

# 2019 Neurotrauma Symposium

Patient Experience: Chris  
Barr

55 year-old male  
C4 Asia D quadriplegic

# Feb 12, 2017

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## Surfer Suffers Critical Injuries At Ocean Beach

Bay City News Service Published 6:10 pm PST, Sunday, February 12, 2017



13 FEBRUARY 2017 / SF NEWS / EVE BATEY

## Surfer Rushed To Hospital Following Ocean Beach Rescue



Thursday March 14, 2019

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## Surfer suffers critical injuries at Ocean Beach

By Bay City News on February 12, 2017 7:16 pm

A surfer suffered critical injuries Sunday afternoon at San Francisco's Ocean Beach, fire officials said.

Bystanders rescued the surfer, a 45-year-old man, at around 4 p.m.

The man was taken to a trauma center, according to fire officials.

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## Surfer injured, rescued at Ocean Beach



By **KEITH BURBANK** :: Bay City News · February 12, 2017

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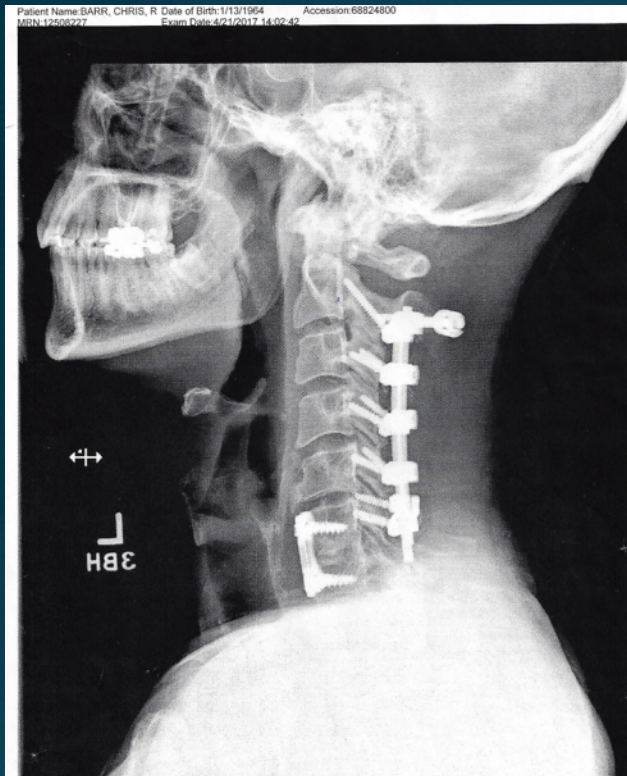
ers arrived, they transported  
critical condition. No update

# Feb 13, 2017

## Zuckerberg San Francisco General Hospital

- C4-C7 fracture per history s/p C3 to 5 laminectomy and C2-6
- prevertebral soft tissue swelling c1-5
- disruption ALL at C3/4
- 3mm retrolisthesis C3/4
- C3-4 cord edema
- C4-7 spinous process fracture with tissue edema and hemorrhage
- nondisplaced ant/sup fracture of vertebral bodies T3-T6 with edema
- R first rib fracture

