

# Annual Report 2019

**Trial Nation**  
Clinical Trials Denmark

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# Executive Summary

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Trial Nation was founded December 5th, 2018. During 2019 Trial Nation has continued the journey as an independent organization, with a business transfer taking place June 1st, 2019. A number of administrative activities has been carried out and processes has been set-up in order to support the workings of the organization. During 2019 Trial Nation has also worked in the new constellation with regionally anchored legal, pharma- and MedTech advisors and a secretariat based in Copenhagen.

Trial Nation moved to its current location, Nørregade 7B, with co-location with Copenhagen Capacity, on May 1st, 2019.

The Innovation Fund Denmark projects NEXT-1 and NEXT-2 was transferred to Trial Nation as part of the business transfer process. Together with project partners, Trial Nation has been granted more Innovation Fund Denmark funding for a project on Virtual Clinical Trials. The purpose is amongst others to explore ways of performing clinical trials where, amongst others, patients in a clinical trial can keep close contact with their clinical trial doctor and nurse with a lesser burden of travel which may make it easier for more patients to take part in clinical trials and also reduce the time and costs associated with development of new therapies. The project is a steppingstone for Denmark to take the lead in the EU on virtual clinical trials.

2019 was also the year where Trial Nation, as the first in Denmark, became Associated Partner on an Innovative Medicines Initiative (IMI) project. The project is “Health Outcomes Observatories – empower patients with tools to measure their outcomes in a standardized manner creating transparency of health outcomes”. The purpose of Trial Nation’s participation is to get an understanding of the dynamics of the initiative, with a longer-term goal to increase Danish participation in IMI projects thereby creating important networks and increasing attractiveness as a country to include in clinical trials. IMI is the world’s biggest public-private partnership (PPP) in the life sciences. It is a partnership between the European Union (represented by the European Commission) and the European pharmaceutical industry (represented by EFPIA, the European Federation of Pharmaceutical Industries and Associations).

Throughout the year, Trial Nation has worked on many things with the purpose of increasing the number of clinical trials in Denmark. Together with stakeholders we have amongst others:

- Held a Clinical Trials Roundtable in June showcasing our clinical trials capabilities within selected clinical specialties towards decision makers for placement of clinical trials
- Held meetings between pharmaceutical companies and investigators within selected clinical specialties to facilitate the inclusion of Denmark and Danish sites in clinical trials
- Arranged and participated in three debates at the People’s Democratic Festival

on Bornholm.

- Initiated and achieved important milestones in the work on how to support Med-Tech clinical trials in the best way
- Worked with regulatory bodies and associations for pharmaceutical and MedTech industries to improve framework conditions in our Dialogue Forum
- Performed a pre-analysis of a platform to provide every Dane the possibility of finding relevant clinical trials for them in an easier way.

During the second half of 2019 Trial Nation developed its five-year strategy, with input from stakeholders around all aspects of the clinical trials eco-system. In December 2019 the strategy was presented at an Extraordinary Assembly. At the Assembly the Statutes were changed as part of a process initiated at the General Assembly held in April 2019.

Based on metrics collected throughout the year the average response time on feasibility is 2 working days, and all but one response within 5 working days. The exception was during vacation period and within the timeline agreed with the Sponsor

The development of number of ongoing clinical trials reported in Trial Nation Centers over the last three years is extremely positive with an increase from 72 trials in 2017 to 186 trials in 2019. This is a result of both expansion and visibility of the Trial Nation centers and Denmark's capabilities as well as the development pipeline of new products. An overview of the development of each center is shown in Figure 1 below. Details on clinical trials are presented in the sections for each center.

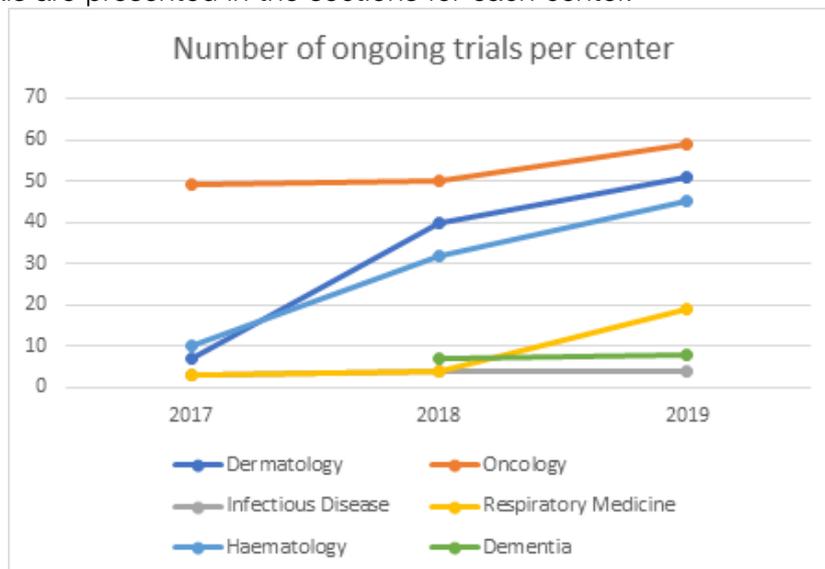


Figure 1: Development of number of ongoing trials in Trial Nation Centers from 2017 to 2019

Key focus in 2020 is to execute on the strategy - for the health and wealth of Denmark.

# Center for Dementia

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In 2019 Center for Dementia was represented by research units at:

Danish Dementia Research Centre, Dept. of Neurology at Rigshospitalet  
Regional Dementia Research Centre, Dept. of Neurology at Zealand University Hospital  
Dementia Clinic, Dept. of Neurology at Odense University Hospital  
Department of Geriatric, Odense University Hospital in Svendborg  
Dementia Clinic, Dept. of Neurology at Aarhus University Hospital  
Memory Clinic, Dept. of Neurology at Aalborg University Hospital

The Center for Dementia was established in 2018 and is coordinated by Prof. Gunhild Waldemar and neurologist and clinical trial director Kristian Steen Frederiksen from the national Danish Dementia Research Center Rigshospitalet. The region of Southern Denmark was represented in the center with two departments, but as the organization of dementia clinics in the region will be changed as of April 2020 only one clinic residing in Svendborg will take part in the network going forward.

In the beginning of 2019, it was decided to expand the network with experts responsible for clinical trials in Huntington Disease patients and therefore the steering committee has been expanded with Consultant Neurologist Lena Hjerminde and Consultant Neurologist Anette Torvin Møller.

The yearly activities are summarized in Table 1 and described in detail below.

## Overall activities of feasibilities, trials and patients

Center for Dementia	2018	2019
Number of feasibilities received	6	4*
Number of initiated trials	2	2**
Number of trials open in year	7	8***
Number of patients enrolled in trials	unknown	71****

Table 1: Overall activities of feasibilities, trials and patients.

\* 3 in Alzheimer's disease and 1 in Huntington Disease

\*\* 2 trials initiated in patients with Huntington Disease

\*\*\* 6 trials in Alzheimer's disease and 2 in Huntington Disease

\*\*\*\* 63 patients included in 8 open trials, some may have been included in 2018

## Feasibilities

In 2019 four feasibilities were requested. 3 in Alzheimer's disease and 1 in Huntington Disease. This is a disappointing low number and therefore we seek to increase awareness of the center to Life Science industry. Please refer to center activities.

## Clinical trials

In 2019, the Center for DEMENTIA initiated a total of 2 commercial clinical trials in Huntington Disease patients. The studies were initiated at the clinical trial units at Rigsho-

spitalet and Aarhus University Hospital. One of the Huntington Disease trials were also planned for initiation at Odense University Hospital, but the site had to withdraw from the study.

No new studies were initiated in Alzheimer's disease patients during 2019. 6 studies in Alzheimer's disease patients were open at the beginning of the year, but due to disappointing interim analysis on two beta amyloid antibodies three ongoing studies were terminated prematurely and one planned study was cancelled. By end of the year encouraging re-analysis on one of the beta amyloid antibodies called for a re-initiation of one study which will be initiated in 2020.

3 studies were open by end of 2019. One study is ongoing in three sites: Aarhus University Hospital, Odense University Hospital and Rigshospitalet. One study is ongoing in two sites: Aarhus University Hospital and Rigshospitalet and one study is ongoing at Rigshospitalet as the only site.

Studies on patients suffering from Alzheimer's and Huntington disease are in general very complex both in in- and exclusion criteria (specific biomarkers and cognitive scales) and in operation as the number of visits, tests and interventions are intense.

