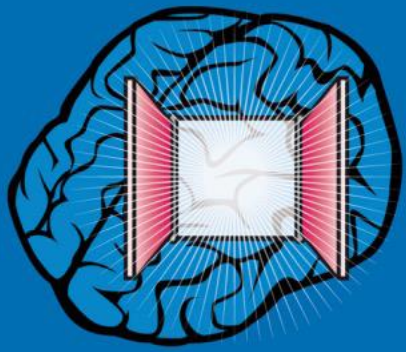


Publieksdag Hersentumoren

Zaterdag 27 November 2021
Online Evenement

In samenwerking met:





Publieksdag
Hersentumoren



Nieuwste inzichten: update vanuit SNO en EANO 2021

Dr. Marjolein Geurts

Neuro-oncoloog Erasmus MC



In samenwerking met:



Neuro-oncologie congressen 2021



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SNO
Society for NeuroOncology

Membership Events Publications Resources Education Public Policy About

The Society for Neuro-Oncology exists to advance multi-disciplinary brain tumor research, education, and collaboration to drive discovery and improve patient care



2021 SNO Annual Meeting!

Registration Open! • November 18-21, 2021, Boston, Massachusetts

EANO Meeting - 16th Meeting of the European Association of Neuro-Oncology

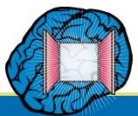
16TH MEETING OF THE EUROPEAN ASSOCIATION OF NEURO-ONCOLOGY

Welcome

EANO 2021 VIRTUAL

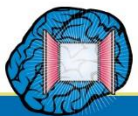
SEPTEMBER 25 - 26, 2021

EDUCATIONAL DAY: OCTOBER 23, 2021



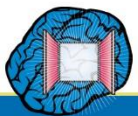
**Publieksdag
Hersentumoren**





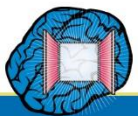


- Is het wondermiddel al gevonden?
- Is er hoop?
- En in de tussentijd?

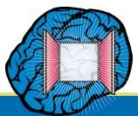




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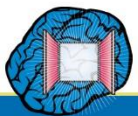


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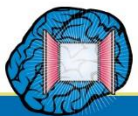


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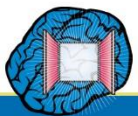


- Is het wondermiddel al gevonden?
 - Nee
- **Is er hoop?**
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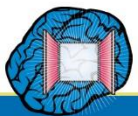
- Is het wondermiddel al gevonden?
 - Nee
- **Is er hoop?**
 - **Natuurlijk**
- En in de tussentijd?



Is er hoop?



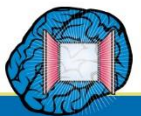
- Onderzoek focust nu op:
 - Beter begrijpen van hersentumoren
 - Testen van nieuwe geneesmiddelen



Is er hoop?



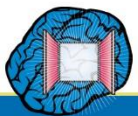
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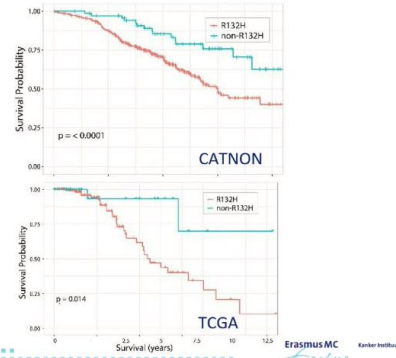
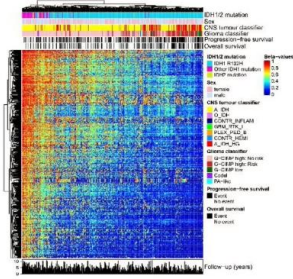
- Onderzoek focust nu op
 - Beter begrijpen van hersentumoren
 - Hoe verschillend zijn hersentumoren – en wat betekent dat?
 - Testen van nieuwe geneesmiddelen



Is er hoop?



