swiss data to be compared internationally. This cooperation allows the ChCR to regularly review and improve its data quality. The ChCR supplies data for the international initiatives managed by the International Association of Cancer Registries (IARC) and the European Network of Cancer Registries (ENCR), for example.
- National cooperation: The ChCR works closely with all the national stakeholders in cancer registration and is in regular contact with the Federal Office of Public Health (FOPH), the Federal Statistical Office (FSO), the National Agency for Cancer Registration (NACR), the Swiss Association of Cancer Registries (ASRT) and the cantonal cancer registries. It maintains regular contact with Childhood Cancer Switzerland and, through it, with the related patient organisations as well.
- Clinical Research Coordinator (CRC) Meeting: The ChCR informed the clinical research coordinators at SPOG about reporting cancer cases from the ChCR perspective (reporting duty, reporting process and statistics to provide complete reports) at the annual CRC Meeting and hosted a lively discussion about regulation of the reporting processes in the SPOG hospitals.

The ChCR will no longer be represented in SPOG from January 2023. •



**Lead ChCR**

Prof. Claudia Kuehni



# Paediatric surgery report

Surgery often plays a critical role in children's cancer treatment. It is essential to focus on the treatment of various types of cancers including neuroblastoma, Wilms' tumour, hepatoblastoma, and brain and bone tumours in an interdisciplinary team. We discuss with specialists from oncology, radiology, radiotherapy and pathology the best strategy for a paediatric patient with a tumour. In Switzerland, with several centres for Paediatric Oncology, we continuously strive for optimal treatment options for paediatric patients across cantonal borders to achieve the best possible outcome. In order to reach this goal, it is of utmost importance to network across all specialities.

In 2022, the Jack Plaschkes Memorial Award for the promotion of clinical and basic research in the field of Paediatric Surgical Oncology in Switzerland was awarded for the last time. Dr. Remo Bilang received the CHF 15,000 award for his excellent work entitled «Perfusion-Based Bioreactor Culture and Isothermal Microcalorimetry for Preclinical Drug Testing with the Carbonic Anhydrase Inhibitor SLC-0111 in Patient-Derived Neuroblastoma».

Surgery will no longer be represented in SPOG in the future. •



Author

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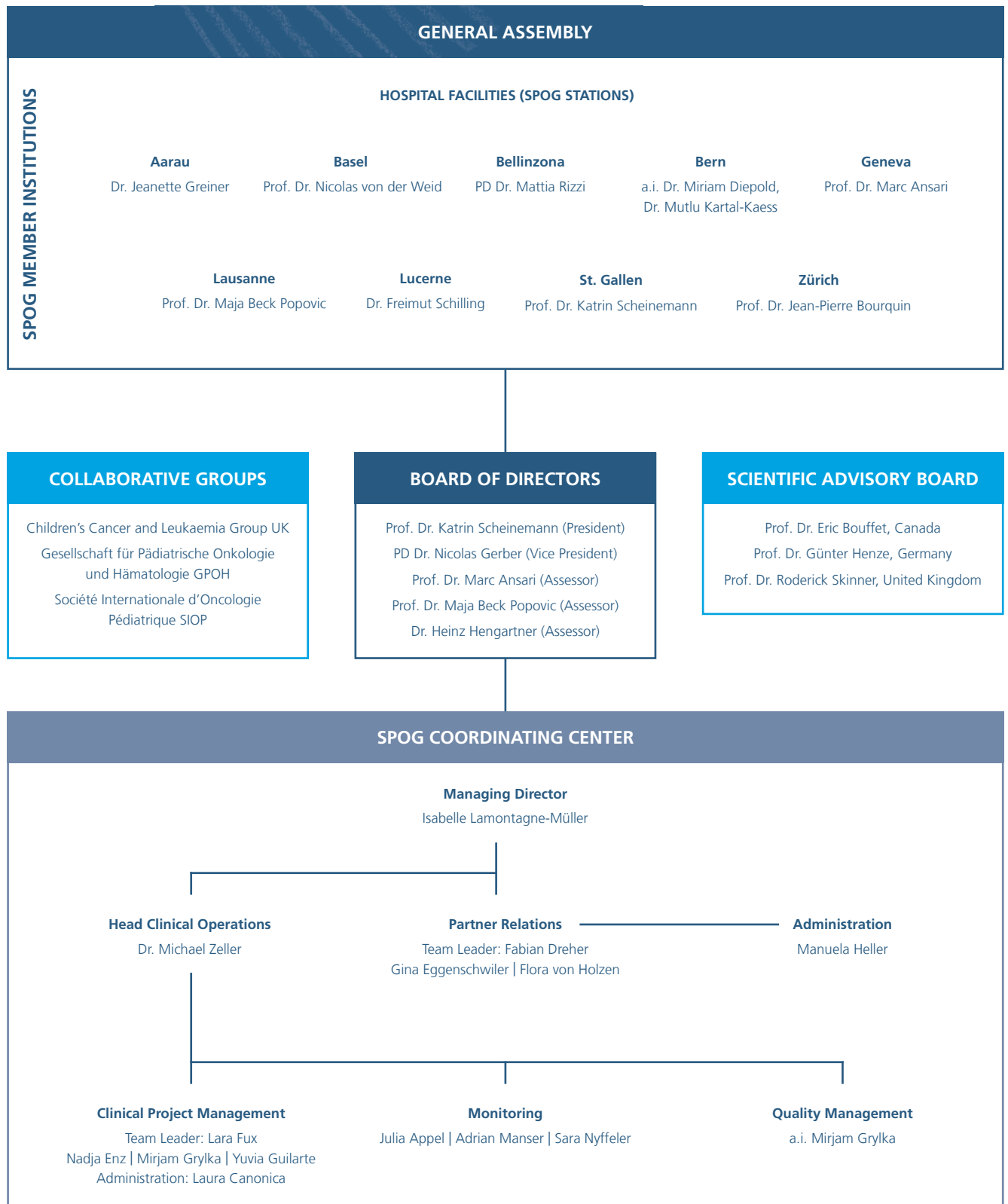


# Annual accounts

Operating account 1 January to 31 December				
	2022		2021	
	CHF		CHF	
<b>Operating income</b>				
Research contributions, Federal Government	949,172		959,000	
Research contributions, third parties	1,474,038		1,542,207	
Research contributions, KFS	500,000		300,000	
Miscellaneous income	404,473		70,814	
<b>Total operating income</b>	<b>3,327,683</b>	<b>100.0 %</b>	<b>2,872,020</b>	<b>100.0 %</b>
<b>Operating costs</b>				
Miscellaneous study-related expenses	-111,050		-89,300	
Research contributions, centres	-1,083,158		-613,091	
Other operating expenses	-69,490		-50,290	
<b>Total operating expenses</b>	<b>-1,263,698</b>	<b>-38.0 %</b>	<b>-752,681</b>	<b>-26.2 %</b>
<b>Interim result 1</b>	<b>2,063,985</b>	<b>62.0 %</b>	<b>2,119,339</b>	<b>73.8 %</b>
<b>Coordination expenses</b>				
Personnel expenses	-1,414,735		-1,460,202	
Other coordination expenses	-458,058		-327,731	
<b>Total coordination expenses</b>	<b>-1,872,793</b>	<b>-56.3 %</b>	<b>-1,787,933</b>	<b>-62.3 %</b>
<b>Interim result 2</b>	<b>191,192</b>	<b>5.7 %</b>	<b>331,406</b>	<b>11.5 %</b>
<b>Financial result</b>				
Financial expenses	-4,558		-8,389	
<b>Total financial result</b>	<b>-4,558</b>	<b>-0.1 %</b>	<b>-8,389</b>	<b>-0.3 %</b>
<b>Interim result 3</b>	<b>186,634</b>	<b>5.6 %</b>	<b>323,018</b>	<b>11.2 %</b>
<b>Extraordinary expenses &amp; out-of-period result</b>				
Extraordinary expenses	0		0	
Out-of-period income	0		0	
<b>Total extraordinary expenses &amp; out-of-period result</b>	<b>0</b>	<b>0.0 %</b>	<b>0</b>	<b>0.0 %</b>
<b>Annual result</b>	<b>186,634</b>	<b>5.6 %</b>	<b>323,018</b>	<b>11.2 %</b>



# Structure of SPOG



Position as of 31 December 2022



# SPOG in Publications in 2022

Below is a list of the publications that appeared in renowned scientific journals in 2022 and in which people from the SPOG network were actively involved. Publications with a coloured background are directly related to studies in which SPOG was involved.