## Number of patients

71 patients were included in 8 clinical trials open in 2019. Some patients were included before 2019 as all Alzheimer's studies were initiated prior to 2019. 51 patients suffered from Alzheimer's disease and 20 patients suffered from Huntington Disease. By end of 2019, 53 patients received experimental disease modifying therapy for Alzheimer's (33) or Huntington Disease (20). Two diseases with severe unmet medical need and no standard disease modification therapy available today.

The status of recruitment in Alzheimer's disease trials which were not prematurely ended were 83-133% in relation to national target. The average number of patients pr. site is 6. Sites are in general acknowledged for living up to target and for low screen failure rates when benchmarked to other sites/countries.

## Center activities

In 2019, the following activities were done in Center for Dementia:

- February: Half a day meeting in Odense to discuss the inclusion of clinical trials in Huntington Disease patients in the Trial Nation center and investigate synergies to the Enroll-HD registry which all three sites in Denmark participate to.
- March: Full day meeting with the agenda split for three purposes:
  - The ADEX network discussing investigator driven research in Alzheimer's Disease with participation of all sites.
  - Trial Nation Dementia company meeting with approximately 50 participants from the departments and life science companies.
  - Steering committee meeting.

- June: Gunhild Waldemar and Peter Johannsen presented the center at the clinical trials seminar for Life Science industry organized in collaboration with Invest in Denmark.
- October: Steering committee meeting in Vejle in relation to the yearly network conference for dementia diagnosing departments.
- November: Kristian Steen Frederiksen and Karina Markersen participated in the CTAD 2019 conference and have had an introductory dialogue on the Trial Nation offering with five life science companies related to the conference.

Furthermore, activities relating to feasibilities, company meetings, grant administration and other organizational matters have taken place on a running basis.

## Cost summary

The departments of the center have each received a grant amounting 400,000 DKK from Trial Nation. The grants are financed by the Trial Nation Life Science Growth plan for 2019, where part of the Trial Nation grant was dedicated to establishing new centers:

Center for Dementia	Grant 2019
Rigshospitalet	400,000
Zealand University Hospital, Roskilde	400,000
Odense University Hospital	400,000
Odense University Hospital, Svendborg	400,000
Aarhus University Hospital	400,000
Aalborg University Hospital	400,000
<b>Total</b>	<b>2,400,000</b>

Table 2: Center spending and budget in DKK.

The model for administration of Trial Nation grants has been developed in cooperation with Rigshospitalet and the capital region. Grants are administered on a separate project account and yearly financial reporting are delivered by grant owner and the financial function. All departments have applied for the grant and reported on the progress and both have been approved by the board.

The model developed has been used for the administration of regional grants in 2020.

## Focus in 2020

In 2020, the center will focus on attracting new trials as this is a challenge especially for trials in Alzheimer's Disease patients. Participation in international conferences and specific meetings with life science industry will be prioritized. Furthermore, the center will still focus on improving the national collaboration across departments and with the Trial Nation secretariat. Competence and building capacity will still be in focus on departmental level and possibilities for establishing patient databases are on the action plan in several departments.

# Center for Dermatology

The Center for Dermatology was established in 2015 and consists of the dermatological departments at Bispebjerg Hospital, Gentofte Hospital, Zealand University Hospital, Odense University Hospital and Aarhus University Hospital and is coordinated by Professor Simon Francis Thomsen from Bispebjerg Hospital. The five dermatological departments treat all dermatological and venereological diseases as well as chronic wounds in children and adults.

The yearly activities are summarized in Table 3 and described in further details below. In 2018, it was decided to include all phases of trials in the recording of activities.

Overall activities of feasibilities, trials and patients

Center for Dermatology	2016	2017	2018	2019
Number of feasibilities received	12	12	29	19
Number of initiated trials	2	6	15	14
early phase/late phase/other trials	2/NA	6/NA	5/5/5	8/5/1
Number of trials open in year	4	7	40	51
early phase/late phase/other trials	4/NA	7/NA	13/15/12	19/19/13
Number of patients enrolled in trials	37/	30	62	171
early phase/late phase/other trials	37/NA	30/NA	19/43	50/121

Table 3: Overall activities of feasibilities, trials and patients.

## Feasibilities

A total of 19 clinical trial feasibilities involving one or more of the clinical departments were coordinated in Center of Dermatology in 2019. 4 feasibilities relate to phase I-II studies, 10 related to phase III-IV studies, 0 to observational studies, 1 to a medical device study and 4 feasibilities of unknown phase. The two major indications are Psoriasis and Atopic Dermatitis.

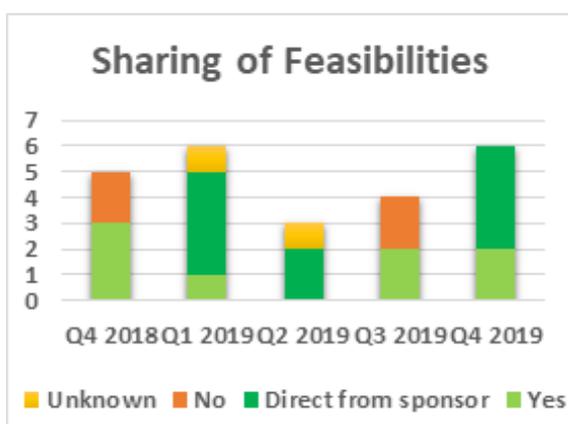


Figure 2: Shared feasibilities received in Center for Dermatology, per quarter, in 2019

As seen in figure 2, the sharing of feasibilities is not implemented throughout the center. We continue to urge sponsors as well as clinicians to direct all feasibility requests to the coordinator.

Companies and CROs increasingly use proprietary online feasibility requests processes. When used it is not possible for the center feasibility coordinator to intercept the feasibility request. This is one of the reasons why all feasibilities are lost to follow-up. Sponsors are primarily big pharma companies and about one quarter of the requests is coordinated by CRO's.

## Clinical trials

In 2019, the Center for Dermatology initiated a total of 14 commercial clinical trials involving one or more of the clinical trial units. Furthermore, 11 trials are already planned for initiation in 2020. Overall, 51 clinical trials were ongoing in 2019, as 37 trials initiated in the years prior to 2019 are still open.

## Departments involved

By the end of 2019, all departments were involved in the conduct of between 6 and 22 clinical trials, as seen in figure 3 below.

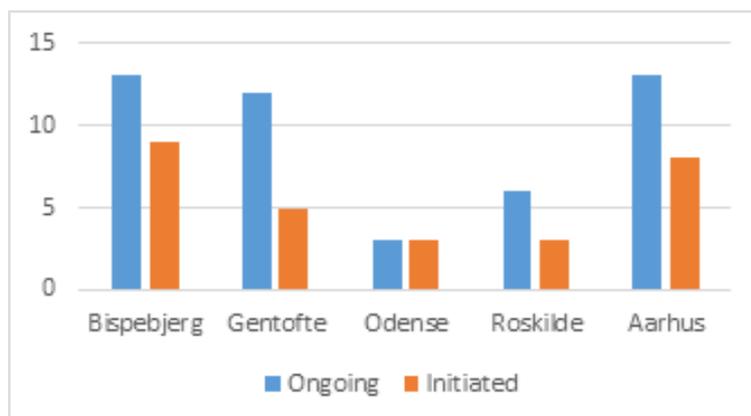


Figure 3: Trial activity in the five dermatological departments.

## Number of patients included

The recording shows that 171 dermatology patients were included in the clinical trials in 2019 of which 50 patients were involved in early phase trials. This number should be compared to prior years with caution as difference in methods appears.

## Center activities

In 2019, the Center for Dermatology had one virtual meeting with focus on the following themes: Budget for center in 2020, yearly reporting of activities, the legal structure of the patient database and support of the National Trial Overview.

At the Department of Dermatology and Allergy at Herlev and Gentofte Hospital, the primary focus in 2019 has been to ensure readiness for clinical trials by changing the workflow in the Clinical Research Unit and developing Standard Operating Procedures to reduce the waste time and improve recruitment of patients for clinical trials. New staff are trained and information on ongoing clinical trials are optimized for the staff at the department and referring specialists.

In 2019, Department of Dermatology, Bispebjerg Hospital made preparations to be more oriented towards recruiting patients from also outside the hospital setting, for example via internet platforms, social media, interactions with patient organizations and private vendors, etc. This will ensure that recruitment goals and timelines are better

met, more studies can be initiated, and the site can super-recruit patients into more studies. Also, this will ensure a more targeted recruitment via different sites in the entire Dermatology Center. Further initiatives towards these goals will be initiated in 2020.