Longer survival in non-R132H mut astrocytomas



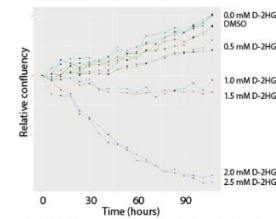
Pim French

non-IDH1-R132H IDH1/2 mutations are associated with increased DNA methylation and improved survival in astrocytomas, compared to IDH1-R132H mutations



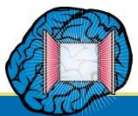
Why

- D-2HG is toxic to cells at high levels
- DNA-Methylation affects expression of cell-cycle genes
- D-2HG increases sensitivity towards radio and chemotherapy



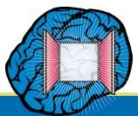
Pim French

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- Onderzoek focust nu op
 - **Beter begrijpen van hersentumoren**
 - Hoe verschillend zijn hersentumoren – en wat betekent dat?
 - **Hoe ziet het immuunsysteem rondom hersentumoren eruit?**
 - Testen van nieuwe geneesmiddelen





10:45 AM – 12:15 PM EST

Concurrent Session: Microglia/Macrophages and Gliomas

Concurrent Chair: [David H. Gutmann, MD PhD](#) – Washington University

Concurrent Chair: [Krishna P. Bhat, PhD](#) – UT MD Anderson Cancer Center

1.50

7:15 AM – 8:45 AM EST

Concurrent Session: Innate and Perturbed Immune Responsiveness in Human Brain Tumor Microenvironment

Concurrent Chair: [Timothy F. Cloughesy, MD](#) – University of California Los Angeles

Computational and Spatial Imaging Analyses of TAMs: Resident Microglia (MG) and Recruited Monocyte-Derived Macrophages (MDMs)

Intersection size

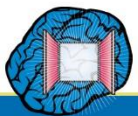
Cell Type	Intersection Size
MG	374
MDM	997
CD45 ⁺ other	796
metastases (BrM)	174
MG & MDM	966
MG & CD45 ⁺ other	155
MG & metastases (BrM)	127

Cell type-specific and disease-specific patterns of TAM 'education' as well as shared pathways between MG & MDMs

Exploring and Therapeutically Exploiting the Brain Tumour Microenvironment

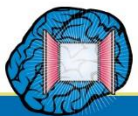
Klemm, Maas et al, Cell (2020)

Johanna Joyce





- Onderzoek focust nu op
 - **Beter begrijpen van hersentumoren**
 - Hoe verschillend zijn hersentumoren – en wat betekent dat?
 - Hoe ziet het immuunsysteem rondom hersentumoren eruit?
 - **Hoe communiceren ze?**
 - Testen van nieuwe geneesmiddelen



Begrijpen van hersentumoren



7:15 AM – 8:45 AM EST	Concurrent Session: Synaptic Input to Brain Tumors: Clinical Implications Concurrent Chair: Frank Winkler, Professor – University Clinic Heidelberg 📄 1.50	
7:15 AM – 7:20 AM EST	Introduction CME LIVE! Location: Auditorium Concurrent Speaker: Frank Winkler, Professor – University Clinic Heidelberg	📄 ★
7:20 AM – 7:40 AM EST	Synaptic Input to Glioma Networks Drives Brain Tumor Progression CME LIVE! Location: Auditorium Concurrent Speaker: Frank Winkler, Professor – University Clinic Heidelberg	★
7:40 AM – 8:00 AM EST	Electrical and Synaptic Integration of Glioma into Neural Circuits CME LIVE! Location: Auditorium Concurrent Speaker: Michelle Monje, MD PhD – Stanford University	★
8:00 AM – 8:20 AM EST	Glioma-Neuron Synapses Enriched Within Intratumoral Network Hubs Influence Language Plasticity CME LIVE! Location: Auditorium Concurrent Speaker: Shawn L. Hervey-Jumper, MD – University of California, San Francisco	📄 ★
8:20 AM – 8:40 AM EST	Neuron-Tumor Synapses: Clinical Implications for Neuro-Oncology CME LIVE! Location: Auditorium Concurrent Speaker: Wolfgang Wick, MD – Department of Neurology, Heidelberg University Hospital and National Center for Tumor Diseases (NCT)	📄 ★
8:40 AM – 8:45 AM EST	Closing Remarks CME LIVE! Location: Auditorium	📄 ★

Synapse Knockdown in GBM

Ca²⁺ Imaging

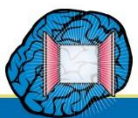
NBEA KO

Kevin Joseph

Miller, A. C., Yoelke, L. H., Shah, A. N. & Moens, C. B. Neurobeachin is required postsynaptically for electrical and chemical synapse formation. *Curr. Biol.* 25, 16–28 (2015).