Publications in peer reviewed journals and cited in PubMed		JIF
1	Agulnik A, Kizyma R, Salek M, Wlodarski MW, Pogorelyy M, Oszer A, Yakimkova T, Nogovitsyna Y, Dutkiewicz M, Dalle JH, Dirksen U, Eggert A, Fernández-Teijeiro A, <b>Greiner J</b> , Kraal K, Mueller A, Sramkova L, Zecca M, Wise PH, Mlynarski W; SAFER Ukraine Collaborative. Global effort to evacuate Ukrainian children with cancer and blood disorders who have been affected by war. <i>Lancet Haematol.</i> (2022); 9(9), e645-e647. doi: 10.1016/S2352-3026(22)00259-9.	1.465
2	Albert MH, Sirait T, Eikema DJ, Bakunina K, Wehr C, Suarez F, Fox ML, Mahlaoui N, Gennery AR, Lankester AC, Beier R, Bernardo ME, Bigley V, Lindemans CA, Burns SO, Carpenter B, Dybko J, <b>Güngör T</b> , Hauck F, Lum SH, Balashov D, Meisel R, Moshous D, Schulz A, Speckmann C, Slatter MA, Strahm B, Uckan-Cetinkaya D, Meyts I, Vallée TC, Wynn R, Neven B, Morris EC, Aiuti A, Maschan A, Aljurf M, Gedde-Dahl T, Gurman G, Bordon V, Kriván G, Locatelli F, Porta F, Valcárcel D, Beguin Y, Faraci M, Kröger N, Kulagin A, Shaw PJ, Veelken JH, Diaz de Heredia C, Fagioli F, Felber M, Gruhn B, Holter W, Rössig C, Sedlacek P, Apperley J, Ayas M, Bodova I, Choi G, Cornelissen JJ, Sirvent A, Khan A, Kupesiz A, Lenhoff S, Ozdogu H, <b>von der Weid NX</b> , Rovira M, Schots R, Vinh DC. Hematopoietic stem cell transplantation for adolescents and adults with inborn errors of immunity: an EBMT IEWP study. <i>Blood.</i> (2022); 140(14), 1635-1649. doi: 10.1182/blood.2022015506.	17.543
3	André P, Diezi L, Dao K, Crisinel PA, Rothuizen LE, Chtioui H, Decosterd LA, <b>Diezi M</b> , Asner S, Buclin T. Ensuring Sufficient Trough Plasma Concentrations for Broad-Spectrum Beta-Lactam Antibiotics in Children With Malignancies: Beware of Augmented Renal Clearance! <i>Front Pediatr.</i> (2022); 9, 768438. doi: 10.3389/fped.2021.768438.	2.634
4	Antić Ž, Yu J, <b>Bornhauser BC</b> , Lelieveld SH, van der Ham CG, van Reijmersdal SV, Morgado L, Elitzur S, <b>Bourquin JP</b> , Cazzaniga G, Eckert C, Camós M, Sutton R, Cavé H, Moorman AV, Sonneveld E, Geurts van Kessel A, van Leeuwen FN, Hoogerbrugge PM, Waanders E, Kuiper RP. Clonal dynamics in pediatric B-cell precursor acute lymphoblastic leukemia with very early relapse. <i>Pediatr Blood Cancer.</i> (2022); 69(1), e29361. doi: 10.1002/pbc.29361.	2.355
5	Babecoff S, Mermillod F, <b>Marino D</b> , Gayet-Ageron A, <b>Ansari M</b> , Fernandez E, <b>Gumy-Pause F</b> . Long-term follow-up for childhood cancer survivors: the Geneva experience. <i>Swiss Med Wkly.</i> (2022); 152, w30153. doi: 10.4414/smw.2022.w30153.	1.822
6	Barz MJ, Behrmann L, Capron D, Zuchtriegel G, Steffen FD, Kunz L, Zhang Y, Vermeerbergen IJ, Marovca B, Kirschmann M, Zech A, Nombela-Arrieta C, Ziegler U, Schroeder T, <b>Bornhauser BC</b> , <b>Bourquin JP</b> . B and T cell acute lymphoblastic leukemia evade chemotherapy at distinct sites in the bone marrow. <i>Haematologica.</i> (2022). doi: 10.3324/haematol.2021.280451.	7.116
7	Belle FN, Sláma T, <b>Schindera C</b> , <b>Diesch T</b> , <b>Kartal-Kaess M</b> , <b>Kuehni CE</b> , Mader L. Body image in adolescent survivors of childhood cancer: The role of chronic health conditions. <i>Pediatr Blood Cancer.</i> (2022); 69(11), e29958. doi: 10.1002/pbc.29958.	2.355
8	Betensky M, Kulkarni K, <b>Rizzi M</b> , Jones S, Brandão LR, Faustino EVS, Goldenberg NA, Sharathkumar A. Recommendations for standardized definitions, clinical assessment, and future research in pediatric clinically unsuspected venous thromboembolism: Communication from the ISTH SSC subcommittee on pediatric and neonatal thrombosis and hemostasis. <i>J Thromb Haemost.</i> (2022); 20(7), 1729-1734. doi: 10.1111/jth.15731.	4.157
9	Bielack SS, Blattmann C, Borkhardt A, Csóka M, Hassenpflug W, Kabičková E, Kager L, Kessler T, Kratz C, <b>Kühne T</b> , Kevric M, Lehrnbecher T, Mayer-Steinacker R, Mettmann V, Metzler M, Reichardt P, Rossig C, Sorg B, von Luettichau I, Windhager R, Hecker-Nolting S. Osteosarcoma and causes of death: A report of 1520 deceased patients from the Cooperative Osteosarcoma Study Group (COSS). <i>Eur J Cancer.</i> (2022); 176, 50-57. doi: 10.1016/j.ejca.2022.09.007.	7.275
10	Blanc L, <b>Renella R</b> . Blood cells molecules and diseases in 2022: A fountain of youth. <i>Blood Cells Mol Dis.</i> (2022); 95, 102665. doi: 10.1016/j.bcmd.2022.102665.	2.372
11	Blanchard-Rohner G, Peirolo A, Coulon L, Korff C, Horvath J, Burkhard PR, <b>Gumy-Pause F</b> , Ranza E, Jandus P, Dibra H, Taylor AMR, Fluss J. Childhood-Onset Movement Disorders Can Mask a Primary Immunodeficiency: 6 Cases of Classical Ataxia-Telangiectasia and Variant Forms. <i>Front Immunol.</i> (2022); 13, 791522. doi: 10.3389/fimmu.2022.791522.	5.085
12	Blankenberger J, Kaufmann M, Albanese E, Amati R, Anker D, Camerini AL, Chocano-Bedoya P, Cullati S, Cusini A, Fehr J, Harju E, Kohler P, Kriemler S, <b>Michel G</b> , Rodondi N, Rodondi PY, Speierer A, Tancredi S, Puhon MA, Kahlert CR. Is living in a household with children associated with SARS-CoV-2 seropositivity in adults? Results from the Swiss national seroprevalence study Corona Immunitas. <i>BMC Med.</i> (2022); 20(1), 233. doi: 10.1186/s12916-022-02431-z.	6.782

13	Bognàr T, Bartelink IH, Egberts TCG, Rademaker CMA, Versluys AB, Slatter MA, Kletzel M, Nath CE, Cuvelier GDE, Savic RM, Dvorak C, Long-Boyle JR, Cowan MJ, Bittencourt H, Bredius RGM, <b>Güngör T</b> , Shaw PJ, <b>Ansari M</b> , Hassan M, Krajcinovic M, Hempel G, Marktel S, Chiesa R, Théoret Y, Lund T, Orchard PJ, Wynn RF, Boelens JJ, Lalmohamed A. Association Between the Magnitude of Intravenous Busulfan Exposure and Development of Hepatic Veno-Occlusive Disease in Children and Young Adults Undergoing Myeloablative Allogeneic Hematopoietic Cell Transplantation. <i>Transplant Cell Ther.</i> (2022); 28(4), 196-202. doi: 10.1016/j.jtct.2022.01.013.	4.064
14	Boller D, Doepfner KT, De Laurentiis A, <b>Guerreiro Stucklin AS</b> , Marinov M, Shalaby T, Depledge P, Robson A, Saghir N, Hayakawa M, Kaizawa H, Koizumi T, Ohishi T, Fattet S, Delattre O, Schweri-Olac A, Höland K, Grotzer M, Frei K, Spertini O, Waterfield MD, Arcaro A. Republication: Targeting PI3KC2B Impairs Proliferation and Survival in Acute Leukemia, Brain Tumours and Neuroendocrine Tumours. <i>Anticancer Res.</i> (2022); 42(6), 3217-3230. doi: 10.21873/anticancer.15812.	1.994
15	Bonner ER, Harrington R, Eze A, Bornhorst M, Kline CN, Gordish-Dressman H, Dawood A, Das B, Chen L, Pauly R, Williams PM, Karlovich C, Peach A, Howell D, Doroshow J, Kilburn L, Packer RJ, Mueller S, <b>Nazarian J</b> . Circulating tumor DNA sequencing provides comprehensive mutation profiling for pediatric central nervous system tumors. <i>NPJ Precis Oncol.</i> (2022); 6(1), 63. doi: 10.1038/s41698-022-00306-3.	10.092
16	Borgmann-Staudt A, Michael S, Sommerhaeuser G, Fernández-González MJ, Alacán Friedrich L, Klco-Brosius S, Kepak T, Kruseova J, <b>Michel G</b> , Panasiuk A, Schmidt S, Lotz L, Balcerak M. The Use of Assisted Reproductive Technology by European Childhood Cancer Survivors. <i>Curr Oncol.</i> (2022); 29(8), 5748-5762. doi: 10.3390/curroncol29080453.	2.257
17	<b>Borlin PR, Brazzola PL</b> , Frontzek K, Zanoni P, <b>Morscher RJ</b> , Hench J, Frank S, Kottke R, Rushing EJ, Goeggel Simonetti B, Steindl K, <b>Guerreiro Stucklin AS</b> . Cancer in children with biallelic BRCA1 variants and Fanconi anemia-like features: Report of a malignant brain tumor in a young child. <i>Pediatr Blood Cancer.</i> (2022); 69(10), e29680. doi: 10.1002/pbc.29680.	2.355
18	Bouchoucha Y, Matet A, Berger A, Carcaboso AM, Gerrish A, Moll A, Jenkinson H, Ketteler P, Dorsman JC, Chantada G, <b>Beck-Popovic M</b> , Munier F, Aerts I, Doz F, Golmard L; European Retinoblastoma Group EuRbG. Retinoblastoma: From genes to patient care. <i>Eur J Med Genet.</i> (2022); 66(1), 104674. doi: 10.1016/j.ejmg.2022.104674.	2.368
19	Brivio E, Baruchel A, Beishuizen A, <b>Bourquin JP</b> , Brown PA, Cooper T, Gore L, Kolb EA, Locatelli F, Maude SL, Mussai FJ, Vormoor-Bürger B, Vormoor J, von Stackelberg A, Zwaan CM. Targeted inhibitors and antibody immunotherapies: Novel therapies for paediatric leukaemia and lymphoma. <i>Eur J Cancer.</i> (2022); 164, 1-17. doi: 10.1016/j.ejca.2021.12.029.	7.275
20	Byrne J, Schmidtmann I, Rashid H, Hagberg O, Bagnasco F, Bardi E, De Vathaire F, Essiaf S, Winther JF, Frey E, Gudmundsdottir T, Haupt R, Hawkins MM, Jakab Z, Jankovic M, Kaatsch P, Kremer LCM, <b>Kuehni CE</b> , Harila-Saari A, Levitt G, Reulen R, Ronckers CM, Maule M, Skinner R, Steliarova-Foucher E, Terenziani M, Zdravec Zalete L, Hjorth L, Garwicz S, Grabow D. Impact of era of diagnosis on cause-specific late mortality among 77 423 five-year European survivors of childhood and adolescent cancer: the PanCareSurFup consortium. <i>Int J Cancer.</i> (2022); 150(3), 406-419. doi: 10.1002/ijc.33817.	5.145
21	<b>Ceppi F</b> , Gotti G, Mörice A, Silvestri D, Poyer F, Lentès J, Bergmann A, Trka J, Alten J, Elitzur S, Barbaric D, Buldini B, Dell'Acqua F, Schumacher F, Casazza G, <b>Tchinda J</b> , Nebral K, Conter V, Attarbaschi A, Schrappe M. Near-tetraploid T-cell acute lymphoblastic leukaemia in childhood: Results of the AIEOP-BFM ALL studies. <i>Eur J Cancer.</i> (2022); 175, 120-124. doi: 10.1016/j.ejca.2022.08.013.	7.275
22	<b>Ceppi F</b> , Wilson AL, Annesley C, Kimmerly GR, Summers C, Brand A, Seidel K, Wu QV, Beebe A, Brown C, Mgebroff S, Lindgren C, Rawlings-Rhea SD, Huang W, Pulsipher MA, Wayne AS, Park JR, Jensen MC, Gardner RA. Modified Manufacturing Process Modulates CD19CAR T-cell Engraftment Fitness and Leukemia-Free Survival in Pediatric and Young Adult Subjects. <i>Cancer Immunol Res.</i> (2022); 10(7), 856-870. doi: 10.1158/2326-6066.CIR-21-0501.	8.728
23	Chalandon Y, Mamez AC, Giannotti F, Beauverd Y, Dantin C, Mahne E, Mappoura M, <b>Bernard F</b> , de Ramon Ortiz C, Stephan C, Morin S, <b>Ansari M</b> , Simonetta F, Masouridi-Levrat S. Defibrotide Shows Efficacy in the Prevention of Sinusoidal Obstruction Syndrome After Allogeneic Hematopoietic Stem Cell Transplantation: A Retrospective Study. <i>Transplant Cell Ther.</i> (2022); 28(11), 765.e1-765.e9. doi: 10.1016/j.jtct.2022.08.003.	4.064
24	Chavaz L, Janssens GO, Bolle S, Mandeville H, Ramos-Albiac M, Van Beek K, Benghiat H, Hoebe B, Morales La Madrid A, Seidel C, Kortmann RD, Hargrave D, Gandola L, Pecori E, van Vuurden DG, Biassoni V, Massimino M, Kramm CM, <b>von Bueren AO</b> . Neurological Symptom Improvement After Re-Irradiation in Patients With Diffuse Intrinsic Pontine Glioma: A Retrospective Analysis of the SIOP-E-HGG/DIPG Project. <i>Front Oncol.</i> (2022); 12, 926196. doi: 10.3389/fonc.2022.926196.	4.848
25	Conter V, <b>Ceppi F</b> . Are clinical pharmacology studies still needed in childhood acute lymphoblastic leukemia? <i>Haematologica.</i> (2022); 107(2), 356-357. doi:10.3324/haematol. 2021.279059.	7.116
26	Daetwyler E, Bargetzi M, <b>Oth M, Scheinemann K</b> . Late effects of high-dose methotrexate treatment in childhood cancer survivors-a systematic review. <i>BMC Cancer.</i> (2022); 22(1), 267. doi: 10.1186/s12885-021-09145-0.	3.150
27	De Clercq E, Grotzer M, Landolt MA, von Helversen B, Flury M, <b>Rössler J</b> , Kurzo A, Streuli J. No wrong decisions in an all-wrong situation. A qualitative study on the lived experiences of families of children with diffuse intrinsic pontine glioma. <i>Pediatr Blood Cancer.</i> (2022); 69(9), e29792. doi: 10.1002/pbc.29792.	2.355
28	Deslarzes P, Djafarriar R, Matter M, La Rosa S, Gengler C, <b>Beck-Popovic M</b> , Zingg T. Neuroblastic Tumors of the Adrenal Gland in Elderly Patients: A Case Report and Review of the Literature. <i>Front Pediatr.</i> (2022); 10:869518. doi: 10.3389/fped.2022.869518.	2.634