The department of Dermatology at Odense University Hospital has consolidated its databases including patients with hyperhidrosis, lupus erythematosus and genodermatoses. From these databases patients suffering from hereditary angioedema, Gorlin Goltz syndrome and cutaneous lupus have been recruited for clinical studies. Unfortunately, planned studies of new therapies in hyperhidrosis and basal cell carcinomas in Gorlin Goltz syndrome had to be cancelled due to lack of staff. As public research funding is often limited to diseases affecting larger population groups, the support of Trial Nation Denmark has been important, especially in rare diseases such as hereditary angioedema.

In 2018 Department of Dermatology at Zealand University Hospital in Roskilde had reached the critical capacity threshold where hiring of an extra study nurse was needed.

In 2019, the clinical trial unit at Department of Dermatology, Aarhus University Hospital has been further established. With the support of Trial Nation, we have now updated and expanded our welcoming and introductory documents that are sent to all companies before initiating a trial. As reported in the annual report for 2018 we have in 2019 started using the access to referrals sent via a system called Refhost from general practitioners (GPs) to office-based dermatologist. The access to Refhost was obtained because the support from Trial Nation allowed us to spend time on getting all necessary permissions from different authorities. Access to Refhost is important in dermatology because some clinical trials are conducted with patients with mild or moderate disease severity – patients that are not necessarily seen in university hospital departments. By the access to Refhost we have been able to participate in a wider range of clinical trials and our recruitment has been strengthened tremendously. In 2020 it is our goal to further take the advantage of our access to Refhost to expand our participation in clinical trials.

## Cost summary

The departments of the center have reported the following spending in 2019:

Center for Dermatology	Reported Spending	Actual Spending	Budget
Bispebjerg	1,416,053.00	2,708,572.94	1,416,053.00
Gentofte	1,178,314.75	1,178,314.75	1,185,650.00
Odense	983,434.53	983,434.53	1,183,063.98
Roskilde	489,225.07	489,225.07	607,011.69
Aarhus	1,125,552.00	1,301,642.71	1,125,552.00
<b>Total</b>	<b>5,192,579.35</b>	<b>6,661,189.99</b>	<b>5,517,330.67</b>

Table 4: Center spending and budget

In 2019, the Center for Dermatology spent DKK 5,192,579.35 which was 94% of the total budget for the year. 2 departments had its spending's capped with DKK 1,468,610.64 to stay within budget for the year.

## **Focus in 2020**

In 2019, the center will focus on attracting new trials and improving the national collaboration across departments, ensuring effective feasibility handling, sufficient capacity for clinical trials, predictable deliverables herein capture of relevant trial performance data and patient empowerment. Marketing of the competences in the center towards industry will still be in focus.

The following specific activities will be in focus:

- Finalizing the legal framework for the patient database.
- Improving the national collaboration across departments
- Pilot the patient partner concept with the patient organization, Hudalliancen
- Define and execute collaboration with private research clinics
- Consider if RefHost can be implemented in all center
- Continue streamlining of administrative procedures to optimize the members cost-benefit.
- A joint (Trial Nation Center Dermatology) publication on the cohort captured in the database.

# Center for Hematology

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Center for Hematology consisted of the following departments in 2019:

Department of Paediatrics and Adolescent Medicine at Copenhagen University Hospital, Rigshospitalet. The Trial Nation responsible medical doctor being Chief Consultant Karsten Nysom.

Department of Hematology at Copenhagen University Hospital, Rigshospitalet. The Trial Nation responsible medical doctor being Chief Consultant Peter Brown.

Department of Hematology at Herlev and Gentofte Hospital. The Trial Nation responsible medical doctor being Chief Consultant Lars Møller Pedersen.

Department of Hematology at Little Belt Hospital - Vejle Hospital. The Trial Nation responsible medical doctor being Professor and Chief Consultant Torben Plesner.

Department of Hematology at Odense University Hospital. The Trial Nation responsible medical doctors being Professor & Chief Consultant Niels Abildgaard.

Department of Hematology at Zealand University Hospital. The Trial Nation responsible medical doctor being Chief Consultant Christian Bjørn Poulsen.

Department of Hematology at Aalborg University Hospital. The Trial Nation responsible medical doctor being Chief Consultant Henrik Gregersen.

Department of Hematology at Aarhus University Hospital. The Trial Nation responsible medical doctor being constituted Chair Professor & Chief Consultant Francesco D'Amore.

Medical Lead for the center was Professor & Chief Consultant Niels Abildgaard from Department of Hematology at Odense University Hospital, while Sally Grant from Odense University Hospital and Ask Aabenhus from Trial Nation performed center management. The eight hematology departments cover most of the Danish population, treat all hematology diagnoses in pediatric, adolescent and adult patients and cover all phases of clinical trials.

In the last quarter of 2019, it was decided to include the Department of Hematology at Regional Hospital West – Holstebro Hospital from January 1st, 2020 to further broaden the centers geographic reach. The yearly activities are summarized in Table 5 and described below.

## Overall activities of feasibilities, trials and patients

### Feasibilities

A total of 63 unique commercial feasibilities were reported in 2019 involving 25 I-II feasibilities, 23 phase III-IV feasibilities, and 15 feasibilities of unknown phase involving one or more of the clinical departments in Trial Nation Center for Hematology in 2019. The figures constitute a substantial increase compared to 2018. Still the figures are, as in previous years, subject to substantial uncertainty as most of the feasibilities are shared directly with Investigators leaving the clinical research units uninformed in several cases and so resulting in reporting bias. Further one hospital did not report feasibility data. The figures are accordingly likely to be higher. See table 5 below.

The increase in the number of reported feasibilities may at least in part be explained by the successful hand-over of the feasibility handling to Odense University Hospital and improved local documentation practices.

Center for Hematology	2017	2018	2019
Number of feasibilities received	13	32	63
Number of initiated trials	3	8	11
Number of trials open in year	10	32	45

Table 5: Overall activities of feasibilities, trials and patients.

## Clinical trials

In 2019, Trial Nation Center for Hematology reported the initiation of 11 unique commercial clinical phase I & II trials in involving one or more of the clinical departments. Overall, 45 unique commercial clinical phase I-II trials were reported as ongoing in 2019 compared to 32 the year before. A 40% increase in the reported phase I-II trial activity. 6 of the ongoing trials were pediatric hematology trials of which 2 was initiated in 2019. Still the figures are, as in previous years, subject to some uncertainty and likely to be minimum figures.

As in the past years all departments were involved in the conduct of commercial clinical phase I & II trials. See Figure 4.

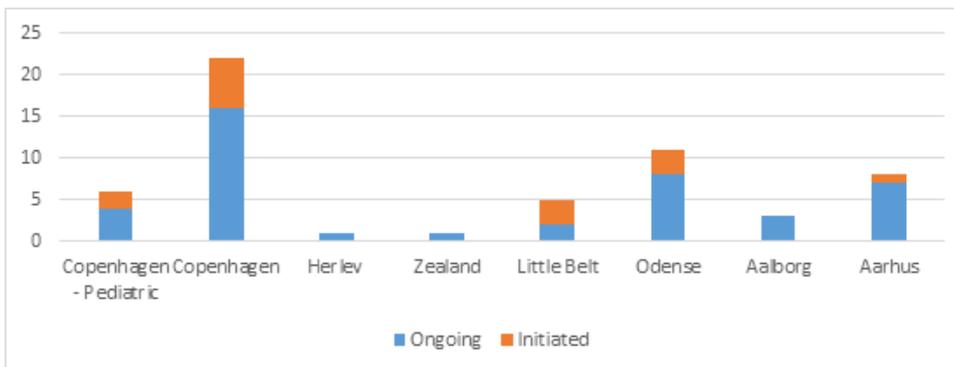


Figure 4. Number of commercial phase I & II clinical trials ongoing and initiated in at the departments constituting Trial Nation Center for Hematology in 2019. Copenhagen – Pediatric = Copenhagen University Hospital – Department of Pediatric and Adolescent Medicine, Copenhagen = Copenhagen University Hospital, Herlev = Herlev & Gentofte Hospital, Little Belt = Little Belt Hospital - Vejle Hospital, Odense = Odense University Hospital, Zealand University Hospital, Aalborg = Aalborg University Hospital, Aarhus = Aarhus University Hospital.

It is impossible to consolidate the reported recruitment figures in a meaning full way.

