bns
Benelux
Neuromodulation
Society

BNS NEWSLETTER

ISSUE NUMBER 8 • JUNE 2026

BNS
NEWSLETTER

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PREFACE BY THE PRESIDENT

LISA GOUDMAN

Dear BNS Members,
Dear Colleagues,

Welcome to this new edition of the BNS Newsletter. The past months have been active and inspiring for our society. Based on the input of our members and the work of the board, we are taking important steps toward a clearer strategic direction for the BNS. Education, collaboration, consensus building, data initiatives, and international positioning will be key priorities for the coming years.
In this newsletter, you will find the first concrete results of this work: new educational activities, reflections from the INS Congress in Lisbon, recent research from our community, and a look ahead to both the BNS Congress in Antwerp and e-INS 2027 in Brussels.
I would like to sincerely thank all members who shared their ideas and contributed to these initiatives. BNS can only grow through the engagement of its community.
I hope you enjoy reading this edition, and I look forward to seeing many of you at our upcoming activities.

Warm regards,
Lisa Goudman, President BNS

Impressions from Lisbon

bns
Benelux Neuromodulation Society

IMPRESSIONS FROM THE 17TH INS CONGRESS

Lisbon • May 2026

The 17th World Congress of the International Neuromodulation Society in Lisbon brought together colleagues from around the world for a week of science, exchange, and collaboration. Below are a few impressions from an inspiring congress.

A week of science, exchange, and collaboration

BNS visible on the international stage

New connections across chapters

Celebrating contributions and recognitions

ins International Neuromodulation Society

17TH WORLD CONGRESS OF THE INTERNATIONAL NEUROMODULATION SOCIETY

9–14 May 2026 LISBON Portugal

Bridging minds, machines, and medicine

Lisbon 2026: inspiration for future initiatives

Thank you to everyone who participated, presented, and contributed to this inspiring congress.

First cross-chapter meeting

During the INS Congress 2026 in Lisbon, the Benelux Chapter actively participated in the first Cross-Chapter Meeting, organised together with the Nordic, Italian, Canadian, and UK chapters.

The session, entitled “Beyond the Implant: Precision Neuromodulation Through Data, Systems Biology, and Real-World Outcomes”, brought together international experts to discuss how neuromodulation can further evolve beyond implantation alone. Topics included patient selection, objective monitoring, psychological assessment, closed-loop therapies, long-term outcomes, and the emerging role of systems biology and real-world data.

TAKE-HOME MESSAGE:
National differences are not a limitation; they are a major opportunity to learn from each other, question our own routines, and strengthen neuromodulation care across chapters.

What made this session particularly special was not only the scientific content, but also the atmosphere in the room. There was representation from all participating chapters, and from the very beginning it felt like an open, curious, and constructive exchange between colleagues. After each presentation, there was room for discussion, questions, and reflection. The interaction was lively and honest, with participants openly sharing how neuromodulation is organised and practiced in their own countries.

One of the most valuable aspects was learning from the differences between national healthcare systems, reimbursement structures, clinical pathways, registries, and multidisciplinary collaborations. These differences could easily be seen as barriers, but during this meeting they felt much more like an opportunity. They reminded us that there is not one single way to organise neuromodulation care, and that comparing our approaches can help us better understand our own strengths, challenges, and blind spots.

For the Benelux Chapter, this was an inspiring experience. It showed how much we can gain by looking beyond our own borders and by connecting with colleagues who face similar clinical questions in different contexts. The discussions made clear that cross-chapter collaboration is not only useful for sharing scientific knowledge, but also for building a broader community, learning from each other's systems, and strengthening neuromodulation care together.

The Benelux Chapter was strongly represented in the programme, with contributions from several BNS members, including Jan Willem Kallewaard, Maarten Moens, Lisa Goudman, and Bart Billet. For those BNS members who were present in Lisbon, thank you for joining and contributing to the discussion. For those who could not attend, we hope this short reflection gives you a sense of the energy, openness, and collaborative spirit that marked this first meeting.

CROSS-CHAPTER SPIRIT

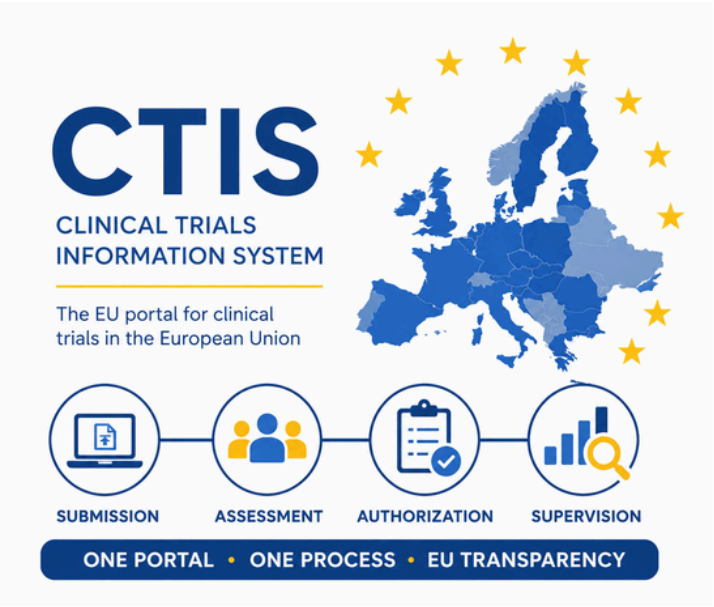
Open dialogue, shared challenges, and a willingness to learn from each other made this first meeting feel like the start of something valuable.