- 29 Devine KA, Christen S, Mulder RL, Brown MC, Ingerski LM, Mader L, Potter EJ, Sleurs C, Viola AS, Waern S, Constine LS, Hudson MM, Kremer LCM, Skinner R, **Michel G**, Gilleland Marchak J, Schulte FSM. Recommendations for the surveillance of education and employment outcomes in survivors of childhood, adolescent and young adult cancer: A report from the International Late Effects of Childhood Cancer Guideline Harmonization Group. *Cancer*. (2022); 128(13), 2405-2419. doi: 10.1002/cncr.34215. 6.575
- 30 Devoogdt N, Van Zanten M, Damstra R, Van Duinen K, Dickinson-Blok JL, Thomis S, Giacalone G, Belva F, Suominen S, Kavola H, Oberlin M, **Rössler J**, Rucigaj TP, Riches K, Mansour S, Gordon K, Vignes S, Keeley V. Paediatric lymphoedema: An audit of patients seen by the paediatric and primary lymphoedema group of vascular European Reference Network (VASCERN). *Eur J Med Genet*. (2022); 65(12), 104641. doi: 10.1016/j.ejmg.2022.104641. 2.368
- 31 Diociaiuti A, Baselga E, Boon LM, Domp Martin A, Dvorakova V, El Hachem M, Gasparella P, Haxhija E, Ghaffarpour N, Kyrklund K, Irvine AD, Kapp FG, **Rössler J**, Salminen P, van den Bosch C, van der Vleuten C, Kool LS, Vikkula M. The VASCERN-VASCA working group diagnostic and management pathways for severe and/or rare infantile hemangiomas. *Eur J Med Genet*. (2022); 65(6), 104517. doi: 10.1016/j.ejmg.2022.104517. 2.368
- 32 Dudley IM, Sunguc C, Heymer EJ, Winter DL, Teepe JC, Belle FN, Bárdi E, Bagnasco F, Gudmundsdottir T, Skinner R, **Michel G**, Byrne J, Øfstaas H, Jankovic M, Mazić MC, Mader L, Loonen J, Garwicz S, Wiebe T, Alessi D, Allodji RS, Haddy N, Grabow D, Kaatsch P, Kaiser M, Maule MM, Jakab Z, Winther Gunnes M, Terenziani M, Zdravceva Zalete L, Kuehni CE, Haupt R, de Vathaire F, Kremer LC, Lähteenmäki PM, Winther JF, Hjorth L, Hawkins MM, Reulen RC. Risk of subsequent primary lymphoma in a cohort of 69,460 five-year survivors of childhood and adolescent cancer in Europe: The PanCareSurFup study. *Cancer*. (2022). doi: 10.1002/cncr.34561. 6.575
- 33 Dzhumashev D, Timpanaro A, Ali S, De Micheli AJ, Mamchaoui K, Cascone I, **Rössler J**, **Bernasconi M**. Quantum Dot-Based Screening Identifies F3 Peptide and Reveals Cell Surface Nucleolin as a Therapeutic Target for Rhabdomyosarcoma. *Cancers (Basel)*. (2022); 14(20), 5048. doi: 10.3390/cancers14205048. 6.126
- 34 Erker C, Lane A, Chaney B, Leary S, Minturn JE, Bartels U, Packer RJ, Dorris K, Gottardo NG, Warren KE, Broniscer A, Kieran MW, Zhu X, White P, Dexheimer PJ, Black K, Asher A, DeWire M, Hansford JR, Gururangan S, **Nazarian J**, Ziegler DS, Sandler E, Bartlett A, Goldman S, Shih CS, Hassall T, Dholaria H, Bandopadhyay P, Samson Y, Monje M, Fisher PG, Dodgshun A, Parkin S, Chintagumpala M, Tsui K, Gass D, Larouche V, Broxson E, Garcia Lombardi M, Wang SS, Ma J, Hawkins C, Hamideh D, Wagner L, Koschmann C, Fuller C, Drissi R, Jones BV, Leach J, Fouladi M. Characteristics of patients ≥10 years of age with diffuse intrinsic pontine glioma: a report from the International DIPG/DMG Registry. *Neuro Oncol*. (2022); 24(1), 141-152. doi: 10.1093/neuonc/noab140. 10.247
- 35 Espinoza D, Blanco Lopez JG, Vasquez R, Fu L, Martínez R, Rodríguez H, Navarrete M, Howard SC, Friedrich P, Valsecchi MG, Conter V, **Cepi F**. How should childhood acute lymphoblastic leukemia relapses in low-income and middle-income countries be managed: The AHOPCA-ALL study group experience. *Cancer*. (2022). doi: 10.1002/cncr.34572. 6.575
- 36 Everts R, Muri R, **Leibundgut K**, Siegwart V, Wiest R, Steinlin M. Fear and discomfort of children and adolescents during MRI: ethical consideration on research MRIs in children. *Pediatr Res*. (2022); 91(4), 720-723. doi: 10.1038/s41390-020-01277-6. 2.747
- 37 Fontana A, Matthey S, Mayor C, Dufour C, Destaillets A, Ballabeni P, Maeder S, Newman CJ, **Beck-Popovic M**, **Renella R**, **Diezi M**. PASTEC - a prospective, single-center, randomized, cross-over trial of pure physical versus physical plus attentional training in children with cancer. *Pediatr Hematol Oncol*. (2022); 39(4), 329-342. doi: 10.1080/08880018.2021.1994677. 1.232
- 38 Gebauer J, Skinner R, Haupt R, Kremers L, van der Pal H, **Michel G**, Armstrong GT, Hudson MM, Hjorth L, Lehnert H, Langer T. The chance of transition: strategies for multidisciplinary collaboration. *Endocr Connect*. (2022); 11(9), e220083. doi: 10.1530/EC-22-0083. 2.592
- 39 Geiger J, **Kroiss S**, Reinehr M, Ehrlenspiel D, Schweiger M, Knirsch W. Just an innocent murmur? Large left-ventricular lipoblastoma in an asymptomatic girl. *Eur Heart J Case Rep*. (2022); 6(8), ytac319. doi: 10.1093/ehjcr/ytac319. 2.708
- 40 Ghaffarpour N, Baselga E, Boon LM, Diociaiuti A, Domp Martin A, Dvorakova V, El Hachem M, Gasparella P, Haxhija E, Kyrklund K, Irvine AD, Kapp FG, **Rössler J**, Salminen P, van den Bosch C, van der Vleuten C, Kool LS, Vikkula M. The VASCERN-VASCA working group diagnostic and management pathways for lymphatic malformations. *Eur J Med Genet*. (2022); 65(12), 104637. doi: 10.1016/j.ejmg.2022.104637. 2.368
- 41 Ghorashian S, Jacoby E, De Moerloose B, Rives S, Bonney D, Shenton G, Bader P, **Bodmer N**, Quintana AM, Herrero B, Algeri M, Locatelli F, Vetteranta K, Gonzalez B, Attarbaschi A, Harris S, **Bourquin JP**, Baruchel A. Tisagenlecleucel therapy for relapsed or refractory B-cell acute lymphoblastic leukaemia in infants and children younger than 3 years of age at screening: an international, multicentre, retrospective cohort study. *Lancet Haematol*. (2022); 9(10), e766-e775. doi: 10.1016/S2352-3026(22)00225-3. 10.406
- 42 Gielen GH, Baugh JN, van Vuurden DG, Veldhuijzen van Zanten SEM, Hargrave D, Massimino M, Biassoni V, Morales la Madrid A, Karremann M, Wiese M, Thomale U, Janssens GO, **von Bueren AO**, Perwein T, Nussbaumer G, Hoving EW, Niehusmann P, Gessi M, Kwiecien R, Bailey S, Pietsch T, Andreiulo F, Kramm CM. Pediatric high-grade gliomas and the WHO CNS Tumor Classification-Perspectives of pediatric neuro-oncologists and neuropathologists in light of recent updates. *Neurooncol Adv*. (2022); 4(1), vda077. doi: 10.1093/naojnl/vda077. 10.247