## Center activities

In 2019, the following joint activities took place in Center for Hematology:

- Sharing of feasibilities
- Dialogue meeting with Danish Medicines Agency and the National Research Ethics Committee (NVK) – April 2019
- Held a Clinical Trial Seminar in Copenhagen for Sponsor VIPs in collaboration with Invest in Denmark showcasing the Trial nation centers hereinunder Center for Hematology – June 2019

- Supported the architectural design of a real-time national database on clinical trials
- Continued improvement of the collaboration with relevant patient organizations on clinical research
- Supported the Trial Nation CRO Network meetings

## Further

- Departments from the center participated in several national and international conferences hereinunder the European Hematology conference (EHA) and the American Society of Hematology (ASH) conference.
- The secretariat held individual meetings with several departments (in a one case jointly with the local oncology department)
- The Trial Nation Secretariat participated in the Nordic NECT meeting in Bergen, Norway – March 2019
- At People's Democratic Festival on Bornholm the secretariat organized three events of which two were cancer related. One on shared decision in connection with clinical trials in collaboration with The Danish Cancer Association and Danish Comprehensive Cancer Center and one on the prioritization of clinical research in collaboration with the Danish Comprehensive Cancer Center – June 2019. The later resulted in a letter on the issue addressed to the Minister of Health – August 2019 to which legislation was approved November 28th, 2019.
- Face to face center meeting in connection with the joint Clinical Research Unit meeting – August 2019

## Issues to consider

- National sharing of feasibilities is challenged by
  - Used electronic feasibility platforms by companies
- Precision medicine protocols effectively reduce the potential patient pool. Consequently, improved structures for referral of patients for all phases between hospitals for clinical trials within Denmark and within the Nordics are needed
- Support of work on national database on clinical trials is imperative to support clinician and patient knowledge of clinical trials open for recruitment in Denmark and so referral of patients for clinical trials
- Continued focus on new / future cutting edge requirements for performance of clinical trials
  - Handling of virtual clinical trials
- Improved collaboration with patient organizations on clinical research are needed
- Stronger prioritization of clinical research needed

## Cost summary

The departments of the center have reported the following spending in 2019:

	Reported Spending	Actual Spending	Budget
Center for Hematology			
Copenhagen University Hospital - Paediatrics	NA	NA	NA
Copenhagen University Hospital	618,600.00	785,715.18	618,600.00
Herlev and Gentofte Hospital	618,600.00	784,005.15	618,600.00
Little Belt Hospital - Vejle	421,397.59	421,397.59	618,600.00
Odense University Hospital	618,600.00	748,611.27	618,600.00
Zealand University Hospital	618,600.00	651,314.11	618,600.00
Aalborg University Hospital	610,531.41	610,531.41	618,600.00
Aarhus University Hospital	618,600.00	699,671.98	618,600.00
Total	9,667,756.97	25,999,975.15	10,689,628.00

Table 6: Center spending and budget in DKK. Department of Pediatrics and Adolescent Medicine at Copenhagen University Hospital is funded through Trial Nation Center for Oncology.

In 2019, Center for Hematology spent DKK 4,124,839.01, which was 95% of the total budget for the year. 5 departments had their spending capped with DKK 576,317.70 in total to stay within budget. Furthermore, the department at Odense University Hospital received a grant of 400,000 DKK to support the establishment of the Center for Hematology as a separate Trial Nation Center.

At the Department of Pediatric and Adolescent Medicine at Copenhagen University Hospital the primary focus has been to ensure readiness through systematization, development and quality assurance of work procedures and work flow, and the continued development of internal and external collaboration agreements which ensures more open trials with patient cohorts over and under the age of 18. See departments funding in the annual report for Trial Nation Center for Oncology.

At the Department of Hematology at Copenhagen University Hospital, the focus has primarily been to develop tools for existing and future protocols, and to create and maintain homepages that promote open protocols, feasibilities and preparedness for clinical trials.

At Herlev and Gentofte Hospital, the primary focus has been to ensure readiness for clinical trials through change of the work flow in the Clinical Research Unit and development of Standard Operating Procedures, so as to reduce the waste time and improve recruitment of patients for clinical trials.

At Little Belt Hospital, Vejle Hospital, the focus has been to ensure readiness for clinical trials through databases on myelomatose patients' treatment and response and the development (Standard Operation Procedures).

At Odense University Hospital, activities and funds has been spend on qualifying and strengthening the local infrastructure to support early phase trials, including lab facilities. Extension and qualification of SOPs and training of clinical staff to handle clinical trials, early phase trials. The department has further taken care of the national feasibility

handling and jointly with the secretariat worked to strengthen the infrastructure of Center for Hematology.

At Zealand University Hospital, the activities have focused on feasibility handling, process optimizing (e.g. Site Selection), training (e.g. budgeting), Trial Nation meetings and administrative updates of CVs, East Danish Protocol Overview etc.

At the Clinical Research Unit, Aalborg University Hospital, the funds have been used for travel and meeting activities, oversight and screening of hematologic patients for referral for existing and future protocols. The funds have ensured readiness through feasibility handling and early protocol work.

At Aarhus University Hospital, the primary focus has been on development and revision of Standard Operating Procedures, national referral of patients, budgeting to improve local workflow. Secondary focus has been on participation in executive workgroups for general clinical trial improvements across the hospital hereinunder saved hospital medicine costs in clinical trials.

## Focus in 2020

In 2020, the center will focus on attracting new trials and improving the national collaboration across departments, ensuring effective feasibility handling, sufficient capacity for clinical trials, predictable deliverables herein capture of relevant trial performance data and patient empowerment. Marketing of the competences in the center towards industry will further be intensified. This will be accomplished by

- Attracting new trials
- Increasing the number of shared, currently not shared, feasibilities for clinical trials
- Ensuring sufficient capacity for clinical trials
- Improving the national collaboration across departments
- Patient involvement in clinical trials
- The development of a national database on clinical trials to support referral of patients for clinical trials and empower patients who seek participation in clinical trials
- Improving structures for referral of patients between hospitals for clinical trials within Denmark and within the Nordics
- Regional and national prioritization of clinical research
- Inclusion of the Regional Hospital West – Holstebro Hospital in the center

# Center for Infectious Diseases

In 2019 Center for Infectious Diseases consisted of:

- Department of Infectious Diseases at Rigshospitalet
- Department of Infectious Diseases at Aarhus University Hospital
- Department of Infectious Diseases at Odense University Hospital
- Department of Infectious Diseases at Hvidovre Hospital
- Department of Infectious Diseases at Aalborg University Hospital

The Center for Infectious Diseases and Immune modulation was established in 2016 and is coordinated by Medical Lead prof. Lars Østergaard from Aarhus University Hospital. All 5 Infectious Diseases departments in Denmark are included in the center and they cover 4 of 5 Danish Regions. During 2019 the center has worked to include a department from Region Zealand and from 2020 Department of Internal Medicine at Roskilde Hospital will join the center. The yearly activities are summarized in Table 7 and described in detail below.

## Overall activities of feasibilities, trials and patients

Overall, the activity level in Center for Infectious Diseases increased considerably in the period from 2017-2019.

Center for Infectious Diseases	2017	2018	2019
Number of feasibilities received	13	18	9
Number of initiated trials	3	2	4
Number of trials open in year	3	4	13*
Number of patients enrolled	260	38	534 (140)**

Table 7: Overall activities of feasibilities, trials and patient inclusion.

\* 4 commercial and 9 investigator driven trials.

\*\*534 recruited in sponsor driven trials and 140 in investigator driven trials. Recruitment data for 2017 and 2018 are only for sponsor-initiated trials.

## Feasibilities

A total of 9 clinical trial feasibilities were evaluated and completed by the departments in Center of Infectious Diseases in 2019 (see Table 7 above). All clinical trial feasibilities in 2019 were for phase III studies. Feasibilities were received from sponsors such as Pharm-Olam, Pfizer, Sanofi and Janssen along with the CRO's PPD and IQVIA requesting sponsor blinded feasibilities.

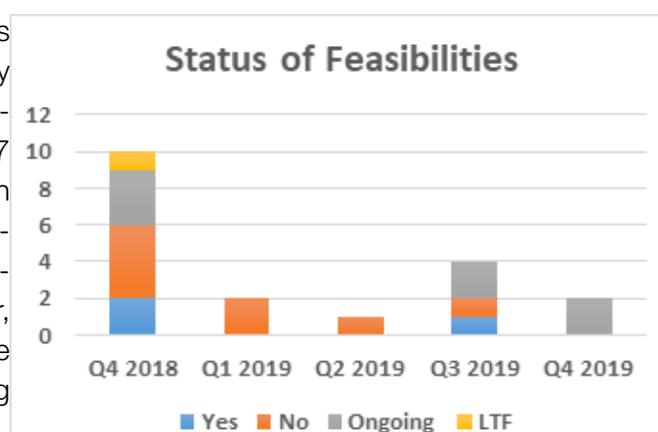


Figure 5: Quarterly status for feasibilities received in Center for Infectious diseases in 2019 (LTF: Lost to follow-up).