This first edition was a big success and marks the beginning of further cross-chapter collaboration.
A second edition is already planned for the next congress.

CTIS Webinar. European trials: new rules, new questions...

On December 15th, 2025, the BNS organised a webinar on CTIS and the new European rules for clinical trials, entitled "CTIS, the new rules for European trials: (no)sense?" We were very pleased to welcome Audrey Van Scharen, Master in Laws and Vice-president of the Ethics Committee at VUB, who guided us through this complex and rapidly evolving regulatory landscape.

Many of us are involved in clinical research, registries, device-related studies, or investigator-initiated projects, but not everyone is fully aware of how European regulations are changing the way clinical trials are submitted, assessed, followed, and made publicly visible.



CTIS stands for **Clinical Trials Information System**. It is the European platform used for the submission, assessment, supervision, and public registration of clinical trials with medicinal products. For neuromodulation, this is important to understand, even though many of our studies involve devices, implantable systems, intrathecal drug delivery, registries, or real-world data rather than classical drug trials.

The key message is that the **regulatory pathway must be clarified early**. Depending on the study design, a project may fall under clinical trial regulations, medical device regulations, medicinal product regulations, or observational research frameworks. This is especially relevant for studies involving implantable neuromodulation devices, IDD, combined therapies, multicentre data collection, or collaboration with industry.

For researchers and clinical teams, this means that study preparation should include early questions such as: What type of study are we conducting? Who is the sponsor? Which approvals are required? Which reporting obligations apply? And how will data protection, safety reporting, and transparency be organised?

Although these regulations may feel complex, they are becoming an essential part of high-quality clinical research. For the BNS community, better regulatory awareness will help us design feasible studies, collaborate across centres, avoid unnecessary delays, and strengthen neuromodulation research in the Benelux.

For those who could not attend: regulation is not something to check at the end of a study design. It should be part of the foundation from the very beginning.

TAKE-HOME MESSAGE

For neuromodulation and IDD research, the regulatory pathway should be clarified early. Device studies, drug-related studies, registries, and real-world data projects may follow different rules, and this can strongly influence feasibility, timelines, and approvals.

Strategic roadmap 2026-2027

During the past months, the BNS board has reflected on the future direction of our society. Neuromodulation is evolving rapidly, both scientifically and clinically. At the same time, the need for collaboration, education, structured data, and clear positioning is becoming increasingly important.

On March 10th, 2026, the BNS board met in Rosmalen to discuss the strategic roadmap for 2026-2027. This meeting included a SWOT analysis, a TOWS discussion, the results of the member survey, and the formulation of concrete strategic priorities for the coming two years.

First of all, we would like to sincerely thank all BNS members who responded to the survey and shared their views. Your input was extremely valuable. It confirmed that the BNS should continue to grow as an independent scientific and multidisciplinary Benelux platform, while also becoming more visible, more structured, and more active in producing shared output.

WHY THIS MATTERS

This roadmap turns reflection into action. It shows how the BNS can use its unique Benelux position to foster collaboration, create visible impact, and translate member input into tangible initiatives; from education and consensus documents to multicenter research and international engagement. It is about giving structure to our collective expertise for the benefit of every member and the patients we serve.

The SWOT analysis clearly showed that we have strong foundations within the Benelux: scientific expertise, a high level of clinical care and research, and a strong tradition of multidisciplinary collaboration. At the same time, several challenges were identified, including the need for a more formal structure, fragmentation between centers, and limited external visibility.

Importantly, these challenges are not seen as limitations, but as starting points for action. The growing relevance of neuromodulation, the need for guidelines and consensus, and the increasing importance of digital platforms for education and collaboration all create important opportunities for the BNS.

Based on the SWOT/TOWS analysis, six strategic priorities were defined for 2026-2027:

1. Formal structure and positioning. The BNS will further define its mission, vision, scope, and governance. A clear role within the Benelux landscape is essential to support all other ambitions. Priority leaders: Lisa Goudman & Maarten Moens