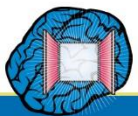
Folie 9 15.09.2021 Joseph K., et al, Manuscript under preparation EANO Annual Meeting 2021

Diversity of cellular communication in glioblastoma





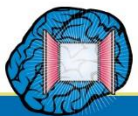
- Is het wondermiddel al gevonden?
 - Nee
- Is er hoop?
 - Natuurlijk
 - Goed begrijpen van de tumor is essentieel
- En in de tussentijd?



Is er hoop?



- Onderzoek focust nu op:
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 - Testen van nieuwe geneesmiddelen

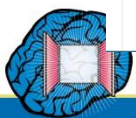


Testen van nieuwe geneesmiddelen



3:45 PM – 5:15 PM EST	<p>Abstract Session: Clinical Trials I</p> <p>Abstract Session Moderator: Tracy T. Batchelor, MD – Harvard Medical School, Massachusetts General Hospital</p> <p>Abstract Session Moderator: Mustafa Khasraw, MD – Duke University</p> <p>Abstract Session Moderator: Isabella C. Glitza Oliva, MD, PhD – The University of Texas MD Anderson Cancer Center</p>	
3:45 PM – 3:55 PM EST	<p>CTIM-13 - Phase 1 Clinical Trial of Oncolytic Viral Immunotherapy with CAN-2409 + Valacyclovir in Combination with Nivolumab and Standard of Care (SOC) in Newly Diagnosed High-Grade Glioma (HGG) NON CME </p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: Patrick Y. Wen, MD – Center For Neuro-Oncology, Dana-Farber Cancer Institute</p>	★
3:55 PM – 4:05 PM EST	<p>CTIM-17 - Intra-cranial administration of CTLA-4 and PD-1 immune checkpoint-inhibiting monoclonal antibodies in recurrent glioblastoma patients: a multi-cohort adaptive phase I clinical trial NON CME</p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: Johnny Duerinck, Md, PhD – UZ Brussel</p>	★
4:05 PM – 4:15 PM EST	<p>CTIM-03 - Autologous adoptive immune-cell therapy elicited a durable response with enhanced immune reaction signatures in patients with recurrent glioblastoma: An open label, phase I/IIa trial NON CME</p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: Jaejoon Lim, MD, PhD – Bundang CHA Medical Center, Department of Neurosurgery, CHA University</p>	★
4:15 PM – 4:25 PM EST	<p>CTIM-12 - A Phase 1 Trial of Immunoradiotherapy with the IDO Enzyme Inhibitor (BMS-986205) and Nivolumab in Patients with Newly Diagnosed MGMT Promoter Unmethylated IDHwt Glioblastoma NON CME</p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: Rimas V. Lukas, MD – Northwestern Medicine Lou and Jean Malnati Brain Tumor Institute</p>	★
4:25 PM – 4:35 PM EST	<p>CTIM-24 - Randomized trial of neoadjuvant vaccination with tumor-cell lysate induces T cell response in low-grade gliomas NON CME</p>	★