## Clinical trials

In 2019, the Center for Infectious Diseases and Immune Modulation initiated a total of 4 commercial clinical trials, 3 of those are conducted in 3-5 of the departments, while 1 study is conducted at one site. Additionally, the center initiated 5 investigator initiated clinical trials of which 3 includes all 5 departments. 2 commercial trials are already planned for initiation in 2020 involving a total of 3 of the departments in the center. Overall, 13 clinical trials were ongoing in 2019, as 4 trials initiated in 2017 and 2018 were still open in 2019. By the end of 2019, all departments were involved in the conduct of between 5 and 12 clinical trials.

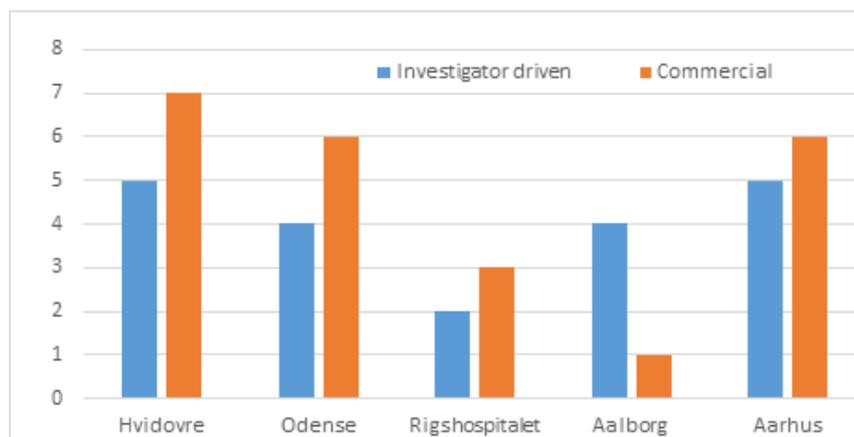


Figure 6. Number of open commercial and investigator driven clinical trials at the departments in Center for Infectious diseases in 2019.

## Number of participants included in clinical trials:

674 participants were included in clinical trials by the Center for Infectious Diseases in 2019, 534 of these were included in commercial trials, while 140 participants were included in investigator driven trials. All 5 departments participated in a large commercial vaccine trial and included 378 healthy volunteers in total, which was 130% of enrollment target. Overall, the center has had remarkably higher recruitment numbers this year compared to previous years. The NEXT grant has enabled the clinical trial departments in the center to build up capacity to handle larger studies and more studies at a time, making it feasible to participate in e.g. large vaccine trials.

## Center activities

In 2019, the Center for Infectious Diseases and Immune Modulation set up and hosted a collaborator meeting with international headquarter participation from the industry partner Gilead, where possible future collaboration was discussed.

In addition, all 5 sites have been updating the centers existing databases on HIV, cystic fibrosis, central nervous system infections and hepatitis.

This year we have established the center's ability to conduct large vaccine trial with many participants within a short timeline, and we expect that the field of vaccine studies

will be an important part of the center's activities in the future.

The center will continue to work proactively towards establishing collaborations with new industry partners and to expand our capability to conduct clinical trials in new areas within the field of Infectious Diseases and Immune Modulations.

## Special Cases to Point Out

All 5 departments in the center for Infectious Diseases and Immune Modulation participated in a large vaccine study and recruited 130% of the country enrollment target within 2 months. For 4 of the departments this was the first ever vaccine study and the NEXT initiative was instrumental in making this study such a success, as several of the departments would not have considered participating before NEXT. The NEXT collaboration has increased the capacity for running clinical studies at participating sites and the well-established collegial network between departments in the network has been key contributors to the successful conduct of the study. The center's participation in the study was kick started at a roundtable meeting in New York in 2018 which was organized in collaboration with the secretariat of NEXT and Invest in Denmark.

Additionally, 3 departments participated in a pediatric vaccine trial and enrolled 71 children aged 1-2 years so far (the study is still recruiting). 1 department also participated in a vaccine trial for newborn babies, recruiting 80 participants so far, but due to great interest from parents the site plans to recruit 150 participants, which is 3 times targeted enrollment. These two studies are the first studies including babies and toddlers that the departments in the center participated in and they have paved the road for similar studies in the future. The departments have established collaborations across specialties to the local pediatric departments to support these activities.

The center strengthened the collaboration between the departments in 2019 with 2 new investigator driven trials involving all 5 departments; the TITAN study initiated from Aarhus including HIV patients where 34 patients were already enrolled on national level and the SAB7 study initiated from Hvidovre investigating treatment duration for staphylococcus aureus bacteremia.

The NEXT initiative also played an important role in the establishment of a national network within central nervous system infections that received grants of a total of 10 million DKK to initiate 2 new investigator driven studies in the coming year from Aalborg.

## Cost Summary

The departments of the center have reported the following spending in 2019:

Center for Infectious Diseases	Reported Spending	Actual Spending	Budget
Aarhus	1,272,892.00	1,966,925.55	1,272,892.00
Hvidovre	227,490.00	1,228,268.44	227,490.00
Odense	236,099.00	804,598.25	236,099.00
Rigshospitalet	227,490.00	813,011.42	227,490.00
Aalborg	239,450.00	317,053.70	239,450.00
<b>Total</b>	<b>2,203,510.99</b>	<b>5,129,857.35</b>	<b>2,203,511.00</b>

Table 8: Center spending and budget in DKK

In 2019, the Center for Infectious diseases spent DKK 2,203,510.99, which was 100% of the total budget for the year. As can be seen the spending has been much higher and the 5 departments had their spending's capped with DKK 2,926,346.37 to stay within budget for the year.

## Focus in 2020

In 2020, the center will focus on attracting new trials and improving the national collaboration across departments, ensuring effective feasibility handling, sufficient capacity for clinical trials, predictable deliverables herein capture of relevant trial performance data and patient empowerment.

The new department from Roskilde Hospital will be fully involved in the network from 2020, ensuring that the center covers all 5 Danish regions.

The center will specifically focus on attracting vaccine trials, which is a new area for many of the departments, which holds great potential for future studies.

Additionally, the center will further extend collaboration with other specialties, e.g. pediatrics, to widen the range of study possibilities for the center.

Several areas will be expanded within the investigator driven research such as central nervous infections, bone infections and shortened antibiotic treatment duration, increasing the width of expertise in the center.

# Center for Oncology

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Center for Oncology consisted of the following departments in 2019:

Department of Paediatrics and Adolescent Medicine at Copenhagen University Hospital, Rigshospitalet. The Trial Nation responsible medical doctor being Chief Consultant Karsten Nysom.

The Phase I Unit, Department of Oncology at Copenhagen University Hospital, Rigshospitalet. The Trial Nation responsible medical doctor being Chief Consultant Kristoffer Rohrberg.

The Experimental Cancer Therapy Unit, Department of Oncology at Herlev and Gentofte Hospital. The Trial Nation responsible medical doctor being Professor & Chief Consultant Dorte Nielsen.

Department of Oncology at Little Belt Hospital, Vejle Hospital. The Trial Nation responsible medical doctor being Consultant Torben Frøstrup Hansen.

Department of Oncology at Odense University Hospital. The Trial Nation responsible medical doctors being Chief Consultant Karin Holmskov and Professor & Chief Consultant Per Pfeiffer.

Department of Oncology at Aalborg University Hospital. The Trial Nation responsible medical doctor being Chair Professor & Chief Consultant Ursula Falkmer.

Department of Oncology at Aarhus University Hospital. The Trial Nation responsible medical doctor being Chair Professor & Chief Consultant Signe Borgquist.

Medical Lead for the center was Chief Consultant Kristoffer Rohrberg from The Phase I Unit at Copenhagen University Hospital, while Ask Aabenhus managed center activities. The seven oncology departments cover the vast majority of the Danish population, treat all oncology diagnoses in pediatric, adolescent and adult patients and cover all phases of clinical trials.

In the last quarter of 2019, it was decided to include the Department of Oncology at Zealand University Hospital and the Department of Oncology at Regional Hospital West - Herning Hospital from January 1st, 2020 further broaden the geographic reach.

The yearly activities are summarized in Table 9 and described below.