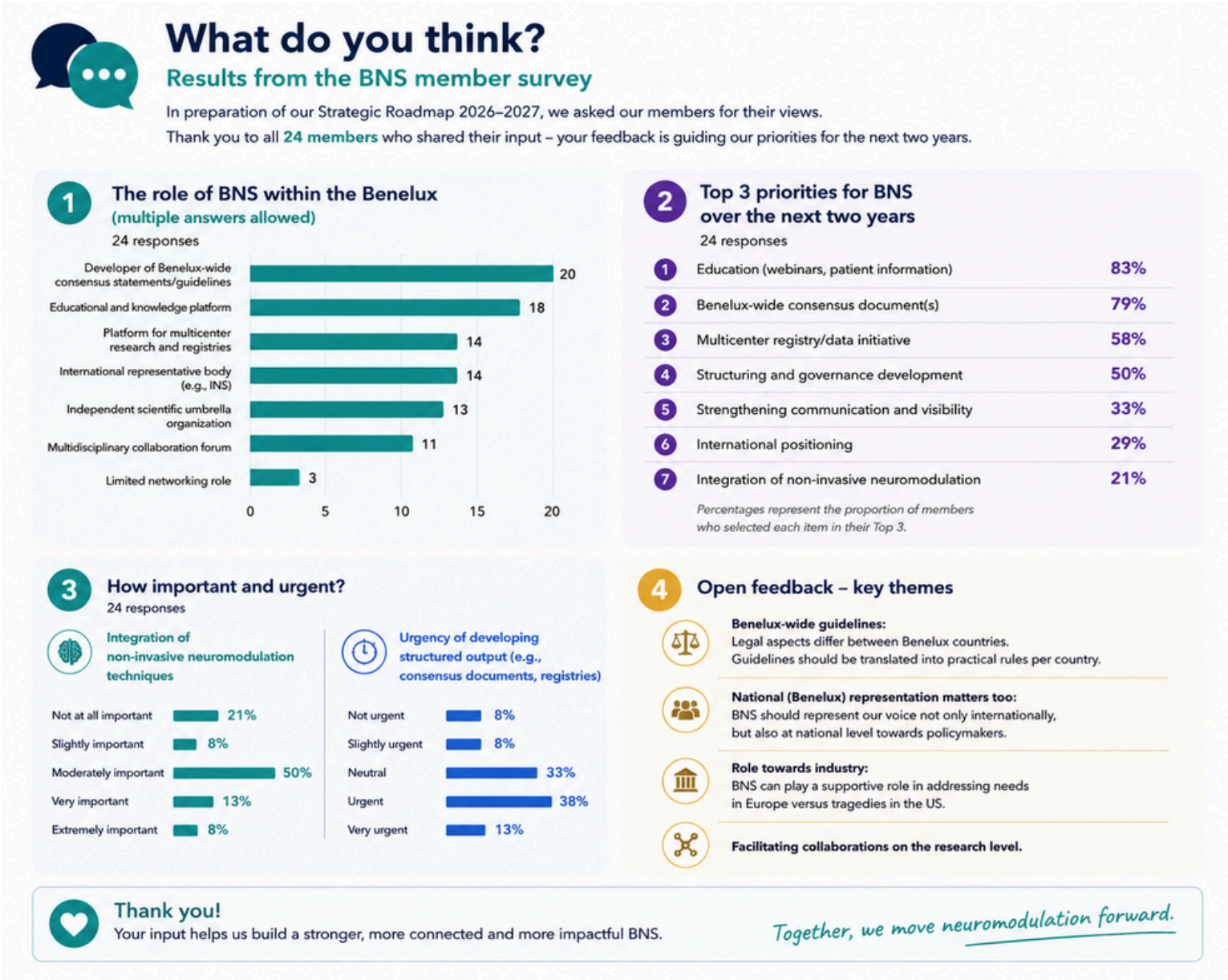
2. Development of consensus documents. There is a clear need for Benelux-wide consensus documents or position papers. These will help to harmonize practice, increase visibility, and strengthen the scientific role of the BNS. Priority leaders: Inge Arnts & Simone Van Der Gaag

3. Launch of multicenter data initiatives. Real-world data and registry initiatives are becoming increasingly important. The BNS aims to support pilot projects involving multiple centers, with clear agreements on data governance and ownership. Priority leaders: Mark Plazier, Bart Billet & Jan Willem Kallewaard

4. Integration of non-invasive neuromodulation. To remain future-oriented and multidisciplinary, BNS will explore how non-invasive neuromodulation techniques can be integrated within the society's scope and activities. Priority leader: Jan Willem Kallewaard

5. Education and communication platform. Members clearly indicated the importance of education. The BNS will therefore work toward more structured educational initiatives, including webinars, case discussions, patient or referrer information, newsletters, and social media communication. Priority leader: Wout Van Oosterwyck

6. International positioning. The BNS will continue to strengthen its role within INS and in collaboration with other European and international partners. The cross-chapter meeting in Lisbon is an important example of this direction. Priority leaders: Lisa Goudman, Erkan Kurt & Maarten Moens



The member survey gave additional guidance. Education and Benelux-wide consensus documents were selected as the highest priorities, followed by multicenter registry and data initiatives. Members who completed the survey also highlighted the importance of practical implementation: guidelines should be useful in daily practice and should take into account the legal and healthcare system differences between Belgium, the Netherlands, and Luxembourg. This is an important point. Differences between countries and centers should not be seen only as barriers. They can also be a major opportunity. By learning from each other's systems, strengths, and challenges, the BNS can help transform fragmentation into collaboration.

