

Hands-On TMS and Esketamine Symposium Agenda *Topics and times are subject to change*

June 25-26, 2022

VEA Newport Beach Marriott Hotel and Spa – 900 Newport Center Drive, Newport Beach, CA

92660 Mindful Health Solutions – 4100 Newport Place Drive, Suite #730, Newport Beach, CA 92660

Course Title: Transcranial Magnetic Stimulation and Esketamine: Applications for Treatment Resistant Depression

Psychiatric disorders represent a significant and growing problem for society. While many patients are effectively treated with pharmacotherapy, psychotherapy, or a combination of the two, up to 30% with mood and anxiety conditions (Bystritsky 2006; Rush et al. 2006) do not respond to these standard treatments. In October 2008, the first transcranial magnetic stimulation (TMS) system was cleared by the U.S. Food and Drug Administration (FDA) for the treatment of adult patients with major depression who had not responded to one antidepressant medication. This marked the beginning of one of the most *innovative* treatment developments for psychiatry in the last decade. TMS allows the psychiatrist to modulate specific neural networks which affect mood, thinking and behavior. In 2018, the first TMS system was cleared by the FDA for the treatment of patients with OCD who have not responded to medication and psychotherapy (Carmi et al. 2018). Now, patients have access to this ground-breaking form of neuromodulation at numerous centers in the United States and there is broadening clinical applications into other psychiatric conditions as well as expansion in insurance coverage.

First use of ketamine as an antidepressant demonstrated a 50% response rate (Berman 2000). In March 2019, esketamine nasal spray used in conjunction with an oral antidepressant, was approved by the U.S. Food and Drug Administration (FDA) for the treatment of depression in adults who have not benefited from other antidepressant medication. Esketamine is thought to lead to growth through the creation of new connections in the brain by working on the glutamate system in addition to other systems.

Despite the growing availability of these innovative options, many psychiatrists are unsure about how to best utilize TMS and esketamine. This course provides practitioners with practical information for the management of patients who are candidates for both TMS therapy and esketamine. The course speakers are clinician-researchers with extensive knowledge about the clinical applications of TMS and esketamine. The course reviews mechanisms of action, applications for depressed patients and other psychiatric conditions, patient selection for the TMS and esketamine, as well as a thorough review of one of the current FDA cleared TMS Therapy systems. Teaching techniques will include didactics, case discussion, and panel discussion. Each attendee will receive a copy of *Transcranial Magnetic Stimulation: Clinical Applications for Psychiatric Practice* (Bermudes et al. 2018).

Part 1 of the course reviews the development of TMS as an integral treatment for patients with treatment resistant mood disorders. As well as a review on the effectiveness of esketamine and how it is administered. Additionally, each attendee will get trained in motor threshold determination on an FDA cleared TMS systems.

Part 2 of the course incorporates new research on treatment resistant neuropsychiatric conditions and the role of TMS and esketamine as key treatment modalities. In summary, this course provides both an update on the present clinical role of TMS and esketamine and a road map to its potential future.

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References:

1. Bermudes, RA, Lanocha, KI, Janicak, PG. *Transcranial Magnetic Stimulation: Clinical Applications for Psychiatric Practice*. Arlington, VA: American Psychiatric Association Publishing, 2018.
2. O'Reardon JP, et al. "Efficacy and safety of transcranial magnetic stimulation in the acute treatment of major depression: a multisite randomized controlled trial." *Biol Psychiatry*. 2007 Dec 1;62(11):1208-16.
3. Yechiel Levkovitz, et al. "Efficacy and safety of deep transcranial magnetic stimulation for major depression: a prospective multicenter randomized controlled trial." *World Psychiatry* 14.1 (2015): 64-73
4. Carmi, Lior, et al. "Efficacy and Safety of Deep Transcranial Magnetic Stimulation for Obsessive-Compulsive Disorder: A Prospective Multicenter Randomized Double-Blind Placebo-Controlled Trial." *Am J Psychiatry* 2019; 176:931-938.
5. Rush, A. John, et al. "Acute and longer-term outcomes in depressed outpatients requiring one or several treatment steps: a STAR* D report." *American Journal of Psychiatry* 163.11 (2006): 1905-1917.
6. Ella J. Daly, et al. "Efficacy and Safety of Intranasal Esketamine Adjunctive to Oral Antidepressant Therapy in Treatment-Resistant Depression A Randomized Clinical Trial." *JAMA Psychiatry*. 2018;75(2):139-148.