## Overall activities of feasibilities, trials and patients

### Feasibilities

A total of 65 unique commercial feasibilities were reported in 2019 involving 35 I-II feasibilities, 20 phase III feasibilities, and 10 feasibilities of unknown phase involving one or more of the clinical departments in Trial Nation Center for Oncology in 2019. Of these 13 were documented as shared via the Trial Nation secretariat, whereas the secretariat assisted sponsors with the identification of appropriate departments and investigators for an additional 2 feasibilities.

All the above figures constitute a decline compared to 2018 figures but are equal to 2017 figures. As in previous years, the figures are subject to substantial uncertainty as most of the feasibilities are shared directly with Investigators leaving the clinical research units uninformed in several cases and so resulting in reporting bias. The effect of use of electronic feasibility platforms on the number of reported feasibilities is unclear.

The feasibility figures are anyway, as in previous years, subject to substantial uncertain-

ty as most of the feasibilities are shared directly with Investigators resulting in positive documentation bias and uncertainty more generally. See Table 9 below.

Center for Oncology	2017	2018	2019
Number of feasibilities received	65	83	65
Number of initiated trials	11	16	18
Number of trials open in year	49	50	59

Table 9: Overall activities of feasibilities, trials and patients.

## Clinical trials

In 2019, Trial Nation Center for Oncology documented the initiation of 18 unique commercial clinical phase I & II trials in involving one or more of the clinical departments. Overall, 59 unique commercial clinical phase I-II trials were documented as ongoing in 2019 compared to 50 the year before. 11 of the ongoing trials were pediatric oncology trials of which 3 were initiated in 2019. As in the previous years all departments were involved in the conduct of commercial clinical phase I & II trials. See Figure 7.

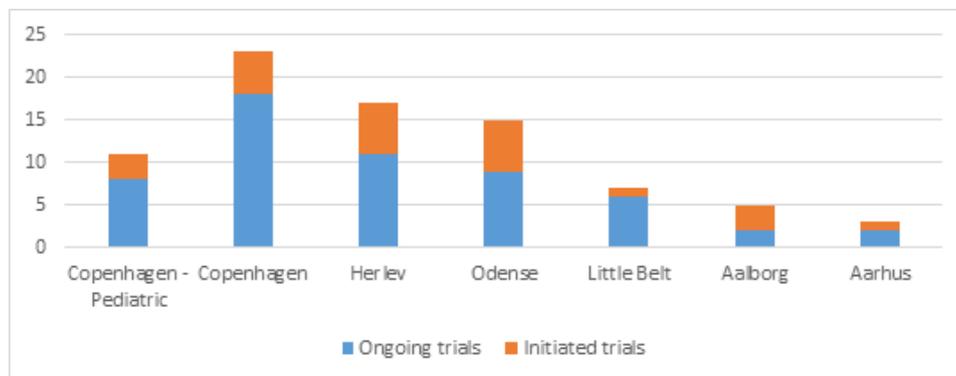


Figure 7. Number of commercial phase I & II clinical trials ongoing and initiated in at the departments constituting Trial Nation Center for Oncology in 2019. Copenhagen – Pediatric = Copenhagen University Hospital – Department of Pediatric and Adolescent Medicine, Copenhagen = Copenhagen University Hospital, Herlev = Herlev & Gentofte Hospital, Odense = Odense University Hospital, Little Belt = Little Belt Hospital - Vejle Hospital, Aalborg = Aalborg University Hospital, Aarhus = Aarhus University Hospital

Totally, 615 patients were referred to the Phase I Unit at Copenhagen University Hospital for phase I treatment in 2019 compared to 418 the year before. Of these patients, 96 received experimental treatment via a clinical trial. 6 more than the year before.

Totally, 192 patients were referred to the Experimental Cancer Unit at Herlev and Gentofte Hospital for phase I treatment of which 190 had a first visit at the clinic.

It is impossible to consolidate the reported recruitment figures in a meaningful way.

## Center activities

In 2019, the following joint activities took place in Center for Oncology:

- Sharing of feasibilities
- Face to face center meeting – April 2019
- Dialogue meeting with Danish Medicines Agency and the National Research Ethics Committee (NVK) – April 2019
- Clinical Trial Seminar in Copenhagen for Sponsor VIPs in collaboration with Invest in Denmark showcasing the Trial Nation centers hereinunder Center for Oncology – June 2019
- Supported the architectural design of a real-time national database on clinical trials
- Continued improvement of the collaboration with relevant patient organizations on clinical research
- Supported the Trial Nation CRO Network meetings

## Further

- Departments from the center participated in several national and international conferences hereinunder the European Society of Medical Oncology (ESMO) conference and the American Society of Clinical Oncology (ASCO) conference.
- The secretariat held individual meetings with all departments (in one case jointly with the local hematology department)
- The Trial Nation Secretariat participated in the Nordic NECT meeting in Bergen, Norway – March 2019
- At People's Democratic Festival on Bornholm the secretariat organized three events of which two were cancer related. One on shared decision in connection with clinical trials in collaboration with The Danish Cancer Association and Danish Comprehensive Cancer Center and one on the prioritization of clinical research in collaboration with the Danish Comprehensive Cancer Center – June 2019. The later resulted in a letter on the issue addressed to the Minister of Health – August 2019.

## Issues to consider

- National sharing of feasibilities is challenged by
  - Use of electronic feasibility platforms
  - Organizational change: returning the national feasibility handling to Department of Oncology at Copenhagen University Hospital from January 1, 2020
- Precision medicine protocols effectively reduce the potential patient pool. Consequently, improved structures for referral of patients for all phases between hospitals for clinical trials within Denmark and within the Nordics are needed
- Support of work on national database on clinical trials is imperative to support

clinician and patient knowledge of clinical trials open for recruitment in Denmark and so referral of patients for clinical trials

- Continued focus on new / future cutting edge requirements for performance of clinical trials
  - Handling of virtual clinical trials
- Improved collaboration with patient organizations on clinical research are needed
- Stronger prioritization of clinical research needed

## Cost summary

The departments of the center have reported the following spending in 2019:

	Reported Spending	Actual Spending	Budget
Center for Oncology			
Copenhagen University Hospital – Pediatrics	618,600.00	788,895.92	618,600.00
Copenhagen University Hospital – Oncology	5,892,160.00	18,796,765.49	5,892,160.00
Herlev & Gentofte Hospital	1,790,829.00	2,536,315.11	1,790,829.00
Little Belt Hospital, Vejle Hospital	618,600.00	700,819.71	618,600.00
Odense University Hospital	618,600.00	633,589.92	618,600.00
Aalborg University Hospital	580,401.92	580,401.92	618,600.00
Aarhus University Hospital	277,383.06	277,383.06	618,600.00
<b>Total</b>	<b>10,396,573.99</b>	<b>24,314,171.13</b>	<b>10,775,989.00</b>

Table 10: Center spending and budget in DKK.

In 2019, the Center for Oncology spent DKK 10,396,573.99, which was 96% of the total budget for the year. 6 departments had their spending's capped with DKK 13,917,597.14 to stay within budget for the year.

At the Department of Pediatric and Adolescent Medicine at Copenhagen University Hospital the primary focus has been to ensure readiness through systematization, development and quality assurance of work procedures and work flow, and the continued development of internal and external collaboration agreements which ensures more open trials with patient cohorts over and under the age of 18.

At the Phase I Unit at Copenhagen University Hospital, the primary focus has been to ensure readiness for phase I clinical trials through further development of an increasing translational research program and the continuous upfront genomic analysis of patients, broaden collaboration with new sponsors of early clinical trials, the identification of treatment options for patients through the national tumor board, clinical trials with patient cohorts over and under the age of 18 and marketing of the departments and the centers' competences. The hospital further participated in the event on political prioritization of clinical research at People's Democratic Festival on Bornholm and supported the architectural design process for national database on clinical trials. A focus area has furthermore been better collaboration with competent authorities to speed up and ease the approval process and to help sponsors and CROs with implementation of new legislation regarding genomic analysis.

At Herlev and Gentofte Hospital, the primary focus has been to ensure readiness for phase I-II clinical trials through systematization, quality assurance of work procedures and the continued development of internal and external collaboration agreements, up-front genomic analysis of patients and identification of treatment options for patients through the national tumor board. The hospital further supported the architectural design process for national database on clinical trials.

At Little Belt Hospital - Vejle Hospital, the primary focus has been to ensure readiness for clinical trials, creation and maintenance of databases and training of Clinical Research Unit staff. The hospital further participated in the event on shared decision in connection with clinical trials at People's Democratic Festival on Bornholm.

At Odense University Hospital, the primary focus has been on ensuring readiness for clinical trials through genomic analysis of patients, training of Clinical Research Unit staff and the identification of treatment options for patients through the national tumor board.