43	Gilleland Marchak J, Christen S, Mulder RL, Baust K, Blom JMC, Brinkman TM, Elens I, Harju E, Kadan-Lottick NS, Khor JWT, Lemiere J, Recklitis CJ, Wakefield CE, Wiener L, Constone LS, Hudson MM, Kremer LCM, Skinner R, Vetsch J, Lee JL, <b>Michel G</b> . Recommendations for the surveillance of mental health problems in childhood, adolescent, and young adult cancer survivors: a report from the International Late Effects of Childhood Cancer Guideline Harmonization Group. <i>Lancet Oncol.</i> (2022); 23(49), e184-e196. doi: 10.1016/S1470-2045(21)00750-6.	33.752
44	Guerrini-Rousseau L, Masliah-Planchon J, Waszak SM, Alhopuro P, Benusiglio PR, Bourdeaut F, Brecht IB, Del Baldo G, Dhanda SK, Garre ML, Gidding CEM, Hirsch S, Hoarau P, Jorgensen M, Kratz C, Lafay-Cousin L, Mastronuzzi A, Pastorino L, Pfister SM, Schroeder C, Smith MJ, Vahteristo P, Vibert R, Vilain C, <b>Waespe N</b> , Winship IM, Evans DG, Brugieres L. Cancer risk and tumour spectrum in 172 patients with a germline SUFU pathogenic variation: a collaborative study of the SIOPE Host Genome Working Group. <i>J Med Genet.</i> (2022); 59(11), 1123-1132. doi: 10.1136/jmedgenet-2021-108385.	4.943
45	Haemmerli M, Ammann RA, <b>Rössler J, Koenig C, Brack E</b> . Vital signs in pediatric oncology patients assessed by continuous recording with a wearable device, NCT04134429. <i>Sci Data.</i> (2022); 9(1), 89. doi: 10.1038/s41597-022-01182-z.	5.541
46	Haeusler GM, Lehrnbecher T, Agyeman PKA, Loves R, Castagnola E, Groll AH, van de Wetering M, Aftandilian CC, Phillips B, Chirra KM, <b>Schneider C</b> , Dupuis LL, Sung L. Clostridioides difficile infection in paediatric patients with cancer and haematopoietic stem cell transplant recipients. <i>Eur J Cancer.</i> (2022); 171, 1-9. doi: 10.1016/j.ejca.2022.05.001.	7.275
47	Hagel C, Sloman V, Mynarek M, Petrasch K, Obrecht D, Kühl J, Deinlein F, Schmid R, <b>von Bueren AO</b> , Friedrich C, Juhnke BO, <b>Gerber NU</b> , Kwicien R, Girschick H, Höller A, Zapf A, von Hoff K, Rutkowski S. Refining M1 stage in medulloblastoma: criteria for cerebrospinal fluid cytology and implications for improved risk stratification from the HIT-2000 trial. <i>Eur J Cancer.</i> (2022); 164, 30-38. doi: 10.1016/j.ejca.2021.12.032.	7.275
48	Hecker-Nolting S, Baumhoer D, Blattmann C, Kager L, <b>Kühne T</b> , Kevric M, Lang S, Mettmann V, Sorg B, Werner M, Bielack SS. Osteosarcoma pre-diagnosed as another tumor: a report from the Cooperative Osteosarcoma Study Group (COSS). <i>J Cancer Res Clin Oncol.</i> (2022). doi: 10.1007/s00432-022-04156-1.	3.656
49	Hecker-Nolting S, Kager L, <b>Kühne T</b> , Baumhoer D, Blattmann C, Friedel G, von Kalle T, Kevric M, Mayer-Steinacker R, Schwarz R, Sorg B, Wirth T, Bielack SS. Ultra-Late Osteosarcoma Recurrences: An Analysis of 17 Cooperative Osteosarcoma Study Group patients with a First Recurrence Detected More Than 10 Years After Primary Tumor Diagnosis. <i>J Adolesc Young Adult Oncol.</i> (2022). doi: 10.1089/jayao.2021.0221.	1.465
50	Hersche R, Roser K, Weise A, <b>Michel G</b> , Barbero M. Fatigue self-management education in persons with disease-related fatigue: A comprehensive review of the effectiveness on fatigue and quality of life. <i>Patient Educ Couns.</i> (2022); 105(6), 1362-1378. doi: 10.1016/j.pec.2021.09.016.	2.607
51	Hettmer S, Linardic CM, Kelsey A, Rudzinski ER, Vokuhl C, Selfe J, Ruhen O, Shern JF, Khan J, Kovach AR, Lupo PJ, Gatz SA, <b>Schäfer BW</b> , Volchenboum S, Minard-Colin V, Koscielniak E, Hawkins DS, Bisogno G, Sparber-Sauer M, Venkatramani R, Merks JHM, Shipley J. Molecular testing of rhabdomyosarcoma in clinical trials to improve risk stratification and outcome: A consensus view from European paediatric Soft tissue sarcoma Study Group, Children's Oncology Group and Cooperative Weichteilsarkom-Studiengruppe. <i>Eur J Cancer.</i> (2022); 172, 367-386. doi: 10.1016/j.ejca.2022.05.036.	7.275
52	Hinze L, Schreck S, Zeug A, Ibrahim NK, Fehlhaber B, Loxha L, Cinar B, Ponimaskin E, Degar J, McGuckin C, Chiosis G, Eckert C, Cario G, <b>Bornhauser BC, Bourquin JP</b> , Stanulla M, Gutierrez A. Supramolecular assembly of GSK3 $\alpha$ as a cellular response to amino acid starvation. <i>Mol Cell.</i> (2022); 82(15), 2858-2870.e8. doi: 10.1016/j.molcel.2022.05.025.	15.584
53	Hou SHJ, Tran A, Cho S, Forbes C, Forster VJ, Stokoe M, Allapitan E, Wakefield CE, Wiener L, Heathcote LC, <b>Michel G</b> , Patterson P, Reynolds K, Schulte FSM. The Perceived Impact of COVID-19 on the Mental Health Status of Adolescent and Young Adult Survivors of Childhood Cancer and the Development of a Knowledge Translation Tool to Support Their Information Needs. <i>Front Psychol.</i> (2022); 13, 867151. doi: 10.3389/fpsyg.2022.867151.	2.067
54	Huo Z, Bilanz R, Supuran CT, <b>von der Weid NX</b> , Bruder E, Holland-Cunz S, Martin I, Muraro MG, Gros SJ. Perfusion-Based Bioreactor Culture and Isothermal Microcalorimetry for Preclinical Drug Testing with the Carbonic Anhydrase Inhibitor SLC-0111 in Patient-Derived Neuroblastoma. <i>Int J Mol Sci.</i> (2022); 23(6), 3128. doi: 10.3390/ijms23063128.	4.556
55	Ilic A, Roser K, Sommer G, Baenziger J, Mitter VR, Mader L, Dyntar D, <b>Michel G</b> . COVID-19 Information-Seeking, Health Literacy, and Worry and Anxiety During the Early Stage of the Pandemic in Switzerland: A Cross-Sectional Study. <i>Int J Public Health.</i> (2022); 67, 1604717. doi: 10.3389/ijph.2022.1604717.	2.419
56	Jacoby E, Ghorashian S, Vormoor B, De Moerloose B, <b>Bodmer N</b> , Molostova O, Yanir AD, Buechner J, Elhasid R, Bielora B, Rogosic S, Dourthe ME, Maschan M, Rossig C, Toren A, von Stackelberg A, Locatelli F, Bader P, Zimmermann M, <b>Bourquin JP</b> , Baruchel A. CD19 CAR T-cells for pediatric relapsed acute lymphoblastic leukemia with active CNS involvement: a retrospective international study. <i>Leukemia.</i> (2022); 36(6), 1525-1532. doi: 10.1038/s41375-022-01546-9.	8.665
57	Jang C, Hui S, Zeng X, Cowan AJ, Wang L, Chen L, <b>Morscher RJ</b> , Reyes J, Frezza C, Hwang HY, Imai A, Saito Y, Okamoto K, Vaspoli C, Kasprinski L, Zsido GA 2nd, Gorman JH 3rd, Gorman RC, Rabinowitz JD. Metabolite Exchange between Mammalian Organs Quantified in Pigs. <i>Cell Metab.</i> (2022); 34(9), 1410. doi: 10.1016/j.cmet.2022.08.006.	21.567
58	Jenei K, Aziz Z, Booth C, Cappello B, <b>Cepi F</b> , de Vries EGE, Fojo A, Gyawali B, Ilbawi A, Lombe D, Sengar M, Sullivan R, Trapani D, Huttner BD, Moja L. Cancer medicines on the WHO Model List of Essential Medicines: processes, challenges, and a way forward. <i>Lancet Glob Health.</i> (2022); 10(12), e1860-e1866. doi: 10.1016/S2214-109X(22)00376-X.	21.597