Objectives:

1. Explain the mechanism of action of TMS.
2. Understand the efficacy of TMS for the treatment of major depression.
3. Identify the risks and side effects of TMS.
4. Review the specifications of FDA-cleared TMS systems.
7. Identify appropriate patients for TMS.
8. Demonstrate how to determine a resting motor threshold on FDA cleared system.
9. Understand Mechanism of Action of ketamine
10. Research studies on the effectiveness esketamine
11. Learn how ketamine/esketamine are administered and observed.
12. Understand the typical patient experience with treatment

Topics:

- Transcranial Magnetic Stimulation
- Major Depression
- Treatment Resistant Depression
- Esketamine

Course:

This course will focus on Treatment Resistant Depression, Obsessive-Compulsive Disorder, Motor Threshold Determination and Esketamine (12 Hours of CME for In-person, 6 Hours of CME for Virtual)

Location:

(In-person) – VEA Newport Beach Marriott Hotel and Spa – 900 Newport Center Drive, Newport Beach, CA 92660
Mindful Health Solutions – 4100 Newport Place Drive, Suite #730, Newport Beach, CA 92660

(Virtual) – Zoom webinar

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Dates: June 25-26, 2022

In-Person Schedule: (12 credits)

Day 1 (Saturday, June 25th)

07:30am – 08:00am **Light Breakfast and Coffee Served – [VEA Newport Beach Marriott Hotel and Spa – 900 Newport Center Drive, Newport Beach, CA 92660]**

08:00am – 08:15am **Introductory Remarks**

08:15am – 9:15am **Transcranial Magnetic Stimulation: History and Mechanism of Action – Karl Lanocha, MD**

09:15am – 10:15am **Transcranial Magnetic Stimulation for Treatment Resistant Depression – Richard Bermudes, MD**

10:15am – 10:30am **Break**

10:30am – 11:30am **FDA Cleared TMS Systems and Specifications – Ian Cook, MD**

11:30am – 12:30pm **Risk Management Issues in Transcranial Magnetic Stimulation for Treatment of Major Depression – Philip Janicak, MD**

12:30pm – 01:30pm **Lunch Provided**

01:30pm – 02:00pm **Break/Move to Hands-on Demo Location**

02:00pm – 05:00pm **Hands on Demonstrations – [Mindful Health Solutions – 4100 Newport Place Drive, Suite #730, Newport Beach, CA 92660]**

06:00pm – 08:30pm **Reception – [TBD]**

Day 2 (Sunday, June 26th)

08:00am – 08:30am **Light Breakfast and Coffee Served – [VEA Newport Beach Marriott Hotel and Spa – 900 Newport Center Drive, Newport Beach, CA 92660]**

08:30am – 09:30am **Esketamine for Treatment Resistant Depression – Toby Marton, MD**

09:30am – 10:30am **Clinical Applications and Patient Selection: Who Should be Referred for Transcranial Magnetic Stimulation and Esketamine? – (Panel Discussion)**

10:30am – 11:00am **Break/Move to Hands-on Demo Location**

11:00pm – 02:00pm **Hands on Demonstrations – [Mindful Health Solutions – 4100 Newport Place Drive, Suite #730, Newport Beach, CA 92660]**

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Virtual Schedule: (6 credits)

Day 1 (Saturday, June 25th)

08:00am – 08:15am **Introductory Remarks**

08:15am – 9:15am **Transcranial Magnetic Stimulation: History and Mechanism of Action** – Karl Lanocha, MD

09:15am – 10:15am **Transcranial Magnetic Stimulation for Treatment Resistant Depression** – Richard Bermudes, MD

10:15am – 10:30am **Break**

10:30am – 11:30am **FDA Cleared TMS Systems and Specifications** – Ian Cook, MD

11:30am – 12:30pm **Risk Management Issues in Transcranial Magnetic Stimulation for Treatment of Major Depression** – Philip Janicak, MD

Day 2 (Sunday, June 26th)

08:30am – 09:30am **Esketamine for Treatment Resistant Depression** – Toby Marton, MD

09:30am – 10:30am **Clinical Applications and Patient Selection: Who Should be Referred for Transcranial Magnetic Stimulation and Esketamine?** – (Panel Discussion)

Course Instructors

Richard A. Bermudes, MD

Ian Cook, MD

Philip G. Janicak, MD

Karl Lanocha, MD

Toby Marton, MD

Course Fees:

In-person: \$1,500

Webinar: \$500