At Aalborg University Hospital, the primary focus has mainly been to ensure readiness for clinical trials through genomic analysis of patients, creation and maintenance of databases, training of Clinical Research Unit staff and identification of treatment options for patients through the national tumor board.

At Aarhus University Hospital, the primary focus has been on ensuring readiness for clinical trials through genomic analysis of patients and identification of treatment options for patients through the national tumor board.

## **Focus in 2020**

In 2020, the center will focus on attracting new trials and improving the national collaboration across departments, ensuring effective feasibility handling, adequate capacity for clinical trials, predictable deliverables herein capture of relevant trial performance data and patient empowerment. Marketing of the competences in the center towards industry will further be intensified. This will be accomplished by

- Improving the national collaboration across departments
- Patient involvement in clinical trials
- The development of a national database on clinical trials to support referral of patients for clinical trials and empower patients who seek participation in clinical trials
- Improving structures for referral of patients between hospitals for clinical trials within Denmark and within the Nordics
- Support of the national tumor board in order to identify patients for clinical trials using precision medicine
- Regional and national prioritization of clinical research
- Inclusion of the Zealand University Hospital and Regional Hospital West – Herning Hospital in the center

- Focus on shared best practices for work procedures and the continued development of collaboration agreements
- Focus on reducing regional and national barriers for the approval and conduct of clinical trials

# Center for Respiratory Medicine

In 2019 Center for Respiratory was represented by research units at:

- Department of Respiratory Medicine at Bispebjerg Hospital
- Department of Respiratory Medicine at Hvidovre Hospital
- Department of Respiratory Medicine at Næstved Hospital
- Department of Respiratory Medicine at Odense University Hospital
- Department of Respiratory Diseases at Aalborg University Hospital
- Department of Respiratory Diseases and Allergy at Aarhus University Hospital

The Center for Respiratory Medicine was established in 2016 and is coordinated by Prof. Charlotte Suppli Ulrik from Hvidovre Hospital. The capital region was represented in the center with two departments. The remaining regions were represented by one department each. Trial Nation Respiratory Center is augmented by The Respiratory Medicines Network that in addition to the center departments, cover all public research facilities relevant to commercial respiratory clinical research. All feasibility studies are circulated in the network. The yearly activities are summarized in Table 11 and described in detail below.

## Overall activities of feasibility studies, trials and patients

A total of 24 clinical trial feasibility studies involving 6 phase I-II feasibility studies, 12 phase III-IV-NIS feasibility studies and 6 feasibility studies of unknown phase involving one or more of the clinical departments were performed in Center of Respiratory Medicine in 2019:

Center for Respiratory Medicine	2016	2017	2018	2019
Number of feasibility studies received	16	13	18	24
Number of initiated trials	2	3	2	13
Number of trials open in year	2	3	4	19
Number of patients enrolled in trials	NA	260	38	124

Table 11: Overall activities of feasibility studies, trials and patients.

## Feasibility studies

10 feasibility studies were received from sponsor companies, 10 from CROs. (Total 13 from AstraZeneca, Novartis, Boehringer Ingelheim, Sanofi, Roche and PPD)

The center has again managed to share almost all feasibility studies. The outstanding result is a consequence of alignment and understanding between companies and the respiratory trial units, to a large extent mediated by the center coordinator. The feasibility study influx has been almost constant (5 – 7 feasibility studies per quarter) over the reported year. The outcome of the received feasibility studies is composed of almost equal parts initiated and declined studies. (7 vs 6, respectively). The majority of feasibility studies received in 2019 are still “Status: Ongoing”. The status of three feasibility studies is currently not known (LTF). We are cautious to let the increase of feasibility studies received in 2019 translate to an expectation of more initiated studies in 2020, compared with 2019.

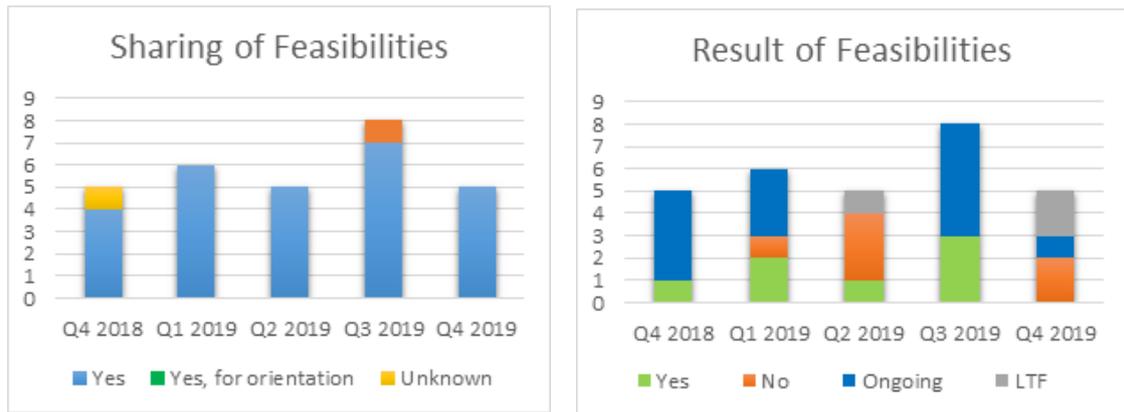


Figure 8 (left): Number of unique feasibilities received in Center for Respiratory Medicine, per quarter, in 2019.

Figure 9 (right): The result (current outcome) of each unique feasibility received in Center for Respiratory Medicine, per quarter, in 2019. (LFT = Left to follow-up)

## Clinical trials

In 2019, a total of 13 commercial clinical trials were initiated within the Center for Respiratory medicine, involving one or more of the clinical trial units. 5 of the initiated trials are early phase (I / II) and 8 are later phase studies. In addition, 6 trials were ongoing from the year before, of which 3 are early phases, 2 are late phase and 1 is of unknown phase. The center has been informed of 3 trials currently planned to be initiated in 2020.

## Departments involved

In 2019, center departments were involved in the conduct of between 3 and 12 clinical trials. Through 2019 the six respiratory research units had 15 ongoing studies and 32 site initiations bringing the center to a collective 47 active study sites.

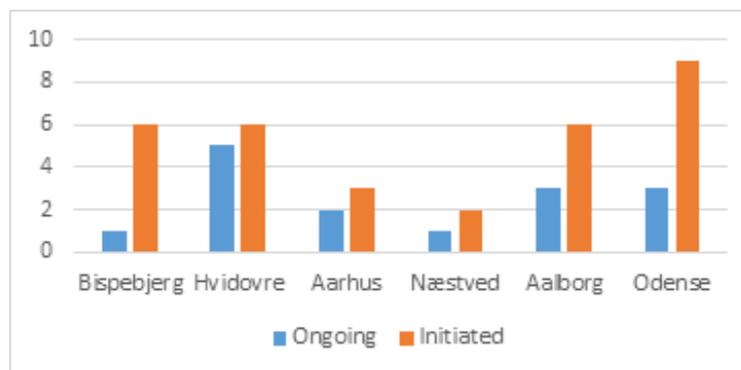


Figure 10: Number of clinical trials ongoing and initiated in Center for Respiratory Medicine in 2019.

## Number of patients

124 patients were included in clinical trials in 2019. Compared to the recruitment of 38 patients in 2018, this is an extraordinary recruitment achievement. Of the recruited 124 patients, 34 patients participated in early phase (I and II) studies.

The inclusion of patients was as follows: Bispebjerg recruited 25 patients to 7 trials (6 initiated in 2019). Hvidovre recruited 44 patients to 11 trials (6 initiated in 2019). Næstved recruited 7 patients to 3 trials (2 initiated). Odense recruited 33 patients to 12 trials (9 initiated in 2019). Aarhus recruited 11 patients to 5 trials (3 initiated in 2019) and Aalborg recruited 6 patients in 9 trials (6 initiated in 2019). The trials are characterized by increasingly specific inclusion criteria, and the recruitment of patients for the trials has been demanding in all trials. The great increase in recruitment performance should be viewed in this challenging light.

## Center activities

All departments have continued and increasingly committed to the demanding activity of running multiple clinical trials. The commitment is manifested in the improved recruitment metrics, but even more so in the mindset of the entire staff across the center departments throughout the entire year.