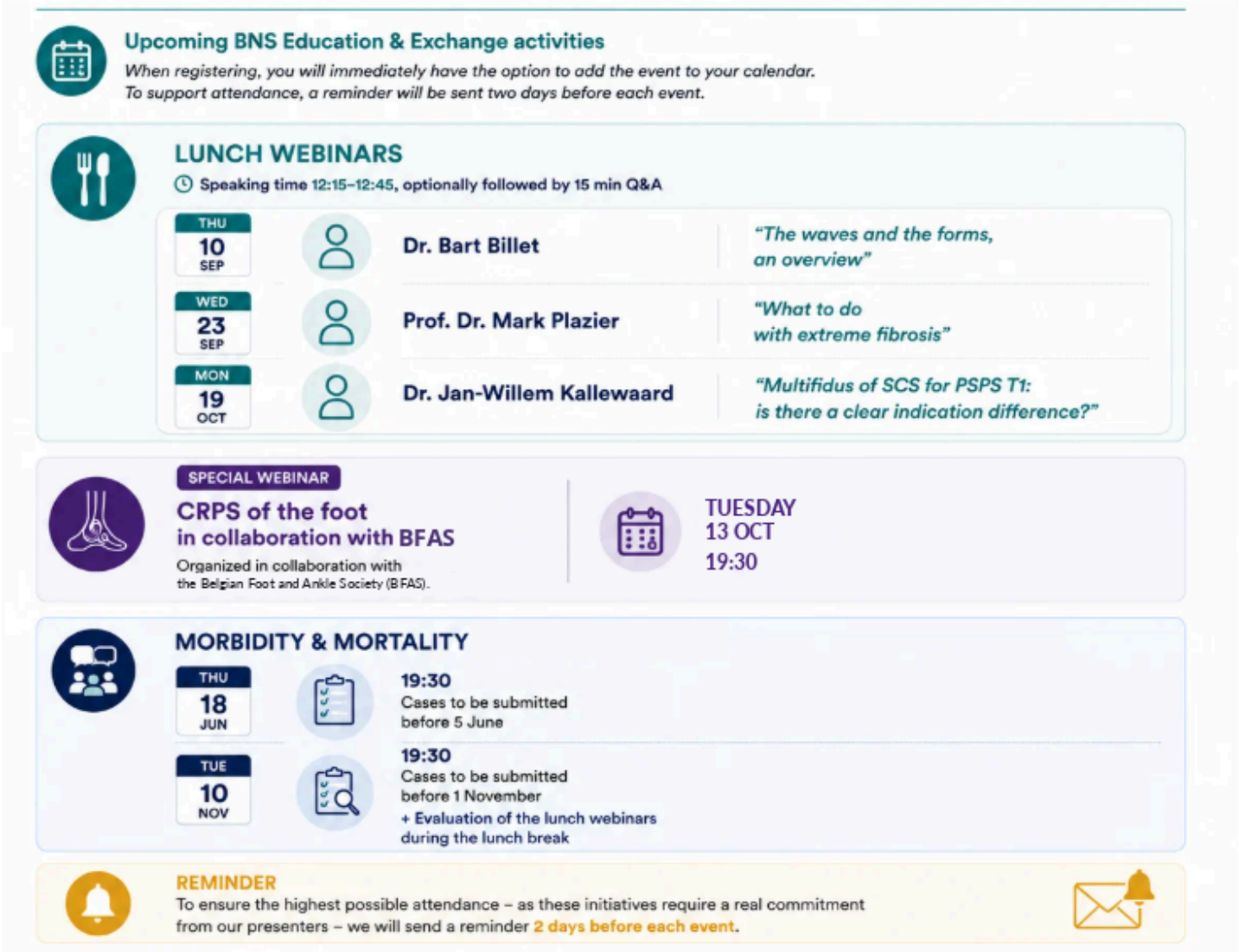
The board also discussed concrete next steps. Each strategic priority will be linked to board members or working groups. The aim is not to create an ambitious document that remains on paper, but to develop realistic and visible output for our members.

The BNS is entering a new phase.
We will continue to build on our scientific expertise and multidisciplinary spirit, but with more structure, clearer priorities, and stronger engagement from the Benelux neuromodulation community.
Thank you again to all members who contributed their ideas. This roadmap belongs to the whole BNS community.

OUR FIRST CONCRETE STEP

With the Benelux Neuromodulation Society, we explicitly aim to strengthen collaboration between pain centres. Not as a goal in itself, but in service of our patients. In concrete terms, this includes better alignment around referrals and shared care pathways, but also joint initiatives on infection prevention and control, the development of registries and data collection, and a coherent voice towards regulatory and reimbursement matters.

A particular point of attention is the broad accessibility of our **educational initiatives**. Neuromodulation is, by nature, a team discipline; a true team sport. Our activities are therefore not only intended for fellows and pain physicians, but equally for nurses, psychologists, and all other motivated professionals who are part of a multidisciplinary pain team. Everyone is warmly welcome.
With this spirit in mind, we are pleased to present our first programme.