59	Jeong H, Grimes K, Rauwolf KK, Bruch PM, Rausch T, Hasenfeld P, Benito E, Roider T, Sabarinathan R, Porubsky D, Herbst SA, Erarslan-Uysal B, Jann JC, Marschall T, Nowak D, <b>Bourquin JP</b> , Kulozik AE, Dietrich S, <b>Bornhauser BC</b> , Sanders AD, Korbel JO. Functional analysis of structural variants in single cells using Strand-seq. <i>Nat Biotechnol.</i> (2022). doi: 10.1038/s41587-022-01551-4.	36.558
60	Jin Q, Gutierrez Diaz B, Pieters T, Zhou Y, Narang S, Fijalkowski I, Borin C, Van Laere J, Payton M, Cho BK, Han C, Sun L, Serafin V, Yacu G, Von Looke W, Basso G, Veltri G, Dreveny I, Ben-Sahra I, Goo YA, Safgren SL, Tsai YC, <b>Bornhauser BC</b> , Suraneni PK, Gaspar-Maia A, Kandela I, Van Vlierberghe P, Crispino JD, Tsirogos A, Ntziachristos P. Oncogenic deubiquitination controls tyrosine kinase signaling and therapy response in acute lymphoblastic leukemia. <i>Sci Adv.</i> (2022); 8(49), eabq8437. doi: 10.1126/sciadv.abq8437.	13.116
61	Juhnke BO, Gessi M, <b>Gerber NU</b> , Friedrich C, Mynarek M, <b>von Bueren AO</b> , Haberer C, Schüller U, Kortmann RD, Timmermann B, Bison B, Warmuth-Metz M, Kwicien R, Pfister SM, Spix C, Pietsch T, Kool M, Rutkowski S, von Hoff K. Treatment of embryonal tumors with multilayered rosettes with carboplatin/etoposide induction and high-dose chemotherapy within the prospective P-HIT trial. <i>Neuro Oncol.</i> (2022); 24(1), 127-137. doi: 10.1093/neuonc/noab100.	10.247
62	Kamath A, Srinivasamurthy SK, Chowta MN, Ullal SD, Daali Y, <b>Uppugunduri CRS</b> . Role of Drug Transporters in Elucidating Inter-Individual Variability in Pediatric Chemotherapy-Related Toxicities and Response. <i>Pharmaceuticals (Basel).</i> (2022); 15(8), 990. doi: 10.3390/ph15080990.	5.677
63	Kapp FG, <b>Schneider C</b> , Holm A, Glonnegger H, Niemeyer CM, <b>Rössler J</b> , Zieger B. Comprehensive Analyses of Coagulation Parameters in Patients with Vascular Anomalies. <i>Biomolecules.</i> (2022); 12(12), 1840. doi: 10.3390/biom12121840.	4.082
64	Kline C, Jain P, Kilburn L, Bonner ER, Gupta N, Crawford JR, Banerjee A, Packer RJ, Villanueva-Meyer J, Luks T, Zhang Y, Kambhampati M, Zhang J, Yadavilli S, Zhang B, Gaonkar KS, Rokita JL, Kraya A, Kuhn J, Liang W, Byron S, Berens M, Molinaro A, Prados M, Resnick A, Waszak SM, <b>Nazarian J</b> , Mueller S. Upfront Biology-Guided Therapy in Diffuse Intrinsic Pontine Glioma: Therapeutic, Molecular, and Biomarker Outcomes from PNOC003. <i>Clin Cancer Res.</i> (2022); 28(18), 3965-3978. doi: 10.1158/1078-0432.CCR-22-0803.	10.107
65	Koch R, Gelderblom H, Haveman L, Brichard B, Jürgens H, Cyprova S, van den Berg H, Hassenpflug W, Raciborska A, Ek T, Baumhoer D, Egerer G, Eich HT, Renard M, Hauser P, Burdach S, Bovee J, Bonar F, Reichardt P, Kruseova J, Harges J, <b>Kühne T</b> , Kessler T, Collaud S, Bernkopf M, Butterfaß-Bahloul T, Dhooze C, Bauer S, Kiss J, Paulussen M, Hong A, Ranft A, Timmermann B, Rascon J, Vieth V, Kanerva J, Faldum A, Metzler M, Hartmann W, Hjorth L, Bhadri V, Dirksen U. High-Dose Treosulfan and Melphalan as Consolidation Therapy Versus Standard Therapy for High-Risk (Metastatic) Ewing Sarcoma. <i>J Clin Oncol.</i> (2022); 40(21), 2307-2320. doi: 10.1200/JCO.21.01942.	32.956
66	<b>Koenig C</b> , <b>Kuehni CE</b> , <b>Bodmer N</b> , Agyeman PKA, <b>Ansari M</b> , <b>Rössler J</b> , <b>von der Weid NX</b> , Ammann RA. Time to antibiotics is unrelated to outcome in pediatric patients with fever in neutropenia presenting without severe disease during chemotherapy for cancer. <i>Sci Rep.</i> (2022); 12(1), 14028. doi: 10.1038/s41598-022-18168-x.	3.998
67	Kreis C, Héritier H, <b>Scheinemann K</b> , <b>Hengartner H</b> , de Hoogh K, Rössli M, <b>Spycher BD</b> . Childhood cancer and traffic-related air pollution in Switzerland: A nationwide census-based cohort study. <i>Environ Int.</i> (2022); 166, 107380. doi: 10.1016/j.envint.2022.107380.	12.246
68	Kube SJ, Blattmann C, Bielack SS, Kager L, Kaatsch P, <b>Kühne T</b> , Sorg B, Kevric M, Jabar S, Hallmen E, Sparber-Sauer, Klingebiel T, Koscielniak E, Dirksen U, Hecker-Nolting S, Gerß JWO. Secondary malignant neoplasms after bone and soft tissue sarcomas in children, adolescents, and young adults. <i>Cancer.</i> (2022); 128(9), 1787-1800 doi: 10.1002/cncr.34110.	6.575
69	Kumar S, Kesavan R, Sistla SC, Penumadu P, Natarajan H, Nair S, <b>Uppugunduri CRS</b> , Venkatesan V, Kundra P. Impact of Genetic Variants on Postoperative Pain and Fentanyl Dose Requirement in Patients Undergoing Major Breast Surgery: A Candidate Gene Association Study. <i>Anesth Analg.</i> (2022). doi: 10.1213/ANE.0000000000006330.	4.305
70	Langenberg KPS, Meister MT, Bakhuizen JJ, Boer JM, van Eijkelenburg NKA, Hulleman E, Ilan U, Looze EJ, Dierselhuis MP, van der Lugt J, <b>Breunis WB</b> , Schild LG, Ober K, van Hooff SR, Scheijde-Vermeulen MA, Hiemcke-Jiwa LS, Flucke UE, Kranendonk MEG, Wesseling P, Sonneveld E, Punt S, Boltjes A, van Dijk F, Verwiel ETP, Volckmann R, Hehir-Kwa JY, Kester LA, Koudijs MMJ, Waanders E, Holstege FCP, Vormoor HJ, Hoving EW, van Noesel MM, Pieters R, Kool M, Stumpf M, Blattner-Johnson M, Balasubramanian GP, Van Tilburg CM, Jones BC, Jones DTW, Witt O, Pfister SM, Jongmans MCJ, Kuiper RP, de Krijger RR, Wijnen MHW, den Boer ML, Zwaan CM, Kemmeren P, Koster J, Tops BBJ, Goemans BF, Molenaar JJ. Implementation of paediatric precision oncology into clinical practice: The Individualized Therapies for Children with cancer program 'iTher'. <i>Eur J Cancer.</i> (2022); 175, 311-325. doi: 10.1016/j.ejca.2022.09.001.	7.275
71	Längst E, Crettaz D, Delobel J, <b>Renella R</b> , Bardyn M, Turcatti G, Tissot JD, Prudent M. In vitro-transfusional model for red-blood-cell study: the advantage of lowering hematocrit. <i>Blood Transfus.</i> (2022); doi: 10.2450/2022.0086-22.	3.662
72	Laubscher B, <b>Diezi M</b> , <b>Renella R</b> , Mitchell EAD, Aebi A, Mulot M, Glauser G. Multiple neonicotinoids in children's cerebrospinal fluid, plasma, and urine. <i>Environ Health.</i> (2022); 21(1), 10. doi: 10.1186/s12940-021-00821-z.	5.664
73	Lehrnbecher T, Groll AH, Cesaro S, Alten J, Attarbaschi A, Barbaric D, <b>Bodmer N</b> , Conter V, Izraeli S, Mann G, Möricke A, <b>Niggli FK</b> , Schrappe M, Stary J, Zapotocka E, Zimmermann M, Elitzur S. Invasive fungal diseases impact on outcome of childhood ALL - an analysis of the international trial AIEOP-BFM ALL 2009. <i>Leukemia.</i> (2022). doi: 10.1038/s41375-022-01768-x.	8.665

74	Leoni J, Rougemont A-L, Calinescu AM, <b>Ansari M</b> , Compagnon P, Wilde JCH, Wildhaber BE. Effect of Centralization on Surgical Outcome of Children Operated for Liver Tumors in Switzerland: A Retrospective Comparative Study. <i>Children (Basel)</i> . (2022); 9(2), 217. doi: 10.3390/children9020217.	2.81
75	Lin S, Larrue C, <b>Scheidegger NK</b> , Seong BKA, Dharia NV, Kuljanin M, Wechsler CS, Kugener G, Robichaud AL, Conway AS, Mashaka T, Mouche S, Adane B, Ryan JA, Mancias JD, Younger ST, Piccioni F, Lee LH, Wunderlich M, Letai A, Tamburini J, Stegmaier K. An <i>In Vivo</i> CRISPR Screening Platform for Prioritizing Therapeutic Targets in AML. <i>Cancer Discov.</i> (2022); 12(2), 432-449. doi: 10.1158/2159-8290.CD-20-1851.	29.497
76	Locatelli F, Zugmaier G, Mergen N, Bader P, Jeha S, Schlegel PG, <b>Bourquin JP</b> , Handgretinger R, Brethon B, Rössig C, Kormany WN, Viswagnachar P, Chen-Santel C. Blinatumomab in pediatric relapsed/refractory B-cell acute lymphoblastic leukemia: RIALTO expanded access study final analysis. <i>Blood Adv.</i> (2022); 6(3), 1004-1014. doi: 10.1182/bloodadvances.2021005579.	5.486
77	Mader L, Sláma T, <b>Schindera C</b> , <b>Rössler J</b> , von der Weid NX, Belle FN, <b>Kuehni CE</b> . Social, emotional, and behavioral functioning in young childhood cancer survivors with chronic health conditions. <i>Pediatr Blood Cancer.</i> (2022); 69(9), e29756. doi: 10.1002/pbc.29756.	2.355
78	Mauz-Körholz C, Landman-Parker J, Balwiercz W, <b>Ammann RA</b> , Anderson RA, Attarbaschi A, Bartelt JM, Beishuizen A, Boudjemaa S, Cepelova M, Claviez A, Daw S, Dieckmann K, Fernández-Teijeiro A, Fosså A, Gattenlöhner S, Georgi T, Hjalgrim LL, Hriskova A, Karlén J, Kluge R, Kurch L, Leblanc T, Mann G, Montravers F, Pears J, Pelz T, Rajic V, Ramsay AD, Stoevesandt D, Uyttebroeck A, Vordermark D, Körholz D, Hasenclever D, Wallace WH. Response-adapted omission of radiotherapy and comparison of consolidation chemotherapy in children and adolescents with intermediate-stage and advanced-stage classical Hodgkin lymphoma (EuroNet-PHL-C1): a titration study with an open-label, embedded, multinational, non-inferiority, randomised controlled trial. <i>Lancet Oncol.</i> (2022); 23(1), 125-137. doi: 10.1016/S1470-2045(21)00470-8.	33.752
79	Matzdorff A, Alesci SR, Gebhart J, Holzhauser S, Hütter-Krönke ML, <b>Kühne T</b> , Meyer O, Ostermann H, Pabinger I, Rummel M, Sachs UJ, Stauch T, Trautmann-Grill K, Wörmann B. Expertenreport Immunthrombozytopenie - Aktuelle Diagnostik und Therapie. <i>Oncol Res Treat.</i> (2022). doi: 10.1159/000528819.	1.967
80	McGrady ME, Todd K, Ignjatovic V, Jones S, <b>Rizzi M</b> , Luchtman-Jones L, Thornburg CD. Results of an international survey on adherence with anticoagulation in children, adolescents, and young adults: Communication from the ISTH SSC Subcommittee on Pediatric and Neonatal Thrombosis and Hemostasis. <i>J Thromb Haemost.</i> (2022); 20(7), 1720-1728. doi: 10.1111/jth.15730.	4.157
81	Meister MT, Groot Koerkamp MJA, de Souza T, <b>Breunis WB</b> , Frazer-Mendelewska E, Brok M, DeMartino J, Manders F, Calandrin C, Kerstens HHD, Janse A, Dolman MEM, Eising S, Langenberg KPS, van Tuil M, Knops RRG, van Scheltinga ST, Hiemcke-Jiwa LS, Flucke U, Merks JHM, van Noesel MM, Tops BBJ, Hehir-Kwa JY, Kemmeren P, Molenaar JJ, van de Wetering M, van Bortel R, Drost J, Holstege FCP. Mesenchymal tumor organoid models recapitulate rhabdomyosarcoma subtypes. <i>EMBO Mol Med.</i> (2022); 14(10), e16001. doi: 10.15252/emmm.202216001.	8.821
82	Metzger S, <b>Weiser A</b> , <b>Gerber NU</b> , <b>Ott M</b> , <b>Scheinemann K</b> , Krayenbühl N, Grotzer M, <b>Guerreiro Stucklin AS</b> . Central nervous system tumors in children under 5 years of age: a report on treatment burden, survival and long-term outcomes. <i>J Neurooncol.</i> (2022); 157(2), 307-317. doi: 10.1007/s11060-022-03963-3.	3.267
83	Metzger S, <b>Weiser A</b> , <b>Gerber NU</b> , <b>Ott M</b> , <b>Scheinemann K</b> , Krayenbühl N, Grotzer M, <b>Guerreiro Stucklin AS</b> . Correction to: Central nervous system tumors in children under 5 years of age: a report on treatment burden, survival and long-term outcomes. <i>J Neurooncol.</i> (2022); 157(2), 319. doi: 10.1007/s11060-022-03976-y.	3.267
84	<b>Meyer-Landolt L</b> , Gaspar H, Sanz J, <b>Trippel M</b> , Sabina G, <b>Rössler J</b> . Cutaneous squamous cell carcinoma in an autosomal-recessive Adams-Oliver syndrome patient with a novel frameshift pathogenic variant in the EOGT gene. <i>Am J Med Genet A.</i> (2022); 188(11), 3318-3323. doi: 10.1002/ajmg.a.62961.	2.125
85	Michalek S, Goj T, Plazzo AP, Marovca B, <b>Bornhauser BC</b> , Brunner T. LRH-1/NR5A2 interacts with the glucocorticoid receptor to regulate glucocorticoid resistance. <i>EMBO Rep.</i> (2022); 23(9), e54195. doi: 10.15252/embr.202154195.	7.497
86	Moulis G, Cooper N, Ghanima W, González-López T, <b>Kühne T</b> , Lozano ML, Michel M, Provan D, Zaja F, Aladjidi N, Fynbo Christiansen C, Frederiksen H, Grainger J, McDonald V, Robinson S, <b>Schifferli A</b> , Rodeghiero F. Registries in immune thrombocytopenia (ITP) in Europe: the European Research Consortium on ITP (ERIC) network. <i>Br J Haematol.</i> (2022); 197(5), 633-638. doi: 10.1111/bjh.18111.	5.518
87	Moussaoui M, Surbone A, <b>Adam C</b> , <b>Diesch T</b> , Girardin C, Bénard J, Vidal I, <b>Bernard F</b> , Busiah K, Bouthors T, Primi MP, <b>Ansari M</b> , Vulliemoz N, <b>Gumy-Pause F</b> . Testicular tissue cryopreservation for fertility preservation in prepubertal and adolescent boys: a 6 year experience from a Swiss multi-center network. <i>Front Pediatr.</i> (2022); 10, 909000. doi: 10.3389/fped.2022.909000.	2.634
88	<b>Mühlethaler-Mottet A</b> , Uccella S, Marchiori D, La Rosa S, Daraspe J, Balmas Bouloud K, <b>Beck-Popovic M</b> , Eugster PJ, Grouzmann E, Abid K. Low number of neurosecretory vesicles in neuroblastoma impairs massive catecholamine release and prevents hypertension. <i>Front Endocrinol (Lausanne).</i> (2022); 13, 1027856. doi: 10.3389/fendo.2022.1027856.	3.644
89	Müller K, Vogiatzi F, Winterberg D, Rösner T, Lenk L, Bastian L, Gehlert CL, Autenrieb MP, Brüggemann M, Cario G, Schrappe M, Kulozik AE, Eckert C, Bergmann AK, <b>Bornhauser BC</b> , <b>Bourquin JP</b> , Valerius T, Peipp M, Kellner C, Schewe DM. Combining daratumumab with CD47 blockade prolongs survival in preclinical models of pediatric T-ALL. <i>Blood.</i> (2022); 140(1), 45-57. doi: 10.1182/blood.2021014485.	17.543