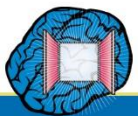
<p>Hyponatriëmie - Het Acute Boek 2021 Annual Meeting</p> <p>ddate=11/19/2021&BCFO=&pfp=days&mode=&fa=&fb=&fc=&fd=</p>		
	<p>Abstract Session Presenter: Jennie W. Taylor, MD, MPH – UCSF Helen Diller Family Comprehensive Cancer Center</p>	
4:35 PM – 4:45 PM EST	<p>CTIM-28 - MDNA55, an interleukin-γ4 receptor targeted immunotherapy, for recurrent GBM delivered by Convection Enhanced Delivery (CED) NON CME </p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: John H. Sampson, MD, PhD, MBA – Duke University</p>	★
4:45 PM – 4:50 PM EST	<p>CTIM-10 - Reproducibility of clinical trials using CMV-targeted dendritic cell vaccines in patients with glioblastoma NON CME</p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: Kristen A. Batch, MD, PhD – Duke University Medical Center</p>	★
4:50 PM – 4:55 PM EST	<p>IMMU-26 - Safety and efficacy of PVSRIPO in recurrent glioblastoma: long-term follow-up and initial multicenter results NON CME</p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: Annick Desjardins, MD, FRCPC – Preston Robert Tisch Brain Tumor Center at Duke</p>	★
4:55 PM – 5:00 PM EST	<p>CTIM-07 - A phase I/II study evaluating the safety and efficacy of a novel long-acting interleukin-7, NT-17, for patients with newly diagnosed high-grade gliomas after chemoradiotherapy NON CME</p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: Jian L. Campian, MD, PhD – Mayo Clinic in Rochester</p>	★
5:00 PM – 5:05 PM EST	<p>CTNI-43 - CXCL12 inhibition in MGMT unmethylated glioblastoma – results of an early proof-of-concept assessment in the multicentric phase I/II GLORIA trial (NCT04121455) NON CME</p> <p>Location: Ballroom C</p> <p>Abstract Session Presenter: Frank A. Giordano, MD – Department of Radiation Oncology, University Hospital Bonn, University of Bonn</p>	★
5:05 PM – 5:10 PM EST	<p>CTIM-16 - Phase 2 study of pembrolizumab plus TTFIELDS plus temozolomide in patients with newly diagnosed glioblastoma (2-THE-TOP) NON CME</p> <p>Location: Ballroom C</p>	★





Verschillende soorten geneesmiddelen

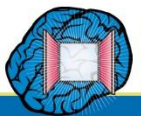
- Immunotherapie
 - Gliomen gevoelig maken voor immunotherapie
- Doelgerichte therapie
 - Gerichte behandeling op DNA van hersentumoren
- Middelen die “epigenetisch” (rondom het DNA) werken





- Vroege fase studies:
 - Wat is de juiste dosering?
 - Wat zijn de bijwerkingen?
 - Kan het samen met andere behandeling (bestraling/chemo)?

 - Niet: remt het de tumor?



Testen van nieuwe geneesmiddelen



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Session: Abstract Session: Clinical Trials I

CTIM-13 - Phase 1 Clinical Trial of Oncolytic Viral Immunotherapy with CAN-2409 + Valacyclovir in Combination with Nivolumab and Standard of Care (SOC) in Newly Diagnosed High-Grade Glioma (HGG)

Friday, November 19, 2021 3:45 PM – 3:55 PM EST Location: Ballroom C

NON CME

Abstract Session Presenter(s)

 **Patrick Y. Wen, MD**
Center For Neuro-Oncology, Dana-Farber
Cancer Institute
Boston, United States

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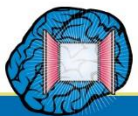
trial of CAN-2409 combined with standard-of-care (SOC) demonstrated safety and improved survival in HGG patients. Addition of CAN-2409 to nivolumab has the potential to activate locally recruited lymphocytes and teach them to recognize tumor neoantigens, changing the 'cold' immunosuppressive tumor microenvironment, and synergizing with the activity mediated by immune checkpoint inhibitors. This notion is supported by preclinical experiments showing that the combination of CAN-2409 with anti-PD1 therapy was more effective than either treatment alone.

Methods: This ongoing phase 1 clinical trial evaluates safety and initial efficacy of CAN-2409 combined with nivolumab and SOC in newly diagnosed HGG. CAN-2409 is injected during neurosurgery into the tumor bed, followed by 14-days of valacyclovir. Radiation starts within 8 (+/-4) days of surgery. Temozolomide is administered to MGMT-methylation positive patients only. Nivolumab is given every 2 weeks, up to 52-weeks. Deep immune profiling studies are ongoing and initial results will be available shortly.

Results: From February 2019 to March 2021, 41 patients were enrolled and 35 were evaluable for safety from the combination of CAN-2409, nivolumab and SOC: 24 male and 11 female; 34 glioblastoma, 1 diffuse astrocytoma; 33 IDH-wildtype, 2 IDH-mutant; 15 MGMT-methylated, 20 unmethylated. Median age was 62-years (range 28-79), median KPS 90 (range 80-100). With 13 months median follow-up, no unexpected serious adverse events were observed, and 23 patients are still alive. The most frequent possibly related adverse events (>10%) were nausea, fatigue, fever, headache, and increased ALT.