RECENTLY PUBLISHED WITH BNS PARTNERS

A spotlight on two papers that were published by BNS members

Journal of Pain Research

Dovepress
Taylor & Francis Group

Open Access Full Text Article

ORIGINAL RESEARCH

Cost-Effectiveness of Differential Target Multiplexed Spinal Cord Stimulation for the Treatment of PSPS Type I from the Belgian Perspective

Iris Smet[1], Bart Billet[2,3], Raf van Paesschen[4], Sara McCloskey[5,6], Charlotte Imschoot[7], Philip Mallender[5], Simon Eggington[8], Jan Willem Kallewaard[9,10]

Cost-effectiveness of DTM-SCS for PSPS Type 1 from the Belgian perspective

A recent publication in the Journal of Pain Research by Iris Smet, Bart Billet, Raf van Paesschen, Jan Willem Kallewaard and colleagues evaluated the cost-effectiveness of Differential Target Multiplexed Spinal Cord Stimulation (DTM-SCS) for patients with Persistent Spinal Pain Syndrome Type 1 (PSPS T1) from the Belgian healthcare perspective.

This is an important topic for our field, as PSPS Type 1 (chronic refractory back pain without previous spine surgery) remains a challenging patient population. While spinal cord stimulation is increasingly supported by clinical evidence in selected patients, reimbursement and healthcare decision-making also require robust health-economic data.

The authors developed a health-economic model comparing DTM-SCS plus conventional medical management with conventional medical management alone. The model combined data from a European randomized controlled trial with Belgian healthcare cost data and evaluated outcomes over a 15-year time horizon.

The results suggest that DTM-SCS is likely to be a cost-effective treatment option for carefully selected patients with PSPS Type 1 in Belgium. In the base-case analysis, DTM-SCS resulted in an additional 1.29 quality-adjusted life years compared with conventional medical management, with an incremental cost-effectiveness ratio of €11,518 per QALY. In probabilistic sensitivity analysis, DTM-SCS was cost-effective in 99.7% of simulations at an assumed willingness-to-pay threshold of €30,000 per QALY.

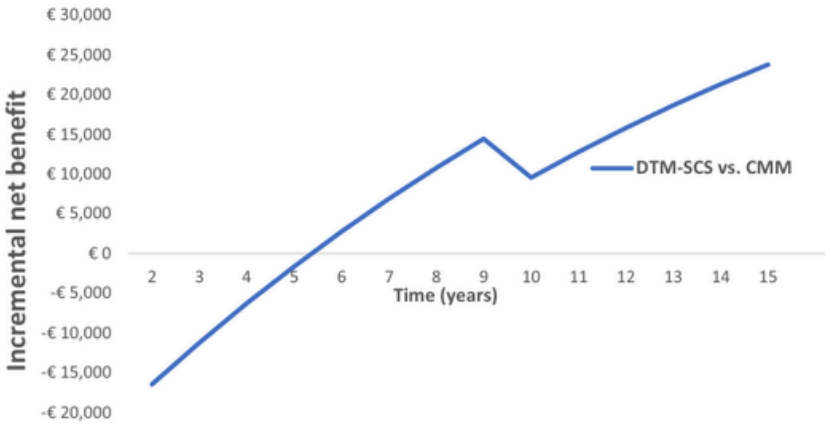


Figure 3 Incremental net benefit, DTM-SCS versus CMM, 15-year time horizon.
Notes: Incremental net benefit based on nominal willingness-to-pay threshold of €30,000.
Abbreviations: CMM, conservative medical management; DTM, differential target multiplexed; SCS, spinal-cord stimulation.

An important message from this work is that upfront costs should be interpreted in the context of long-term patient benefit and healthcare value. The incremental net benefit became positive from year 5 onward, supporting the relevance of long-term modelling in neuromodulation.

For BNS, this study is highly relevant. It provides Belgian health-economic evidence that may support future discussions on patient selection, reimbursement, and the value of neuromodulation in PSPS Type 1.

WHY THIS MATTERS

Health-economic evidence is essential for future reimbursement discussions. This Belgian analysis suggests that DTM-SCS may offer long-term value for carefully selected patients with PSPS Type 1.

THE LANCET

Adaptive deep brain stimulation in Parkinson's disease

Martijn G J de Neeling*, Bart J Keulen*, Mariëlle J Stam*, Bernadette C M van Wijk, Martijn Beudel

With the introduction of adaptive deep brain stimulation (aDBS) for Parkinson's disease, new questions emerge regarding who, why, and how to treat. This paper outlines the pathophysiological rationale for aDBS, which provides real-time modulation of the stimulation amplitude based on subthalamic beta (range 13–30 Hz) activity and related physiomarkers. We review clinical evidence comparing aDBS with conventional DBS in terms of motor improvement, side-effect reduction, energy efficiency, and technical developments, including sensing-enabled device characteristics, stimulation algorithms, and potential clinical indications. We also discuss limitations, such as physiomarker variability, signal artifacts, and the absence of standardised programming protocols. Finally, we explore the readiness for clinical implementation and future directions, and estimate the scope of eligible patients. In our view, aDBS marks a fundamental change in approach from fixed stimulation towards physiomarker-guided neuromodulation. This evolution necessitates new infrastructure, clinician training, and real-world studies, but holds promise for more personalised and responsive treatment.