90	Mueller S, Taitt JM, Villanueva-Meyer JE, Bonner ER, Nejo T, Lulla RR, Goldman S, Banerjee A, Chi SN, Whipple NS, Crawford JR, Gauvain K, Nazemi KJ, Watchmaker PB, Almeida ND, Okada K, Salazar AM, Gilbert RD, <b>Nazarian J</b> , Molinaro AM, Butterfield LH, Prados MD, Okada H. Mass cytometry detects H3.3K27M-specific vaccine responses in diffuse midline glioma. <i>J Clin Invest.</i> (2022); 132(12), e162283. doi: 10.1172/JCI162283.	11.864
91	Mueller T, Laternser S, <b>Guerreiro Stucklin AS</b> , <b>Gerber NU</b> , Mourabit S, Rizo M, Rushing EJ, Kottke R, Grotzer M, Krayenbühl N, <b>Nazarian J</b> , Mueller S. Real-time drug testing of paediatric diffuse midline glioma to support clinical decision making: The Zurich DIPG/DMG centre experience. <i>Eur J Cancer.</i> (2022); 178, 171-179. doi: 10.1016/j.ejca.2022.10.014.	7.275
92	Obrecht D, Mynarek M, Hagel C, Kwiczen R, Spohn M, Bockmayr M, Bison B, Pfister SM, Jones DTW, Sturm D, von Deimling A, Sahm F, von Hoff K, Juhnke BO, Benesch M, <b>Gerber NU</b> , Friedrich C, <b>von Bueren AO</b> , Kortmann RD, Schwarz R, Pietsch T, Fleischhack G, Schüller U, Rutkowski S. Clinical and molecular characterization of isolated M1 disease in pediatric medulloblastoma: experience from the German HIT-MED studies. <i>J Neurooncol.</i> (2022); 157(1), 37-48. doi: 10.1007/s11060-021-03913-5.	3.267
93	<b>Ott M</b> , <b>Brack E</b> , Kearns PR, Kozhaeva O, Ocoolkjic M, Schoot RA, Vassal G; Essential Medicines Group. Essential medicines for childhood cancer in Europe: a pan-European, systematic analysis by SIOPE. <i>Lancet Oncol.</i> (2022); 23(12), 1537-1546. doi: 10.1016/S1470-2045(22)00623-4.	33.752
94	<b>Ott M</b> , <b>Denzler S</b> , <b>Diesch T</b> , <b>Scheinemann K</b> . Cancer knowledge and health-consciousness in childhood cancer survivors following transition into adult care-results from the ACCS project. <i>Front Oncol.</i> (2022); 12, 946281. doi: 10.3389/fonc.2022.946281.	4.848
95	<b>Ott M</b> , Drozdov D, <b>Scheinemann K</b> . Feasibility of a registry for standardized assessment of long-term and late-onset health events in survivors of childhood and adolescent cancer. <i>Sci Rep.</i> (2022); 12(1), 14617. doi: 10.1038/s41598-022-18962-7.	3.998
96	<b>Ott M</b> , <b>Michel G</b> , <b>Gerber NU</b> , <b>Guerreiro Stucklin AS</b> , <b>von Bueren AO</b> , <b>Scheinemann K</b> , On Behalf Of The Swiss Pediatric Oncology Group Spog. Educational Attainment and Employment Outcome of Survivors of Pediatric CNS Tumors in Switzerland – A Report from the Swiss Childhood Cancer Survivor Study. <i>Children (Basel).</i> (2022); 9(3), 411. doi: 10.3390/children9030411.	2.81
97	<b>Ott M</b> , <b>Scheinemann K</b> . Back to school – The teachers' worries and needs having a childhood cancer patient or survivor in their class. <i>Front Oncol.</i> (2022); 12, 992584. doi: 10.3389/fonc.2022.992584.	4.848
98	<b>Ott M</b> , <b>Wyss J</b> , <b>Scheinemann K</b> . Long-Term Follow-Up of Pediatric CNS Tumor Survivors-A Selection of Relevant Long-Term Issues. <i>Children (Basel).</i> (2022); 9(4), 447. doi: 10.3390/children9040447.	2.81
99	<b>Ott M</b> , Yammine S, Usemann J, Latzin P, Mader L, <b>Spycher BD</b> , <b>Güngör T</b> , <b>Scheinemann K</b> , <b>Kuehni CE</b> ; Swiss Pediatric Oncology Group (SPOG). Longitudinal lung function in childhood cancer survivors after hematopoietic stem cell transplantation. <i>Bone Marrow Transplant.</i> (2022); 57(2), 207-214. doi: 10.1038/s41409-021-01509-1.	4.725
100	Papadimitriou K, Cossu G, Hewer E, <b>Diezi M</b> , Daniel RT, Messerer M. Endoscope-Assisted Extreme Lateral Supracerebellar Infratentorial Approach for Resection of Superior Cerebellar Peduncle Pilocytic Astrocytoma: Technical Note. <i>Children (Basel).</i> (2022); 9(5), 640. doi: 10.3390/children9050640.	2.81
101	Pedot G, Marques JG, Ambühl PP, Wachtel M, Kasper S, Ngo QA, <b>Niggli FK</b> , <b>Schäfer BW</b> . Inhibition of HDACs reduces Ewing sarcoma tumor growth through EWS-FLI1 protein destabilization. <i>Neoplasia.</i> (2022); 27, 100784. doi: 10.1016/j.neo.2022.100784.	5.696
102	Penkert J, Strüwe FJ, Dutzmann CM, Doergeloh BB, Montellier E, Freycon C, Keymling M, Schlemmer HP, Sänger B, Hoffmann B, Gerasimov T, Blattmann C, Fetscher S, Frühwald M, Hettmer S, Kordes U, Ridola V, <b>Kroiss S</b> , Mastronuzzi A, Schott S, Nees J, Prokop A, Redlich A, Seidel MG, Zimmermann S, Pajtler KW, Pfister SM, Hainaut P, Kratz CP. Genotype-phenotype associations within the Li-Fraumeni spectrum: a report from the German Registry. <i>J Hematol Oncol.</i> (2022); 15(1), 107. doi: 10.1186/s13045-022-01332-1.	11.059
103	Peterziel H, Jamaladdin N, ElHarouni D, Gerloff XF, Herter S, Fiesel P, Berker Y, Blattner-Johnson M, Schramm K, Jones BC, Reuss D, Turunen L, Friedenauer A, Holland-Letz T, Sill M, Weiser L, Previti C, Balasubramanian G, <b>Gerber NU</b> , Gojo J, Hutter C, Øra I, Lohi O, Kattamis A, de Wilde B, Westermann F, Tippelt S, Graf N, Nathrath M, Sparber-Sauer M, Sehested A, Kramm CM, Dirksen U, Kallioniemi O, Pfister SM, van Tilburg CM, Jones DTW, Saarela J, Pietiäinen V, Jäger N, Schlesner M, Kopp-Schneider A, Oppermann S, Milde T, Witt O, Oehme I. Drug sensitivity profiling of 3D tumor tissue cultures in the pediatric precision oncology program INFORM. <i>NPJ Precis Oncol.</i> (2022); 6(1), 94. doi: 10.1038/s41698-022-00335-y.	10.092
104	Pirson L, <b>Lüer SC</b> , <b>Diezi M</b> , <b>Kroiss S</b> , <b>Brazzola PL</b> , <b>Schilling FH</b> , <b>von der Weid NX</b> , <b>Scheinemann K</b> , <b>Greiner J</b> , Zuzak TJ, von Bueren AO. Pediatric oncologists' perspectives on the use of complementary medicine in pediatric cancer patients in Switzerland: A national survey-based cross-sectional study. <i>Cancer Rep (Hoboken).</i> (2022); e1649. doi: 10.1002/cnr2.1649.	1.62
105	Priboi C, Gantner B, Holmer P, Neves da Silva L, <b>Tinner EM</b> , Roser K, <b>Michel G</b> . Psychological outcomes and support in grandparents whose grandchildren suffer from a severe physical illness: A systematic review. <i>Heliyon.</i> (2022); 8(5), e09365. doi: 10.1016/j.heliyon.2022.e09365.	3.92

