



# 1st CSPS Virtual Scientific Symposium

Thursday,  
November. 5, 2020  
18:00 – 22: 00 ET

**CME ACCREDITATION:**  
**3.5 hours**

Program as of October 16, 2020  
Subject to change

Time (ET)	Subject	Presenter
18:00	Welcome from CSPS President	Dr. B.S. Gan
18:15	Opening Remarks from CSPS Vice-President & Scientific Program Chair	Dr. C. Levis
18:20	First Prize Award Winners of CSPS 2020 Educational Foundation Scientific Presentations <b>Clinical:</b> <a href="#">A randomized control trial comparing surgical and patient reported outcomes between Alloderm and Dermacell in immediate alloplastic breast reconstruction</a>	Dr. M. Stein
18:25	<b>Basic Science:</b> <a href="#">Conditioning electrical stimulation improves functional recovery in a tibial to fibular nerve transfer</a>	Dr. J.L. Senger
18:30	<b>Innovation:</b> <a href="#">Deep learning for automated assessment of upper extremity radiographs</a>	Dr. T. Saun
18:35	<b>DISCUSSION</b>	
18:40	<b>PANEL: <a href="#">Staying on Target with BIA-ALCL</a></b> – moderated by CSPS Past President and current Chair, CSPS Public Relations Committee	Dr. R. Harrop
18:45	Diagnosis, reporting and current case numbers	Dr. P. Lennox
18:55	Current standards of care	Dr. J. Lipa
19:05	A patient's perspective on BIA-ALCL	Ms. T. McGregor
19:15	<b>DISCUSSION</b>	
19:45	<a href="#">Pandemic Politics and the Scourge of Depoliticization</a>	Dr. H. Giroux
20:15	<b>DISCUSSION</b>	
20:25	<b>CANADIAN EXPERT SERIES</b> <a href="#">Flap choices and other pearls in facial reconstruction</a>	Dr. T. Hayakawa
20:40	Lower limb reconstruction	Dr. M. Hill
20:55	<b>DISCUSSION</b>	
21:05	How to incorporate aesthetics into general Plastic Surgery practice	Dr. T. Zadeh
21:20	<a href="#">Blepharoplasty Pearls</a>	Dr. R. Warren
21:35	<b>DISCUSSION</b>	
21:45	<b>Closing remarks from the Scientific Program Chair</b>	Dr. C. Levis

## **A randomized control trial comparing surgical and patient-reported outcomes between Alloderm and Dermacell in immediate alloplastic breast reconstruction**

MJ Stein\*, A Arnaout, G Pond, M Clemons, D Fergusson, J Zhang  
Ottawa, ON

**PURPOSE:** Alloderm and Dermacell are the two leading human acellular dermal matrices (ADM) in immediate breast reconstruction. Despite differences in physical properties including sterility, there are no comparative trials to date comparing surgical and patient-reported outcome measures (PROM) between the two products. A randomized clinical trial was designed in order to determine if there was a clinical difference between the two products. **METHODS:** A single center, open-label, RCT of patients undergoing ADM-assisted immediate breast reconstruction with an implant for breast cancer was performed. Patients were randomized to receiving either Alloderm or Dermacell. Primary outcomes were postoperative seroma (measured by duration of postoperative drain placement) and PROM's (measured by BREASTQ). **RESULTS:** Sixty-two patients were randomized, 31(50%) Alloderm and 31(50%) Dermacell. PROM data was available for 74% of Alloderm 87% of the Dermacell patients. Baseline patient and surgical characteristics were similar. Median duration of drains was 10 days for Alloderm and 8 days for Dermacell ( $p=0.20$ ). At 6 months, a significantly higher number of patients with Alloderm required revisional surgery (30.3% vs 8.6%; $p=0.031$ ). The incidence of other secondary outcomes were similar and non-significant between groups (seromas requiring aspiration(3.0% vs 11.4%), implant loss (6.1% vs 2.9%), infection (9.1% vs 2.9%), red breast syndrome(3.0% vs 2.0%),  $p>0.05$ ) At 3 months, the Alloderm group had a significant improvement in breast satisfaction (67 vs 53,  $p=0.03$ ), overall satisfaction (85 vs 61,  $p=0.003$ ) and satisfaction with surgeon(89 vs 67,  $p=0.01$ ). At 12 months, there were no significant difference in PROM's between groups( $p>0.05$ ). **CONCLUSION:** We report the first randomized controlled trial to date comparing surgical and patient reported outcomes of the two most commonly used ADMs in immediate breast reconstruction in Canada. Although long term patient reported outcomes were not different between the two groups, patients who received Alloderm had high short term satisfaction rates, despite the increased risk of revisional surgeries. **LEARNING OBJECTIVES:** Compare the surgical and patient reported outcomes between Alloderm and Dermacell in immediate breast reconstruction