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(M G J de Neeling MD, B J Keulen MSc, M J Stam MSc,

A recent publication in The Lancet by de Neeling, Keulen, Stam, van Wijk and Beudel from Amsterdam UMC focuses on one of the most exciting future directions in neuromodulation: adaptive deep brain stimulation for Parkinson's disease.

Conventional DBS delivers continuous stimulation using fixed settings. Adaptive DBS takes a different approach: the implanted system can sense neural activity and adjust stimulation in response to the patient's current neurophysiological state. In Parkinson's disease, this is often based on beta activity in the subthalamic nucleus, which is linked to bradykinesia and rigidity.

This represents an important conceptual shift. Instead of continuously stimulating in the same way throughout the day, adaptive DBS aims to provide stimulation when it is needed, and reduce stimulation when it may no longer be necessary or may contribute to side effects.

The potential advantages are clear: more personalised therapy, fewer stimulation-induced side effects, improved energy efficiency, and better adaptation to fluctuations in symptoms and medication state. At the same time, the authors emphasize that adaptive DBS is not yet "plug and play". Important challenges remain, including physiomarker variability, signal artefacts, patient selection, programming strategies, clinician training, and the need for real-world studies.

For the BNS community, this paper is relevant beyond Parkinson's disease alone. It illustrates where the broader field of neuromodulation is heading: towards sensing-enabled systems, closed-loop approaches, data-driven programming, and more personalised treatment.

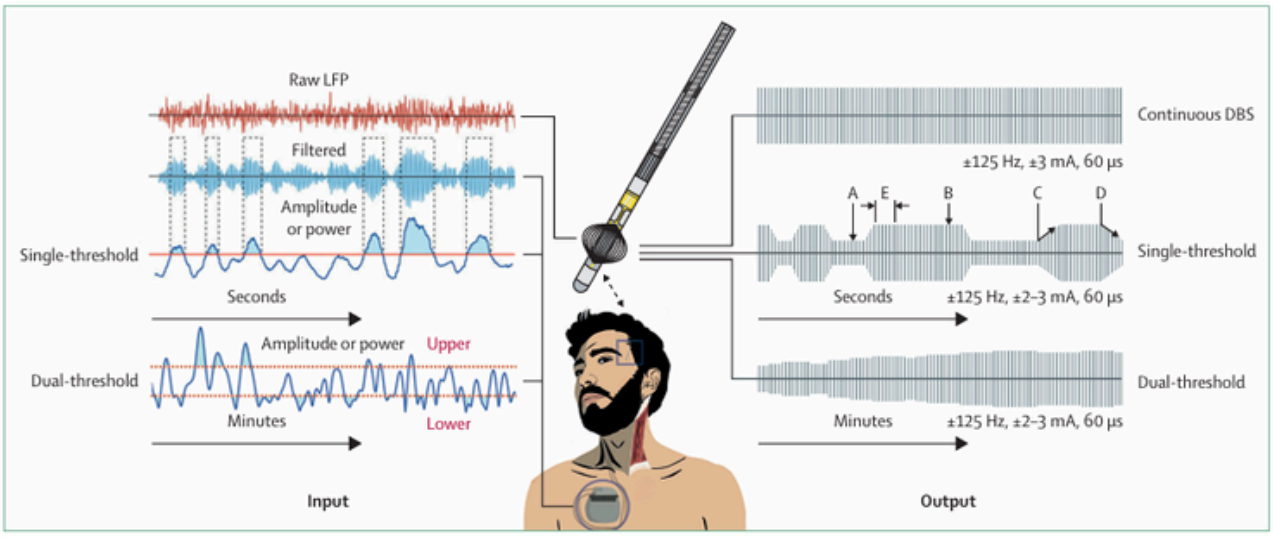


Figure 2: **Schematic of the workings of aDBS**
In the centre, a patient is depicted with a fully implanted DBS system consisting of electrodes in the subthalamic nucleus and a pulse generator. A magnified DBS electrode is depicted above (real size=1·57 mm in diameter). LFP recordings (in red) are used by the pulse generator to extract a physiomarker. The continuously measured physiomarker acts as feedback signal to control the stimulation. The two different types of aDBS control algorithms—single-threshold and dual-threshold—are depicted on the left. The stimulation amplitude (depicted on the right) changes between a low (A) and high (B) value following a transition time up (C) and down (D), over a period of seconds. A refractory (blanking) period (E) can be chosen, during which the stimulation amplitude cannot change. For single-threshold aDBS, stimulation is applied on either the low (A) or high (B) amplitude values, whereas for dual-threshold aDBS, the stimulation amplitude transitions more gradually between these two limits. aDBS=adaptive deep brain stimulation. DBS=deep brain stimulation. LFP=local field potential.

TAKE-HOME MESSAGE

Adaptive DBS marks a shift from fixed stimulation toward responsive, physiomarker-guided neuromodulation. The promise is more personalised therapy, but successful implementation will require training, infrastructure, and real-world evidence.