106	Przystal JM, Cianciolo Cosentino C, Yadavilli S, Zhang J, Latenser S, Bonner ER, Prasad R, Dawood AA, Lobeto N, Chin Chong W, Biery MC, Myers C, Olson JM, Panditharatna E, Kritzer B, Mourabit S, Vitanza NA, Filbin MG, de Iuliis GN, Dun MD, Koschmann C, Cain JE, Grotzer M, Waszak SM, Mueller S, <b>Nazarian J</b> . Imipridones affect tumor bioenergetics and promote cell lineage differentiation in diffuse midline gliomas. <i>Neuro Oncol.</i> (2022); 24(9), 1438-1451. doi: 10.1093/neuonc/noac041.	10.247
107	Rakic M, <b>Hengartner H</b> , <b>Lüer SC</b> , <b>Scheinemann K</b> , Elger BS, Rost M. A national survey of Swiss paediatric oncology care providers' cross-cultural competences. <i>Swiss Med Wkly.</i> (2022); 152, w30223. doi: 10.4414/sm.w.2022.w30223.	1.822
108	Rauch S, Rakic M, <b>Hengartner H</b> , Elger B, Rost M. Access to paediatric oncology centres in Switzerland: Disparities across rural-urban and Swiss-foreigners cohorts. <i>Eur J Cancer Care (Engl).</i> (2022); 31(6), e13679. doi: 10.1111/ecc.13679.	2.161
109	Reinhold A, Meyer P, Bruder E, Soleman J, <b>von der Weid NX</b> , Mueller AA, Savic M. Congenital orbital teratoma: A clinicopathologic case report. <i>Am J Ophthalmol Case Rep.</i> (2022); 26, 101420. doi: 10.1016/j.ajoc.2022.101420.	1.08
110	<b>Renella R</b> , Gagne K, Beauchamp E, Fogel J, Perlov A, Sola M, Schlaeger T, Hofmann I, Shimamura A, Ebert BL, Schmitz-Abe K, Markianos K, Murphy K, Sun L, Rockowitz S, Sliz P, Campagna DR, Springer TA, Bahl C, Agarwal S, Fleming MD, Williams DA. Congenital X-linked neutropenia with myelodysplasia and somatic tetraploidy due to a germline mutation in SEPT6. <i>Am J Hematol.</i> (2022); 97(1), 18-29. doi: 10.1002/ajh.26382.	6.973
111	Richter-Pechańska P, Kunz JB, Rausch T, Erarslan-Uysal B, <b>Bornhauser BC</b> , Frimantas V, Assenov Y, Zimmermann M, Happich M, von Knebel-Doeberitz C, von Neuhoff N, Köhler R, Stanulla M, Schrappe M, Cario G, Escherich G, Kirschner-Schwabe R, Eckert C, Avigad S, Pfister SM, Muckenthaler MU, <b>Bourquin JP</b> , Korbel JO, Kulozik AE. Pediatric T-ALL type-1 and type-2 relapses develop along distinct pathways of clonal evolution. <i>Leukemia.</i> (2022); 36(7), 1759-1768. doi: 10.1038/s41375-022-01587-0.	8.665
112	<b>Robin S</b> , <b>Ben Hassine K</b> , Muthukumaran J, <b>Jurkovic Mlakar S</b> , Krajcinovic M, <b>Nava T</b> , <b>Uppugunduri CRS</b> , <b>Ansari M</b> . A potential implication of UDP-glucuronosyltransferase 2B10 in the detoxification of drugs used in pediatric hematopoietic stem cell transplantation setting: an in-silico investigation. <i>BMC Mol Cell Biol.</i> (2022); 23(1), 6. doi: 10.1186/s12860-022-00407-8.	1.763
113	Römer T, Franzen S, Kravets H, Farrag A, Makowska A, Christiansen H, Eble MJ, Timmermann B, Staatz G, Mottaghy FM, Bühlren M, Hagenah U, Puzik A, Driever PH, <b>Greiner J</b> , Jorch N, Tippelt S, Schneider DT, Kropshofer G, Overbeck TR, Christiansen H, Brozou T, Escherich G, Becker M, Friesenbichler W, Feuchtinger T, Puppe W, Heussen N, Hilgers RD, Kontny U. Multimodal Treatment of Nasopharyngeal Carcinoma in Children, Adolescents and Young Adults-Extended Follow-Up of the NPC-2003-GPOH Study Cohort and Patients of the Interim Cohort. <i>Cancers (Basel).</i> (2022); 14(5), 1261. doi: 10.3390/cancers14051261.	6.126
114	Rost M, Espeli V, <b>Ansari M</b> , <b>von der Weid NX</b> , Elger BS, De Clercq E. Covid-19 and beyond: Broadening horizons about social media use in oncology. A survey study with healthcare professionals caring for youth with cancer. <i>Health Policy Technol.</i> (2022); 11(3), 100610. doi: 10.1016/j.hlpt.2022.100610.	1.196
115	Ruhen O, Lak NSM, Stutterheim J, Danielli SG, Chicard M, Iddir Y, Saint-Charles A, Di Paolo V, Tombolan L, Gatz SA, Aladowicz E, Proszek P, Jamal S, Stankunaite R, Hughes D, Carter P, Izquierdo E, Wasti A, Chisholm JC, George SL, Pace E, Chesler L, Aerts I, Pierron G, Zaidi S, Delattre O, Surdez D, Kelsey A, Hubank M, Bonvini P, Bisogno G, Di Giannatale A, Schleiermacher G, <b>Schäfer BW</b> , Tytgat GAM, Shipley J. Molecular Characterization of Circulating Tumor DNA in Pediatric Rhabdomyosarcoma: A Feasibility Study. <i>JCO Precis Oncol.</i> (2022); 6, e2100534. doi: 10.1200/PO.21.00534.	4.01
116	Saratov V, Ngo QA, Pedot G, Sidorov S, Wachtel M, <b>Niggli FK</b> , <b>Schäfer BW</b> . CRISPR activation screen identifies TGFβ-associated PEG10 as a crucial tumor suppressor in Ewing sarcoma. <i>Sci Rep.</i> (2022); 12(1), 10671. doi: 10.1038/s41598-022-12659-7.	3.998
117	Schoot RA, <b>Ott M</b> , Frederix GWJ, Leufkens HGM, Vassal G. Market access to new anticancer medicines for children and adolescents with cancer in Europe. <i>Eur J Cancer.</i> (2022); 165, 146-153. doi: 10.1016/j.ejca.2022.01.034.	7.275
118	Scott C, Bartolovic K, Clark SA, Waithe D, Hill QA, Okoli S, <b>Renella R</b> , Ryan K, Cahill MR, Higgs DR, Roy NBA, Buckle V, Roberts I, Babbs C. Functional impairment of erythropoiesis in Congenital Dyserythropoietic Anaemia type I arises at the progenitor level. <i>Br J Haematol.</i> (2022); 198(1), e10-e14. doi: 10.1111/bjh.18167.	5.518
119	Sepporta MV, Praz V, Balmas Bourlout K, Joseph JM, Jauquier N, Riggi N, Nardou-Auderset K, Petit A, Scoazec JY, Sartelet H, <b>Renella R</b> , <b>Mühlethaler-Mottet A</b> . TWIST1 expression is associated with high-risk neuroblastoma and promotes primary and metastatic tumor growth. <i>Commun Biol.</i> (2022); 5(1), 42. doi: 10.1038/s42003-021-02958-6.	6.548
120	Siddaway R, Milos S, Vadivel AKA, Dobson THW, Swaminathan J, Ryall S, Pajovic S, Patel PG, <b>Nazarian J</b> , Becher O, Brudno M, Ramani A, Gopalakrishnan V, Hawkins C. Splicing is an alternate oncogenic pathway activation mechanism in glioma. <i>Nat Commun.</i> (2022); 13(1), 588. doi: 10.1038/s41467-022-28253-4.	12.121
121	Sieewart V, Benzing V, Spitzhüttl J, Schmidt M, Grotzer M, Steinlin M, <b>Leibundgut K</b> , Roebbers C, Everts R. Cognition, psychosocial functioning, and health-related quality of life among childhood cancer survivors. <i>Neuropsychol Rehabil.</i> (2022); 32(6), 922-945. doi: 10.1080/09602011.2020.1844243.	2.556
122	Sieewart V, Schürch K, Benzing V, <b>Rössler J</b> , Everts R. Personal and Social Resources Are Linked to Cognition and Health-Related Quality of Life in Childhood Cancer Survivors. <i>Children (Basel).</i> (2022); 9(7), 936. doi: 10.3390/children9070936.	2.81

123	Skroblyn T, Joedicke JJ, Pfau M, Krüger K, <b>Bourquin JP</b> , Izraeli S, Eckert C, Höpken UE. CXCR4 mediates leukemic cell migration and survival in the testicular microenvironment. <i>J Pathol.</i> (2022); 258(1), 12-25. doi: 10.1002/path.5924.	5.979
124	Sorrentino S, Ash S, Haupt R, Plantaz D, Schiff I, Hero B, Simon T, Kachanov D, Shamanskaya T, Kraal K, Littooij A, Wiczorek A, Balwier W, Laurens G, Trager C, Sertorio F, Erminio G, Fragola M, <b>Beck-Popovic M</b> , De Bernardi B, Trahair T. Presenting features of neuroblastoma with spinal canal invasion. A prospective study of the International Society of Pediatric Oncology Europe - Neuroblastoma (SIOPEN). <i>Front Pediatr.</i> (2022); 10, 1023498. doi: 10.3389/fped.2022.1023498.	2.634
125	Speierer A, Chocano-Bedoya PO, Anker D, Schmid A, Keidel D, Vermes T, Imboden M, Levati S, Franscella G, Corna L, Amati R, Harju E, Luedi C, <b>Michel G</b> , Veys-Takeuchi C, Zuppinger C, Gonseth Nusslé S, D'Acremont V, Tall I, Salberg É, Baysson H, Lorthé E, Pennacchio F, Frei A, Kaufmann M, Geigges M, West EA, Schwab N, Cullati S, Chiolerio A, Kahlert C, Stringhini S, Vollrath F, Probst-Hensch N, Rodondi N, Puhan MA, von Wyl V. The Corona Immunitas Digital Follow-Up eCohort to Monitor Impacts of the SARS-CoV-2 Pandemic in Switzerland: Study Protocol and First Results. <i>Int J Public Health.</i> (2022); 67, 1604506. doi: 10.3389/ijph.2022.1604506.	2.419
126	Stanojevic M, Grant M, Vesely SK, Knobloch S, Kanakry CG, <b>Nazarian J</b> , Panditharatna E, Panchapakesan K, Gress RE, Holter-Chakrabarty J, Williams KM. Peripheral blood marker of residual acute leukemia after hematopoietic cell transplantation using multi-plex digital droplet PCR. <i>Front Immunol.</i> (2022); 13, 999298. doi: 10.3389/fimmu.2022.999298.	5.085
127	Stathopoulos C, <b>Beck-Popovic M</b> , Moulin AP, Munier FL. Ten-year experience with intracameral chemotherapy for aqueous seeding in retinoblastoma: long-term efficacy, safety and toxicity. <i>Br J Ophthalmol.</i> (2022); bjo-2022-322492. doi: 10.1136/bjo-2022-322492.	3.611
128	Stathopoulos C, Tripathy D, Moulin A, <b>Beck-Popovic M</b> , Munier FL. Retinal and optic nerve relapse in retinoblastoma secondary to epiretinal and epipapillary vitreous seeds implantation documented by optical coherence tomography. <i>Ophthalmic Genet.</i> (2022); 1-5. doi: 10.1080/13816810.2022.2141801.	1.308
129	Strebel S, Mader L, Sláma T, <b>Waespe N</b> , Weiss A, Parfitt R, Am Zehnhoff-Dinnesen A, Kompis M, <b>von der Weid NX</b> , <b>Ansari M</b> , <b>Kuehni CE</b> . Severity of hearing loss after platinum chemotherapy in childhood cancer survivors. <i>Pediatr Blood Cancer.</i> (2022); 69(9), e29755. doi: 10.1002/pbc.29755.	2.355
130	Svec P, Elfeky R, Galimard JE, Higham CS, Dalissier A, Quigg TC, Bueno Sanchez D, Han Lum S, Faraci M, Cole T, Pichler H, Benítez-Carabante MI, Horakova J, Gonzalez-Vicent M, Yanir A, Fagioli F, Wölfl M, <b>von der Weid NX</b> , Protheroe R, Krivan G, Speckmann C, James B, Avcin SL, Bertrand Y, Verna M, Riha P, Patrick K, Cesaro S, Kalwak K, Bierings M, Büchner J, Mellgren K, Prohászka Z, Neven B, Lankester A, Corbacioglu S. Use of ecilizumab in children with allogeneic haematopoietic stem cell transplantation associated thrombotic microangiopathy - a multicentre retrospective PDWP and IEWP EBMT study. <i>Bone Marrow Transplant.</i> (2022). doi: 10.1038/s41409-022-01852-x.	4.725
131	Teyssier A-C, <b>Michel G</b> , Jubert C, Rialland F, Visentin S, Ouachée M, Bilger K, Gandemer V, Beguin Y, Marie-Cardine A, Chalandon Y, <b>Ansari M</b> , Baumstarck K, Loundou A, Dalle J-H, Sirvent A. Unrelated Cord Blood Transplantation in Children, Adolescents, and Young Adults with Acute Leukemia or Myelodysplastic Syndrome: A Retrospective Comparative Study from the French Society for Bone Marrow Transplantation and Cellular Therapy Between Real-World Data and Previously Reported Results of a Randomized Clinical Trial. <i>Transplant Cell Ther.</i> (2022); 28(11), 780.e1-780.e7. doi: 10.1016/j.jct.2022.08.019.	4.064
132	<b>Uppugunduri CRS</b> , Muthukumaran J, <b>Robin S</b> , Santos-Silva T, <b>Ansari M</b> . In silico and in vitro investigations on the protein-protein interactions of glutathione S-transferases with mitogen-activated protein kinase 8 and apoptosis signal-regulating kinase 1. <i>J Biomol Struct Dyn.</i> (2022); 40(3), 1430-1440. doi: 10.1080/07391102.2020.1827036.	4.15
133	van den Oever SR, Pluijm SMF, Skinner R, Glaser A, Mulder RL, Armenian S, Bardi E, Berger C, Ehrhardt MJ, Gilleland Marchak J, Haesler GM, den Hartogh J, Hjorth L, Kepak T, Krivene I, Langer T, Maeda M, Márquez-Vega C, <b>Michel G</b> , Muraca M, Najib M, Nathan PC, Panasiuk A, Prasad M, Roganovic J, Uyttebroeck A, Winther JF, Zdravec Zalete L, van Dalen EC, van der Pal HJH, Hudson MM, Kremer LCM. Childhood cancer survivorship care during the COVID-19 pandemic: an international report of practice implications and provider concerns. <i>J Cancer Surviv.</i> (2022); 16(6), 1390-1400. doi: 10.1007/s11764-021-01120-9.	3.296
134	van Kalsbeek RJ, Korevaar JC, Rijken M, Haupt R, Muraca M, Kepák T, Kepakova K, Blondeel A, Boes A, Frederiksen LE, Essiaf S, Winther JF, Hermens RPMG, Kienesberger A, Loonen JJ, <b>Michel G</b> , Mulder RL, O'Brien KB, van der Pal HJH, Pluijm SMF, Roser K, Skinner R, Renard M, Uyttebroeck A, Follin C, Hjorth L, Kremer LCM. Evaluating the feasibility, effectiveness and costs of implementing person-centred follow-up care for childhood cancer survivors in four European countries: the PanCareFollowUp Care prospective cohort study protocol. <i>BMJ Open.</i> (2022); 12(11), e063134. doi: 10.1136/bmjopen-2022-063134.	2.496
135	van Kalsbeek RJ, Mulder RL, Haupt R, Muraca M, Hjorth L, Follin C, Kepak T, Kepakova K, Uyttebroeck A, Mangelschots M, Falck Winther J, Loonen JJ, <b>Michel G</b> , Bardi E, Frederiksen LE, den Hartogh J, Mader L, Roser K, <b>Schneider C</b> , Brown MC, Brunhofer M, Göttgens I, Hermens RPMG, Kienesberger A, Korevaar JC, Skinner R, van der Pal HJH, Kremer LCM. The PanCareFollowUp Care Intervention: A European harmonised approach to person-centred guideline-based survivorship care after childhood, adolescent and young adult cancer. <i>Eur J Cancer.</i> (2022); 162, 34-44. doi: 10.1016/j.ejca.2021.10.035.	7.275
136	Venugopal P, George M, Kandadai SD, Balakrishnan K, <b>Uppugunduri CRS</b> . Prioritization of microRNA biomarkers for a prospective evaluation in a cohort of myocardial infarction patients based on their mechanistic role using public datasets. <i>Front Cardiovasc Med.</i> (2022); 9, 981335. doi: 10.3389/fcvm.2022.981335.	5.05