In September, the center hosted an event promoting Danish research capabilities. Outside Madrid, while the international respiratory conference ERS was at full pace, the almost complete Center for Respiratory Medicine welcomed global and Danish representatives for pharmaceutical companies relevant for respiratory research activities in Denmark. The Danish ambassador in Spain welcomed the entire delegation and his residence provided a very stimulating setting for the promotion of strong Danish clinical research competencies. Most of the companies present already had a very strong relationship, commitment and track record with the center. Others were invited to become more aware of the unique capabilities of the center, and the structure that Trial Nation provide. The feedback from companies and clinicians was very uplifting and therefore expect that focused interactions like this are fruitful.

In November, the Danish Respiratory Medicines Network, held its annual meeting. In 2019, the meeting was hosted by, and held at, the Danish Lung Association. The center and relevant patient organizations like the Danish Lung Association can, together, increase awareness about clinical research among patients. Previous research indicates that more than to thirds of patients have interest in some form of research participation, while information about clinical studies was reported as inaccessible. By collaboration with patient organizations, the center aims to offer even more patients to consider research participation.

The network facilitates the legal framework for improved subsite agreements that enable increasingly larger uptake areas without placing the economic and administrative burden of additional sites on the sponsor. Increased subsite activity is not only expected to improve the recruitment basis, but can also be seen as stepstone and learning opportunity for clinical sites interested in becoming fully capable at all facets of trial activity. The activity is initiated from the Northern Region.

## Cost summary

The departments of the center have reported the following spending in 2019:

Center for Respiratory Medicine	Reported Spending	Actual Spending	Budget
Aarhus	441,573.00	494,160.97	441,573.00
Bispebjerg	817,605.00	1,743,948.58	817,605.00
Hvidovre	231,240.00	830,815.50	231,240.00
Næstved	193,640.00	210,455.42	193,640.00
Odense	556,585.00	733,730.49	556,585.00
Aalborg	194,587.00	328,751.49	194,587.00
Total	2,435,230.00	4,341,862.46	2,435,230.00

Table 12: Center spending and budget in DKK.

In 2019, the Center for Respiratory Medicine spent DKK 2,435,230.00, which was 100% of the total budget for the year. 6 departments had their spending's capped with DKK 1,906,632.45 to stay within budget for the year.

At Odense University Hospital, the primary focus has been on patient recruitment and extending our list of local collaborators. We have especially participated in A1AT and IPF trials.

At Næstved Hospital the primary focus has been to consolidate the respiratory research unit, and to focus on phase 2 trials within asthma and COPD, thus few patients with many visits, tests and invasive procedures. We succeeded with First Patient Randomized globally in the ongoing BOREAS study, and the research unit is engaged in both multinational pharma studies, and investigator-initiated national and regional trials.

## Focus in 2020

In 2020, the center will focus on attracting new trials and improving the national collaboration across departments, ensuring effective feasibility handling, sufficient capacity for clinical trials, predictable deliverables herein capture of relevant trial performance data and patient empowerment. Marketing of the competences in the center towards industry will further be intensified.

# Danish Pediatric Network DanPedMed

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Facilitated by Clinical Trials Office Denmark DanPedMed was established in 2016 through a collaboration between Danish Pediatric Society and Danish Society of Clinical Pharmacology and corresponds to similar networks in the Nordic region under Nordic-PedMed. The network involves all pediatric departments in Denmark, including direct contact to 150 clinicians working within the field.

## Organization

Members of the steering committee:

Chairman: Lene Hartmann, Master of Science in Pharmacy. Data and development support, Region Zealand

Coordinator for DanPedMed: Pernille Skovby RN, MCN. Department of Pediatrics, Regional Hospital Unit West Jutland

Representatives in NordicPedMed: Rene Mathiasen, Consultant, MD. Pediatric and Adolescent Medicine, Pediatric oncology, University Hospital Rigshospitalet Copenhagen & Torben Laursen Consultant, MD. Department of Clinical Pharmacology, Aarhus University Hospital

Representatives from Danish Society of Pediatrics: Pernille Mathiesen, Consultant, MD, Pediatric and Adolescent Medicine, Slagelse Sygehus; Søren Hagstrøm, Consultant, MD, Pediatric and Adolescent Medicine, Aalborg University Hospital and Department of Clinical Medicine, Aalborg University, & Anne-Cathrine F. Viuff, MD, Pediatric and Adolescent Medicine, Viborg Regional Hospital.

National Coordinator: Pernille Skovby (PS): To operate the activities of the network the national coordinator is available for handling all inquiries concerning clinical trials in academic or the life science industry (e.g. pre-feasibility, feasibility and knowledge sharing concerning PIPs), and subsequently ensuring the contact to relevant clinicians at the different pediatric departments for participate in relevant research collaborations with the industry, and for providing the industry with relevant partners for knowledge exchange.

The network disseminates knowledge about clinical trials and research collaborations by managing inquiries and by arranging meetings for doctors, project nurses and other project staff.

The steering committee has four meetings annually.

## Activities in 2019:

- 25 inquiries were received and distributed in the network. The inquiries divide into different types as follows: 5 pre-feasibilities, 2 Nordic inquiries, 1 American inquiry

and 12 feasibilities.

- An annual meeting was held in Copenhagen in March with 100 participants with broad representation of pediatrics, clinical pharmacologists and employees from life science industry. The day was divided into themes related to children- and adolescents' medicine. Speakers on the day were, among others, Karel Allegaert from the Netherlands, pediatricians representing all regions in Denmark as well as a presentation by the Danish Health Authority. The feedback has been very positive.
- Tine Brink Henriksen (former member of the steering committee) has, in cooperation with NordicPedMed, written and published an article about children and medicine: <https://www.ncbi.nlm.nih.gov/pubmed/30844088>
- DanPedMed hosted a NordicPedMed meeting in Copenhagen in June. 14 participants from the Nordic countries participated. The agenda was primarily to strengthen the professional cooperation on clinical studies for children and adolescents across the Nordic countries. Besides this, a cooperation meeting was planned with the title: 'Benchmarking and Screening the availability of Real-World Data for the feasibility use in the University Hospitals of the NordicPedMed'. The meeting was held in Iceland in September, with Torben Laursen from DanPedMed participating.
- Participation in '3rd Nordic Conference on Pediatric Medicines - promoting pediatric research through collaboration and new ideas'. The conference was held in Finland in October. Besides networking, the most important part was hearing the presentations on the pan-European c4c project <https://conect4children.org> and DanPedMed was presented.
- In October, a steering committee meeting was held in Trial Nation's facilities with participation of Trial Nation CEO and secretariat about the cooperation with the European project c4c.
- DanPedMed and Trial Nation have cooperated to be a part of the large, pan-European IMI project Connect4Children(c4c). IMI has given a grant of 10,000 EUR annually (to cover activities in relation to c4c), making it possible for DanPedMed to be a part of the pan-European network for sites with interest in clinical trials in children. DanPedMed contributes to three specific tasks in the C4C project description. A 3rd party agreement will be established with Haukeland Hospital in Bergen, which is the national hub of Norway, and it is presumably the first step towards making DanPedMed a national hub in c4c. Trial Nation will be administering the grant. The Department of Neonatal, Rigshospitalet is included as site in one of four academic studies running under c4c. This will be carried out under a 3rd party agreement between Rigshospitalet and Haukeland Hospital in Bergen. It is expected that DanPedMed are offered participation in feasibility studies for four industry sponsored trials under the c4c.
- In November, representatives from DanPedMed and Trial Nation visited Haukeland Universitetssykehus in Bergen – which is the hub that DanPedMed is attached to – for a C4C meeting. The agenda was, among other things, a presentation of Denmark and a clear expression of interest for DanPedMed to be a part of c4c.

## **Cost summary**

The national coordinator of DanPedMed is financed with a grant amounting 160.000 DKK yearly from Trial Nation which is equivalent to 7 hrs./week. The grant has been financed by the Trial Nation Life Science Growth plan for 2019, where part of the Trial Nation grant was dedicated to establishing new centers.

## **A story to share**

The first inquiry Pernille Skovby received in the beginning of 2018 was a feasibility for a vaccine study. This study is now including patients at six sites (Hjørring, Aalborg, Aarhus, Odense, Hvidovre and Herning) in Denmark. For example, a Regional hospital, which has not previously run clinical trials, has joined in by support from pediatric department, Aalborg University Hospital and the department is now being interested in running more projects. This is a great case for how collaboration and networking matters.

## **Focus in 2020**

In 2020, DanPedMed will enforce national collaboration on medicines for children and be an attractive member of the c4c network by participating to international meetings related to c4c. Furthermore, DanPedMed will still focus on improving the national collaboration across Departments of Paediatrics and Adolescent Medicine in order to increase awareness about DanPedMed and focus on outcome of inquiries.

# **Trial Nation**

**Clinical Trials Denmark**