NEXT BNS CONGRESS

Radisson Blu Hotel Antwerp

* BNS congress *

accessible by public transport

SAVE THE DATE

FRIDAY, 18 SEPTEMBER 2026 FROM 9-17H

FAILURES IN NEUROMODULATION: FIX IT

This meeting will focus on what we can learn from complications, troubleshooting, unexpected outcomes, technical challenges, infections, patient-related factors, and difficult clinical decisions. By addressing a broad variety of "failures" in neuromodulation, the programme aims to be relevant for everyone involved in the field, including physicians, nurses, psychologists, researchers, fellows, and allied health professionals.

The congress will take place at the Radisson Blu Hotel Antwerp, a central and easily accessible location by public transport. We hope this will make it possible for many BNS members and multidisciplinary team members from across the Benelux to attend.

Join us for a practical, open, and interactive day focused on learning together and improving patient care.

More information and registration will follow soon.

SAVE THE DATE:
E-INS 2027 IN BRUSSELS

e-INS 2027

5th Joint Congress of the INS European Chapters

12–15 May 2027 | Brussels, Belgium

CONNECTING THE DOTS:
HUMAN CURIOSITY, POWERED BY DATA

Join the European neuromodulation community in the heart of Europe for a congress focused on curiosity, collaboration, bold discussion, and data-driven thinking.

WHAT TO EXPECT

1. DYNAMIC DEBATES
Engaging discussions on important and thought-provoking themes in neuromodulation.

2. INCLUSIVE COLLABORATION
Voices from across disciplines, backgrounds, and stakeholder groups.

3. NETWORKING & CONNECTION
Build bridges between generations, perspectives, and specialties.

4. DATA AS PROOF AND CHALLENGE
Using evidence not only to support ideas, but also to question assumptions.

5. SCIENCE MEETS CULTURE
A meeting point of creativity, innovation, and evidence-driven thinking.

WHY ATTEND?
A unique opportunity to connect with European colleagues, share ideas, challenge gold standards, and help shape the future of neuromodulation.

SAVE THE DATE — BRUSSELS 2027 AWAITS!

IMPORTANT DATES: COMING SOON

BNS MEMBERSHIP

The BNS Board encourages all members of the large neuromodulation family to get their BNS membership. Only by standing together, shoulder to shoulder, based on good practice and sound scientific evidence, new indications, new innovations and more awareness around neuromodulation will be achieved.
The BNS stands for being a trusted partner in the regulatory framework for the authorization and for increased focus on research with joint research projects and shared registries.

New members may register online for €170/year.

GOOD TO KNOW

Neuromodulation nurses, students and young researchers in neuromodulation can be a BNS member and therefore also an INS member for only €50/year.

The BNS board believes that treating patients with neuromodulation is a multidisciplinary team effort and strongly encourages nurses and researchers to join the big BNS family!

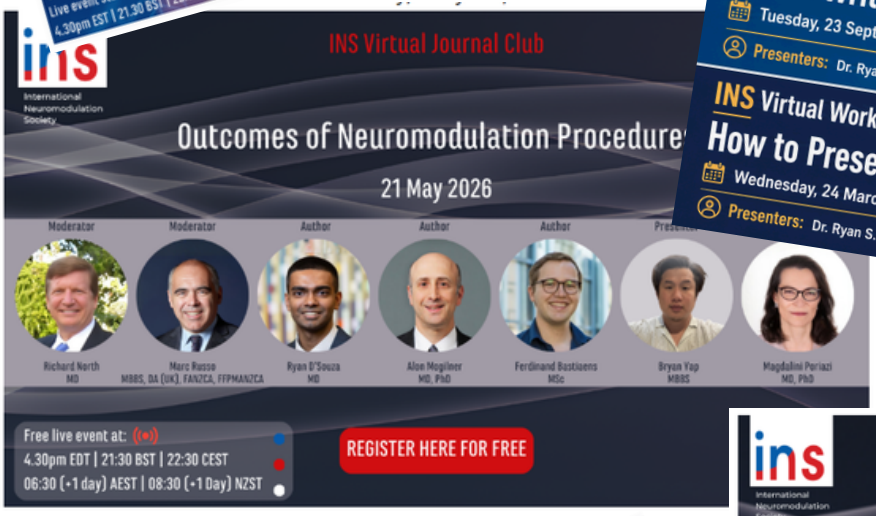
Please visit our website to register.