## **Conditioning electrical stimulation improves functional recovery in a tibial to fibular nerve transfer**

J-L Senger\*, K Rabey, M Morhart, A Chan, KM Chan, C Webber  
Edmonton, AB

**PURPOSE:** Treatment of foot-drop using a distal nerve transfer (DNT) is often unsuccessful, with UNPREDICTABLE outcomes. We hypothesize conditioning electrical stimulation (CES) to the donor nerve prior to DNT will improve outcomes. It is imperative that CES does not injure the donor nerve to be clinically feasible; therefore, we investigated the effects of CES on the nerve. **METHODS:** One week following a common fibular nerve injury, half of the rats were treated with tibial nerve CES. Seven days later, a tibial nerve branch was coapted to the distal fibular nerve. Length of axonal regeneration of the tibial nerve into the fibular stump was quantified at two- weeks, and tibialis anterior muscle reinnervation assessed at 10 weeks. Gait kinetics and kinematics were assessed between 7-10 weeks. The effects of CES on the nerve were compared to naïve (negative-control) and crushed (positive-control) nerves. Immunohistochemistry at 7 days assessed Wallerian degeneration and infiltration of inflammatory cells. **RESULTS:** Animals treated with CES prior to DNT had longer axon extension ( $p < 0.001$ ). Nerve conduction studies identified greater compound muscle action potentials, increased tibialis anterior muscle mass and more reinnervated neuromuscular junctions ( $p < 0.001$ ). Gait analysis of CES- treated animals identified significant improvements in gait kinetics/kinematics (velocity, vertical peak, duty factor, braking/propulsion forces, dorsiflexion, dexterity) ( $p < 0.05$ ). The tibial nerve distal to the site of CES had no macrophage infiltration nor did it demonstrate Wallerian degeneration. Plantarflexion of the treated limb was similarly preserved in both CES-treated and no-ES nerves. **CONCLUSIONS:** CES to the tibial nerve improved regeneration through a lower-limb DNT, with enhanced motor reinnervation and greater functional recovery. CES is non-injurious and safe for clinical use. CES may significantly improve outcomes for patients undergoing lower limb DNT. **LEARNING OBJECTIVES:** 1) CES improves regeneration through a DNT, 2) CES improves functional outcomes, 3) CES is a clinically feasible intervention.

## Deep learning for automated assessment of upper extremity radiographs

TJ Saun\*

Toronto, ON

**PURPOSE:** Hand X-rays are commonly ordered in outpatient, inpatient, and emergency settings, the results of which are often initially interpreted by non-radiology trained healthcare providers. Much like the advent of automated ECG interpretation in the 1970s, there may be utility in automating aspects of upper extremity X-ray analysis to aid with rapid initial analysis and reduce false negative interpretations. Deep neural networks have been shown to be effective in several medical imaging analysis applications. The purpose of this work was to apply a deep learning framework to automatically classify the radiographic positioning of hand X-rays. **METHODOLOGY:** A 152-layer deep residual neural network was trained using the MURA (musculoskeletal radiographs) dataset from Stanford University. This dataset contains 5,933 hand X-rays. The original dataset was filtered to remove pediatric X-rays as well as bilateral and atypical views. The X-rays were all labeled as either PA, lateral, or oblique view. A subset of 851 images was set aside for model validation and testing. Dataset augmentation was performed, including horizontal and vertical flips, rotations (+/-45 degrees), as well as modifications in contrast (+2, -0.5) and brightness (+50, -50). The model was evaluated and performance was reported as a confusion matrix from which accuracy, precision, sensitivity and specificity were calculated. **RESULTS:** The augmented training dataset consisted of 80,672 images. Their distribution was 38% PA, 35% Lateral, and 27% Oblique positions. When evaluated on the test dataset, the model performed with 95.5% accuracy, 92.6% precision, 94.0% sensitivity, and 96.3% specificity. **CONCLUSIONS:** Radiographic positioning of hand X-rays can be effectively classified by a deep neural network. Further work will be performed on classification and localization of abnormalities, automated assessment of standard radiographic measures and eventually on computer-aided diagnosis and management guidance of skeletal pathology. **LEARNING OBJECTIVES:** 1. Understand how a computer algorithm can assist in analyzing hand X-rays 2. Appreciate the workflow required to achieve AI-assisted diagnosis and management for hand pathology identified on X-ray.

**PANEL: Staying on Target with BIA-ALCL**

**Moderator:** Dr. R. Harrop

**Panelists:** Dr. P. Lennox: The current numbers of cases and deaths in Canada and the world  
Dr. J. Lipa: How to manage patients with a known diagnosis  
Ms. T. McGregor: Patient advocate – my journey

**Learning objectives:**

By the end of this session, attendees should:

1. Be familiar with the risk of BIA-ALCL in women with textured breast implants
2. Understand how to confirm the diagnosis of BIA-ALCL
3. Understand how to manage a patient with BIA-ALCL
4. Understand the psychosocial impact this condition has on women with textured implants

## **Pandemic Politics and the Scourge of Depoliticization**

Henry Giroux, PhD

Dr. Henry A. Giroux's primary research areas are: cultural studies, youth studies, critical pedagogy, popular culture, media studies, social theory, and the politics of higher and public education. He is particularly interested in what he calls the war on youth, the corporatization of higher education, the politics of neoliberalism, the assault on civic literacy and the collapse of public memory, public pedagogy, the educative nature of politics, and the rise of various youth movements across the globe. His website can be found at [www.henryagiroux.com](http://www.henryagiroux.com).