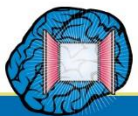
Conclusions: The combination of CAN-2409 + nivolumab + SOC was well tolerated. Clinical follow-up and extensive biomarker analyses will provide a better understanding of the therapeutic potential of this approach.

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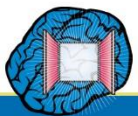


- Is het wondermiddel al gevonden?
 - Nee
- Is er hoop?
 - Natuurlijk
 - Goed begrijpen van de tumor is essentieel
 - Veel nieuwe geneesmiddelen in vroege fase van het onderzoek
- En in de tussentijd?



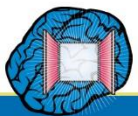


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 - Goed begrijpen van de tumor is essentieel
 - Nieuwe geneesmiddelen in vroege fase van het onderzoek
- **En in de tussentijd?**



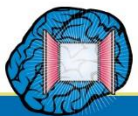


- Bestaande behandelingen optimaliseren
- Kwaliteit van leven optimaliseren



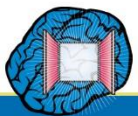


- Bestaande behandelingen optimaliseren
- Kwaliteit van leven optimaliseren



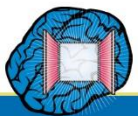


- **Bestaande behandelingen optimaliseren**
 - Operatie
 - Chemo
 - Voeding
- **Kwaliteit van leven optimaliseren**





- **Bestaande behandelingen optimaliseren**
 - Operatie:
 - Bij patienten >70 jaar, tumor verwijderen – of is biopt genoeg?
 - Chemo
 - Voeding
- **Kwaliteit van leven optimaliseren**





- Bij patiënten >70 jaar met een verdenking glioblastoom:
 - Loten:
 - tumor verwijderen
 - biopt
- Voor de overleving maakt het niet uit
- Maar:
 - De tumor verwijderen geeft niet meer complicaties
 - En zorg wel voor een betere conditie en kwaliteit van leven

Conclusion

This **prospective randomized study** does not meet our predefined efficacy criteria, **failing to demonstrate an improvement of OS**, as compared to biopsy alone in **elderly GBM pts** treated with postoperative RT +/- TMZ.

But suggests that **tumor resection** :

- is **well tolerated**
- nevertheless, **improves PFS, performance status and quality of life** in this frail population.

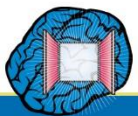
Surgery for glioblastomas in the elderly: an ANOCEF trial (CSA)

Florence Laigle-Donadey



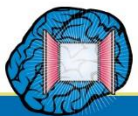


- Bestaande behandelingen optimaliseren
 - Operatie:
 - Bij patienten >70 jaar, tumor verwijderen – of is biopt genoeg?
 - Als je kunt kiezen: tumor verwijderen
 - Chemo
 - Voeding
- Kwaliteit van leven optimaliseren





- **Bestaande behandelingen optimaliseren**
 - Operatie
 - **Chemo**
 - **Is het niet beter om bij een glioblastoom meer chemokuren te geven?**
 - Voeding
- **Kwaliteit van leven optimaliseren**





- Patienten met glioblastoom
 - Loten:
 - standaard behandeling: 6 kuren temozolomide (79)
 - experimentele behandeling: 12 kuren temozolomide (80)
- Voor de overleving maakt het niet uit
- Meer bijwerkingen bij meer temozolomide

Conclusions



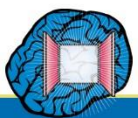
- The GEINO 14 is the only successful prospective randomized trial comparing 6 vs 12 cycles of adjuvant TMZ in GB.
- No differences were detected in 6m PFS, mPFS or mOS.
- Toxicity was light but cumulative especially for platelets and lymphocytes.
- Limitations: the trial was underpowered to provide conclusive data on differences in PFS or OS.