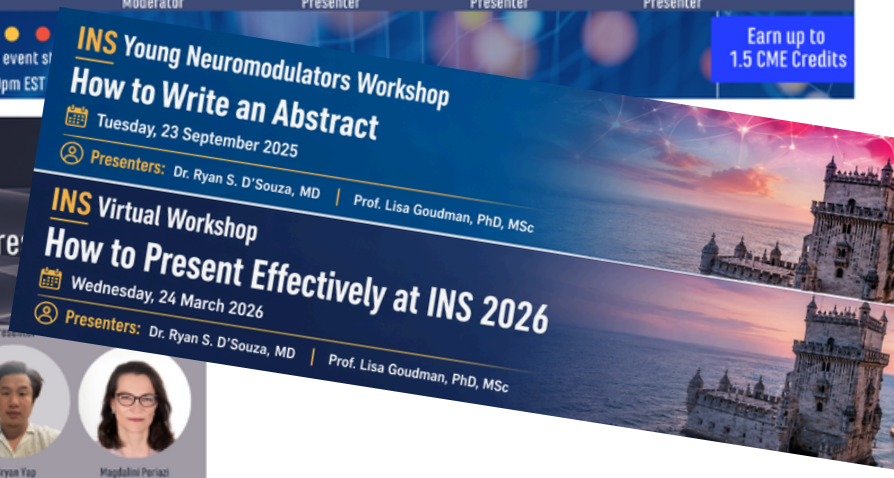
BNS MEMBERSHIP

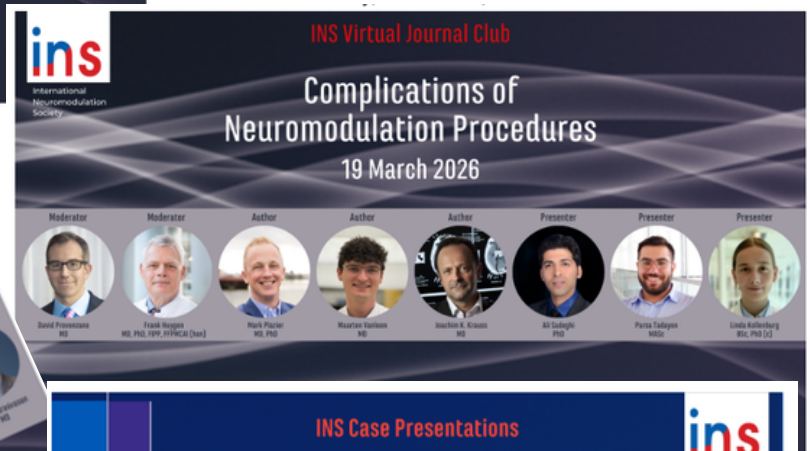
WHAT IS IN IT FOR YOU?

- Access to the journal 'Neuromodulation'
- Access to webinars & journal clubs
- Mentorship program
- Access to fact sheets and educational videos
- and so much more...

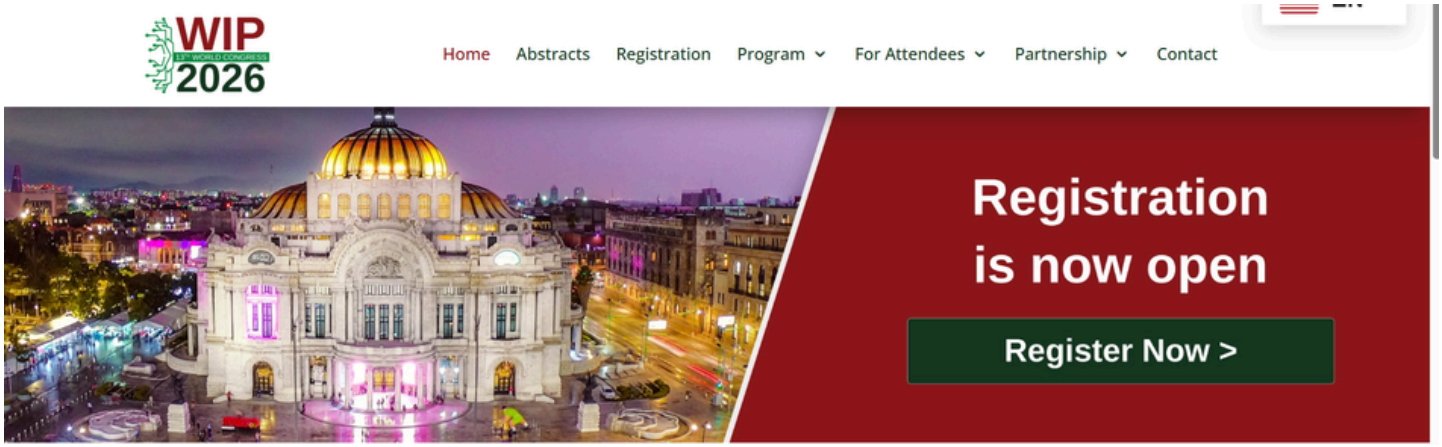
SELECTION OF INS WORKSHOPS, WEBINARS AND JOURNAL CLUBS WITH BNS INVOLVEMENT







Upcoming congresses



ISPN Annual Conference

October 22-25, 2026

Mövenpick Hotel Amsterdam City Centre
Piet Heinkade 11, 1019 BR Amsterdam, Netherlands

This conference is CME eligible

REGISTER NOW

LEARN WHAT IS COMING, MEET WHO IS SHAPING IT, AND RETURN WITH IDEAS FOR BETTER PATIENT CARE.

IASP 2026 WORLD CONGRESS ON PAIN

Bangkok, Thailand • 26-30 October

CONGRATS TO MIKE DE JONGSTE ON BEING NAMED 2026 CHAMPION OF NEUROMODULATION

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