Henry Giroux currently holds the McMaster University Chair for Scholarship in the Public Interest in the English and Cultural Studies Department and the Paulo Freire Distinguished Scholar Professorship in Critical Pedagogy. He received his doctorate from Carnegie Mellon University in 1977. He has held positions at Boston University, Miami University of Ohio, Penn State University and currently is the University Professor for Scholarship in the Public Interest and Paulo Freire Distinguished Scholar in Critical Pedagogy at McMaster University in Hamilton, Ontario. In 2002, he was named as one of the top fifty educational thinkers of the modern period in *Fifty Modern Thinkers on Education: From Piaget to the Present* as part of Routledge's Key Guides Publication Series.

In 2005, Dr. Giroux received an honorary doctorate from Memorial University. In 2007, he was named by the *Toronto Star* as one of the "12 Canadians Changing the Way We Think." In 2015 he was honoured with a Doctorate of Humane Letters from the College of Educational Studies at Chapman University as well the Changing the World Award and the Paulo Freire Democratic Project Social Justice Award. In 2017, he was awarded an Honorary Doctor of the University from the University of the West of Scotland, UK. In 2019, Dr. Giroux was named the winner of the Professional Freedom and Responsibility Award, given annually by the Association for Education in Journalism and Mass Communication (AEJMC) to writers who exemplify the principles of free expression, inclusivity, and media accountability.

He is on the editorial and advisory boards of numerous national and international scholarly journals, and he has served as the editor or co-editor of four scholarly book series. He co-edited a series on education and cultural studies with Paulo Freire for over a decade. He is a frequent contributor to online sources such as *Truthout*, *Tikkun*, *CounterPunch*, *Truthdig*, *Salon*, and has published in a number of academic journals. He has published over 500 scholarly articles. His most recent books include: *America at War with Itself* (City Lights, 2017), *The Public in Peril* (Routledge, 2018), *American Nightmare: Facing the Challenge of Fascism* (City Lights, 2018), *The Terror of the Unforeseen* (Los Angeles Review of Books, 2019), *Neoliberalism's War on Higher Education*, 2<sup>nd</sup> Edition (Haymarket Books 2020); *On Critical Pedagogy* (Bloomsbury 2020) and his *Race, Politics, and Pandemic Pedagogy: Education in a Time of Crisis* (Bloomsbury Books(forthcoming 2021). His web site is [www.henryagiroux.com](http://www.henryagiroux.com).

## **Flap choices and other pearls in facial reconstruction**

T. Hayakawa

Winnipeg, MB

This presentation will outline various flap choices used in facial reconstruction in an anatomical region based format. In addition to basic principles, many unusual defects and reconstructive scenarios will be discussed in order to encourage participants to be creative when embarking on more complex defects. Various conceptual planning strategies will also be emphasized.

### Learning Objectives:

1. The participant will understand the advantages, disadvantages, and limitations of a variety of flap choices utilized in facial reconstruction.
2. Experience based pearls for optimizing outcomes in facial flap reconstruction will be presented to the participant.

## **Blepharoplasty Pearls**

R Warren

Vancouver, BC

1. If you are thinking about Upper Lid Blepharoplasty, also think about brow lift
2. Not everyone gets upper lid hooding as they age
3. If you are thinking about Upper Lid Blepharoplasty, Think about Fat Graft
4. Look for Upper Lid Ptosis and Fix it First
5. Watch out for Compensated Brow Ptosis
6. Tear Trough without bulging fat: Bring in some Fat
7. Tear Trough with bulging fat: Nothing works like Fat Transposition
8. Beware of patients who are prone to lower lid malposition
9. Always Support the Lower Eyelid
10. Watch out for Anatomic Terminology Confusion

## **LEARNING OBJECTIVES**

After this lecture, learners will be able to:

1. Explain the different ways that upper eyelids age
2. Describe three methods to treat the tear trough
3. Examine for tone in the lower eyelid prior to lower blepharoplasty

## **CME ACCREDITATION**

This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada and approved by Continuing Professional Development, Dalhousie University. You may claim a maximum of **3.5** hours (credits are automatically calculated).

Through an agreement between the Royal College of Physicians and Surgeons of Canada and the American Medical Association, physicians may convert Royal College MOC credits to *AMA PRA Category 1 credits™*. Information on the process to convert Royal College MOC credit to AMA credit can be found at [www.ama-assn.org/go/internationalcme](http://www.ama-assn.org/go/internationalcme).

In keeping with CMA guidelines, program content and selection of speakers are the responsibility of the planning committee. Support is directed toward the costs of the course and not to individual speakers.