

cognitive changes as reported in Vallabh et al 2020, and with the finding of Mole et al. 2021 that most tests reveal impairment only at a stage where carriers report subjective symptoms. Our results suggest an opportunity for primary prevention to preserve full cognitive health in at-risk individuals. However, small sample size and limited test sensitivity may leave us underpowered to detect subtle deficits. Future research is warranted to further investigate the neuropsychological profile of pre-symptomatic GPD.

Categories: Genetics/Genetic Disorders

Keyword 1: cognitive functioning

Keyword 2: neuropsychological assessment

Keyword 3: genetic disorders

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Program Welcome by Co-Chairs: Julie Bobholz and Sakina Butt

4:15 - 4:30pm Wednesday, 1st
February, 2023
Pacific Ballroom A

Plenary A: Presidential Address: Anesthesia: A Wake-Up Call. Part 2. Developmental Risk or Resilience?

Presenter: Ida Sue Baron

4:30 - 5:25pm
Wednesday, 1st February, 2023
Pacific Ballroom A

Abstract & Learning Objectives:

This presentation is a clarion call to neuropsychologists to contribute their specialized knowledge to help answer a critical question: Is there a Fetal Anesthesia Syndrome that results in subtle and persistent adverse effects over an individual's lifespan? Neuropsychologists are uniquely positioned to make substantial contributions to

conceptualization, methodology, and interpretation in studies of human exposure to general anesthesia (GA). Part 1, presented at the 2022 INS Barcelona meeting, reviewed preclinical data that documented effects on the central nervous system and long-term behavioral adversities of GA exposure during an animal's critical growth spurt developmental period. Studies of human adult exposure were also summarized, and attention directed to the absence of prospective studies from childhood to adulthood. Part 2 extends the conversation to GA exposure during the highly vulnerable in utero and early childhood developmental periods. Human retrospective study results began to be published in the early 2000s, and prospective studies only within the last decade. Reports of associations between GA and attentional problems, learning disorder, neuropsychological deficit, and neuropsychiatric disorder are emerging. Yet, due to methodological weaknesses and multiple confounders, clear evidence of causality remains lacking in this nascent literature. A 'developmentalistic' way forward for neuropsychologists will be suggested, one using neuropsychological expertise along with the application of innovative technologies that is informed by the extensive preclinical data showing cellular, synaptic, and neural circuitry disruption during critical growth periods and short- and long-term neuropsychological effects.

Upon conclusion of this course, learners will be able to:

1. Describe types of central nervous system disruption that result in animals following exposure to general anesthesia
2. Identify neuropsychological domains at high potential risk following exposure to general anesthesia during the human critical growth spurt period
3. Explain what is meant by 'vertical transfer'

INS Awards Ceremony

5:30 - 6:30pm
Wednesday, 1st February, 2023
Pacific Ballroom A

Reception

6:30 - 7:30pm
 Wednesday, 1st February, 2023
 Flamingo Lawn

CE Workshop 07: Cognitive Effects of Cancer and Treatment: "Chemobrain" and Beyond

Presenter: Brenna C. McDonald

7:20 - 8:50am
 Thursday, 2nd February, 2023
 Town & Country Ballroom B

Abstract & Learning Objectives:
 Improvements in treatment for non-CNS cancer have greatly improved survivorship, allowing increased attention to cancer- and treatment-related sequelae. Cognitive symptoms (cancer-related cognitive impairment, or CRCI) are reported by a large percentage of cancer survivors, and can have a clinically meaningful impact on educational, vocational, and social functioning, and thus overall quality of life. Better understanding of these concerns is therefore of critical importance, and is needed to guide treatment and potential prevention strategies. Neuropsychological studies over the past 40 years have demonstrated cognitive domains commonly affected in cancer patients treated with chemotherapy, but have also shown cognitive differences in patients not treated with systemic therapy and those receiving other types of treatment (e.g., hormonal therapies) relative to non-cancer control groups. More recently, structural and functional neuroimaging research has added to our understanding of the neural substrate of these cognitive symptoms. This course will describe various neuroimaging modalities used to investigate CRCI, including examination of grey and white matter volume and structural integrity, blood flow, brain activation during cognitive processing and at rest, and structural and functional connectivity. The presentation will also review how neuroimaging findings relate to objective and self-reported cognition and clinical and treatment factors, and discuss potential approaches currently being investigated to treat CRCI. Upon conclusion of this course, learners will be able to:

1. Explain commonly affected cognitive domains after non-CNS cancer and treatment
2. Discuss structural and functional brain changes related to cancer, chemotherapy, and other treatments
3. Describe treatment interventions being investigated to treat cancer- and treatment-related cognitive symptoms.

CE Workshop 08: Theory and Practice in the Design and Evaluation of Cognition-Oriented Treatments in Aging and Dementia

Presenter: Alex Bahar-Fuchs

7:20 - 8:50am
 Thursday, 2nd February, 2023
 Pacific Ballroom A

Abstract & Learning Objectives:
 Cognition-Oriented Treatments (COTs) such as cognitive training and rehabilitation are increasingly recognized for their potential benefits for older people at risk of or with dementia, as well as for people with other conditions. An effective and well-informed use of such approaches depends on researchers and clinicians developing a careful understanding of key theoretical assumptions and of practical considerations. The workshop will provide participants with background theory and practical knowledge related to the application of COTs in research and practice, including review of the evidence, and demonstration of key principles in designing and delivering person-centered interventions likely to result in clinically meaningful outcomes. After attending this workshop, participants will be able to summarize the basic assumptions and techniques associated with different COTs, recognize important person and intervention-related factors likely to moderate treatment response, and able to apply those in designing COTs in research and clinical practice. Upon conclusion of this course, learners will be able to:

1. Summarize basic theoretical assumptions and key techniques underpinning cognition-oriented treatments
2. Recognize key person-related and intervention-related factors moderating response to cognition-oriented treatments