Carmen
Balanà Quintero

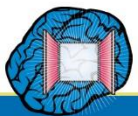


Evidence based: 6 cycles of adjuvant temozomide suffices in glioblastoma



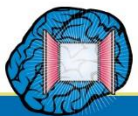


- **Bestaande behandelingen optimaliseren**
 - Operatie
 - **Chemo**
 - Is het niet beter om bij een glioblastoom meer chemokuren te geven?
 - Zes kuren is voldoende
 - Voeding
- **Kwaliteit van leven optimaliseren**





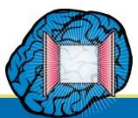
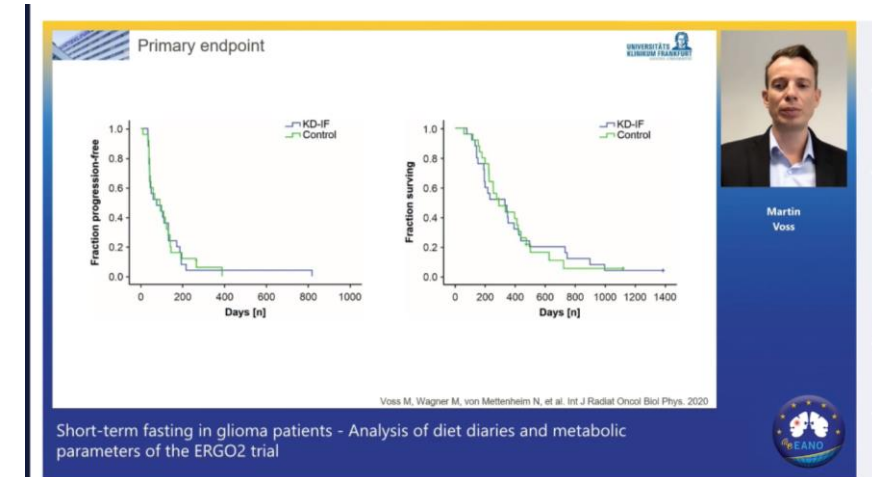
- **Bestaande behandelingen optimaliseren**
 - Operatie
 - Chemo
 - **Voeding**
 - **Helpt een ketogeen dieet om langer te leven?**
- **Kwaliteit van leven optimaliseren**



Bestaande behandelingen optimaliseren

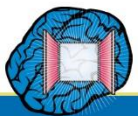


- Patienten met een groeiend glioblastoom na standaardbehandeling
- Loten:
 - Ketogeen dieet (25)
 - Gewoon gezond dieet (25)
- Voor de overleving maakt het niet uit
- Baat het niet dan schaadt het niet?



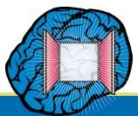


- **Bestaande behandelingen optimaliseren**
 - Operatie
 - Chemo
 - **Voeding**
 - **Helpt een ketogeen dieet om langer te leven?**
 - **Waarschijnlijk niet**
- **Kwaliteit van leven optimaliseren**





- Bestaande behandelingen optimaliseren
- **Kwaliteit van leven optimaliseren**
 - Hoe verhoudt kwaliteit van leven zich tot tumorgroei?
 - Helpt cognitieve revalidatie?





5539 patienten met hersentumor die meededen met een studie


- In de periode dat de tumor *niet* groeit:
 - 47% levert in op kwaliteit van leven
- Tumorgroei lijkt wel heel belangrijk in kwaliteit van leven

Conclusions

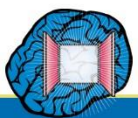

- When considering all HRQoL scales simultaneously, 47% of the patients deteriorated on at least 1 HRQoL scale during the progression-free period
- Only poor performance status at baseline was independently associated with a deterioration in HRQoL on a statistically significant *and* clinically relevant level
- TTD was longer than DFS in the majority of the trials, suggesting the importance of disease progression as a key event driving HRQoL decline
- Treatment itself was not independently associated with a poorer HRQoL during the progression-free period

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Factors associated with health-related quality of life (HRQoL) deterioration in glioma patients during the progression-free survival period