137	Vogiatzi F, Heymann J, Müller K, Winterberg D, Drakul A, Rösner T, Lenk L, Heib M, Gehlert CL, Cario G, Schrappe M, Claviez A, <b>Bornhauser BC</b> , <b>Bourquin JP</b> , Bomken S, Adam D, Frielitz FS, Maecker-Kolhoff B, Stanulla M, Valerius T, Peipp M, Kellner C, Schewe DM. Venetoclax enhances the efficacy of therapeutic antibodies in B-cell malignancies by augmenting tumor cell phagocytosis. <i>Blood Adv.</i> (2022); 6(16), 4847-4858. doi: 10.1182/bloodadvances.2022007364.	5.486
138	<b>Waespe N</b> , Strebel S, <b>Nava T</b> , <b>Uppugunduri CRS</b> , <b>Marino D</b> , <b>Mattiello V</b> , <b>Otth M</b> , <b>Gumy-Pause F</b> , <b>von Bueren AO</b> , <b>Baleydier F</b> , Mader L, Spoerri A, <b>Kuehni CE</b> , <b>Ansari M</b> . Cohort-based association study of germline genetic variants with acute and chronic health complications of childhood cancer and its treatment: Genetic Risks for Childhood Cancer Complications Switzerland (GECCOS) study protocol. <i>BMJ Open.</i> (2022); 12(1), e052131. doi: 10.1136/bmjopen-2021-052131.	2.496
139	Wang Y, Kremer LCM, van Leeuwen FE, Armstrong GT, Leisenring W, de Vathaire F, Hudson MM, <b>Kuehni CE</b> , Arnold MA, Haddy N, Demoor-Goldschmidt C, Diallo I, Howell RM, Ehrhardt MJ, Moskowitz CS, Neglia JP, van der Pal HJH, Robison LL, Schaapveld M, Turcotte LM, <b>Waespe N</b> , Ronckers CM, Teepen JC. Cohort profile: Risk and risk factors for female breast cancer after treatment for childhood and adolescent cancer: an internationally pooled cohort. <i>BMJ Open.</i> (2022); 12(11), e065910. doi: 10.1136/bmjopen-2022-065910.	2.496
140	Wang Y, Reulen RC, Kremer LCM, de Vathaire F, Haupt R, Zdravcov Zalete L, Bagnasco F, Demoor-Goldschmidt C, van Dorp WJ, Haddy N, Hjorth L, Jakab Z, <b>Kuehni CE</b> , Lähteenmäki PM, van der Pal HJH, Sacerdote C, Skinner R, Terenziani M, Wesenberg F, Winther JF, van Leeuwen FE, Hawkins MM, Teepen JC, van Dalen EC, Ronckers CM. Male breast cancer after childhood cancer: Systematic review and analyses in the PanCareSurFup cohort. <i>Eur J Cancer.</i> (2022); 165, 27-47. doi: 10.1016/j.ejca.2022.01.001.	7.275
141	Woods GM, Raffini L, Brandão LR, Jaffray J, Branchford BR, Ng CJ, Sartain SE, Pak J, Male C, Zia A, <b>Rizzi M</b> , Sirachainan N, Faustino EVS, Carpenter SL, Goldenberg NA. Practical considerations and consensus opinion for children's hospital-based inpatient hemostasis and thrombosis (HAT) consultative services: Communication from the ISTH SSC Subcommittee on Pediatric/Neonatal Thrombosis and Hemostasis. <i>J Thromb Haemost.</i> (2022); 20(9), 2151-2158. doi: 10.1111/jth.15798.	4.157
142	<b>Wyss J</b> , Frank NA, Soleman J, <b>Scheinemann K</b> . Novel Pharmacological Treatment Options in Pediatric Glioblastoma-A Systematic Review. <i>Cancers (Basel).</i> (2022); 14(11), 2814. doi: 10.3390/cancers14112814.	6.126
143	Zhao G, Newbury P, Ishi Y, Chekalin E, Zeng B, Glicksberg BS, Wen A, Paithankar S, Sasaki T, Suri A, <b>Nazarian J</b> , Pacold ME, Brat DJ, Nicolaides T, Chen B, Hashizume R. Reversal of cancer gene expression identifies repurposed drugs for diffuse intrinsic pontine glioma. <i>Acta Neuropathol Commun.</i> (2022); 10(1), 150. doi: 10.1186/s40478-022-01463-z.	6.270
144	Zimmermann K, Simon M, <b>Scheinemann K</b> , <b>Tinner EM</b> , Widler M, Keller S, Fink G, Mitterer S, Gerber A-K, von Felten S, Bergstraesser E. Specialised Paediatric Palliative CaRe: Assessing family, healthcare professionals and health system outcomes in a multi-site context of various care settings: SPaERA study protocol. <i>BMC Palliat Care.</i> (2022); 21(1), 188. doi: 10.1186/s12904-022-01089-x.	2.015
145	Zöllner SK, Kauertz KL, Kaiser I, Kerkhoff M, Schaefer C, Tassius M, Jabar S, Jürgens H, Ladenstein R, <b>Kühne T</b> , Haveman LM, Paulussen M, Ranft A, Dirksen U. Ewing sarcoma as Secondary Malignant Neoplasm—Epidemiological and Clinical Analysis of an International Trial Registry. <i>Cancers (Basel).</i> (2022); 14(23), 5935. doi: 10.3390/cancers14235935.	6.126
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Publications in not peer reviewed journals or not cited in PubMed

**Adam C**, Moreno-Carrasco JL, Vázquez-Gómez F, Baroni L, Alderete D, Mastronuzzi A, Zapotocky M, Carceller E, Solano-Páez P, Quiroga-Cantero E, Moreno-Tejero ML, Valencia D, Plaza Lopez De Sabando D, García-Ariza M, **Diezi M**, Alvaro Lassaletta A. Intratumoral Hemorrhage In Pediatric Low-Grade-Gliomas: An International Case Series. 54th Congress of the International Society of Paediatric Oncology (SIOP). (2022); 329, #1049.

Benzing V, Siegwart V, Anzeneder S, Spitzhüttl J, Grotzer M, Roebbers CM, Steinlin M, **Leibundgut K**, Everts R, Schmidt M. The mediational role of executive functions for the relationship between motor ability and academic performance in pediatric cancer survivors. *Psychology of Sport and Exercise*. (2022); 60, 102160.

**Diezi M**. Impacts d'un diagnostic de cancer sur la vie sociale et scolaire de l'enfant. Mort en Deuils En Milieux Scolaires, Regards pédagogiques, cliniques et socioculturels, sous la direction de Christine Fawer Caputo et Jacques Cherblanc, Editions Alphil, Presses Universitaires Suisses. (2022); 71-79.

**Kühne T**. Immune Thrombocytopenia (ITP). (Editor). 3rd Edition. *UNI-MED Verlag Bremen, London, Boston*. (2022).

Pedraza ECS, **Hendriks MJ**, De Clercq E, Ruesch K, **Tinner EM**, Bergstraesser E, **von Bueren AO**, Hjorth L, Wiener L, **Michel G**. «Paediatric Palliative Oncology Across Europe: A Cross-Sectional Survey» *Pediatr Blood Cancer*. (2022); 69, S372-S373.









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