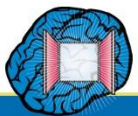
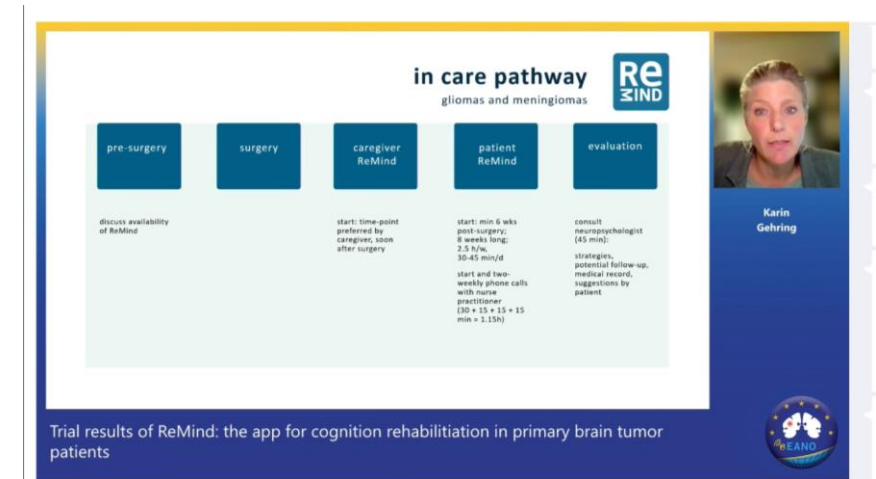


Marijke Coomans



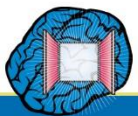


- Cognitieve revalidatie via ReMind app is zinvol



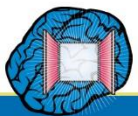


- Is het wondermiddel al gevonden?
 - Nee
- Is er hoop?
 - Natuurlijk
 - Goed begrijpen van de tumor is essentieel
 - Veel nieuwe geneesmiddelen in vroege fase van het onderzoek
- En in de tussentijd?
 - Huidige behandelingen worden beter
 - Veel aandacht voor kwaliteit van leven





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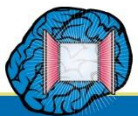


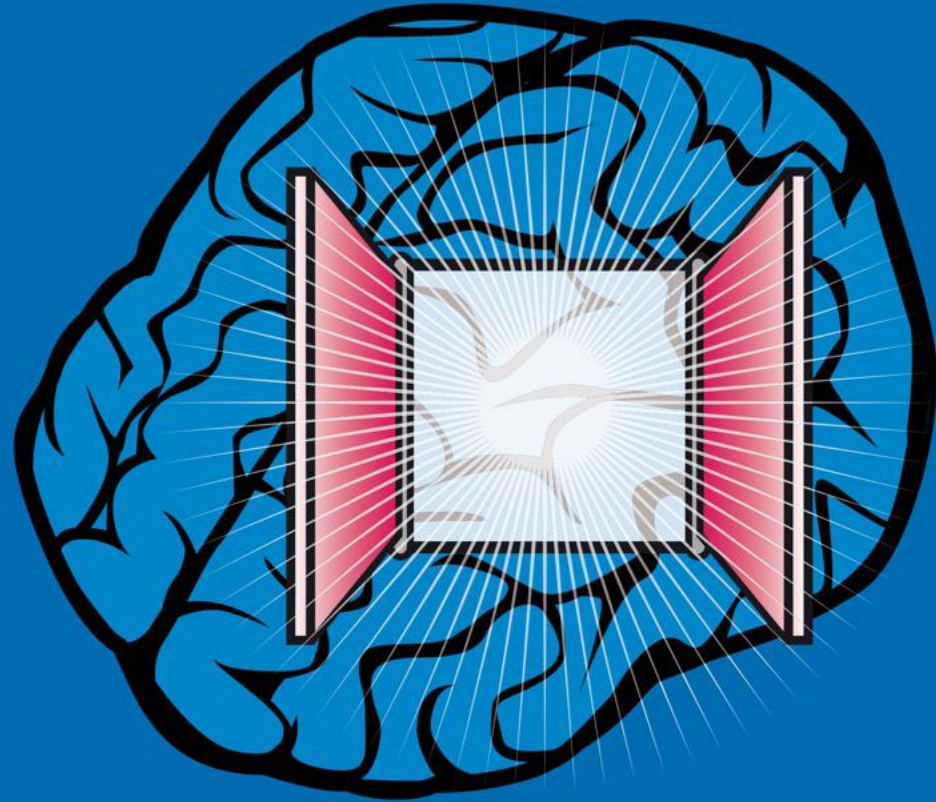


TOEKOMSTGERICHT

**WIE ALS EERSTE
BIJ DE STIP
AAN DE HORIZON IS**

Loesje





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