# 1 plate / 3 rods / 15 screws

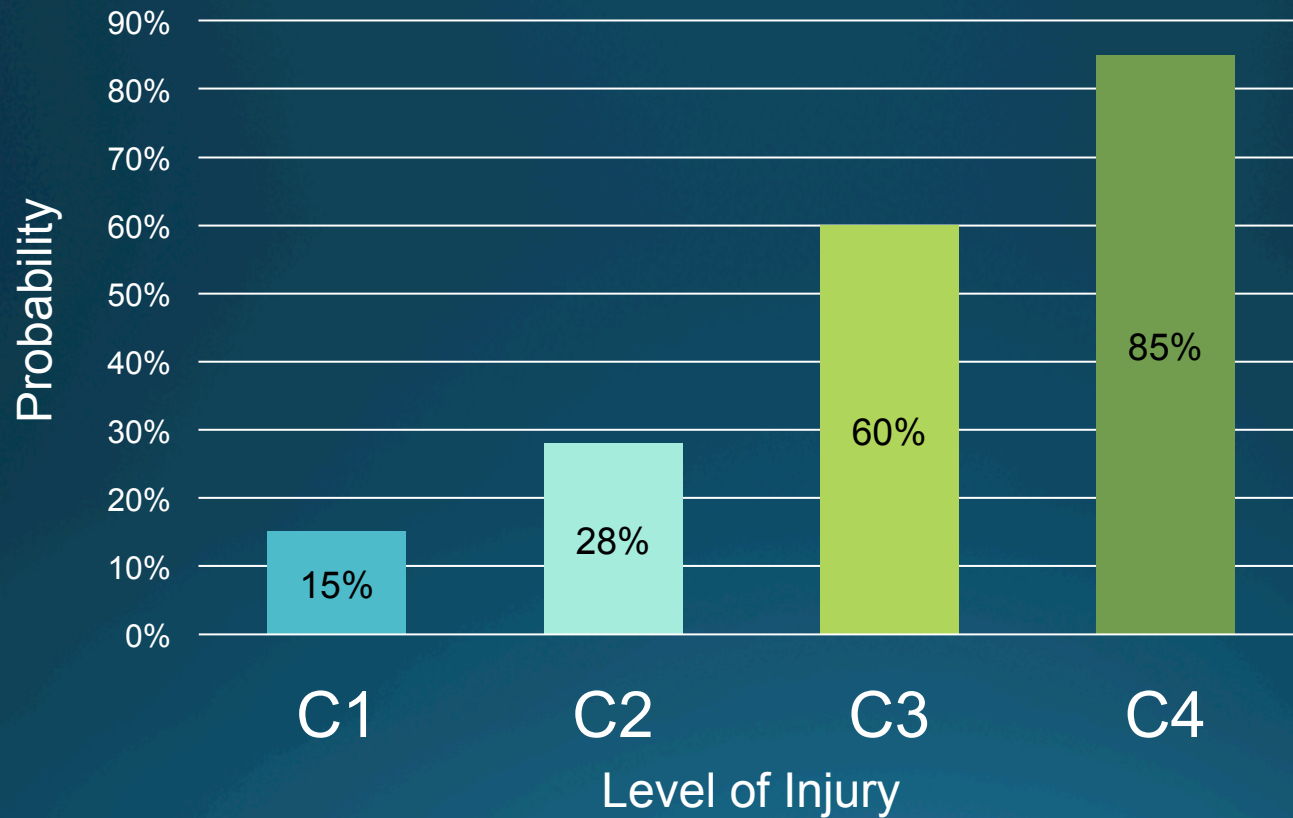


# Prognosis @ 1 week

## Prediction of recovery according to AIS impairment scale

AIS grade at admission	A	B	C	D
First examination at 72 h <sup>10</sup>	One-year follow-up AIS grade			
A	84%	8%	5%	3%
B	10%	30%	29%	31%
C	2%	2%	25%	67%
D	2%	1%	2%	85%

# Ventilator Weaning @ 3 weeks



# Evaluation @ 1 month

## Strength/manual muscle test:

Left	UPPER EXTREMITIES	Right
0/5	Shoulder Flexion	0/5
0/5	Shoulder Extension	0/5
0/5	Elbow Flexion	0/5
0/5	Elbow Extension	0/5
0/5	Wrist Flexion	0/5
0/5	Wrist Extension	0/5
0/5	Finger Flexion	0/5
0/5	Finger Extension	0/5
Left	LOWER EXTREMITIES	Right
0/5	Hip Flexion	0/5
1/5	Hip Extension	1+/5
0/5	Hip Abduction	0/5
0/5	Knee Flexion	1+/5

Physical Therapy signed by [REDACTED] (P.T.) at 3/11/2017 1:47 PM

# Prognosis @ 1 month

## Prediction of recovery according to AIS impairment scale

AIS grade at admission	A	B	C	D
First examination at 30 days <sup>11</sup>	One-year follow-up AIS grade			
A	95%	0	2,5%	2,5%
B	0	53%	21%	26%
C	1%	0	45%	54%
D	2%	0	0	96%

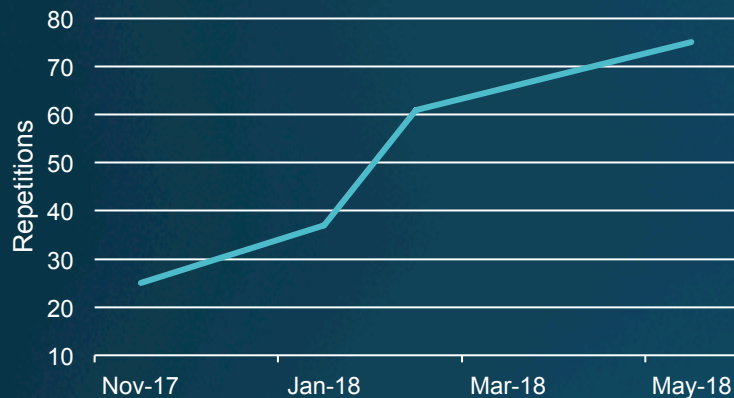
# My Recovery Timeline

When	Where	What
0-2 weeks	ZSFG	Intubation, surgery
2-4 weeks	Kaiser Walnut Creek	Stabilization, extubation
1-3 months	KFRC Vallejo	PT/OT - Spontaneous recovery begins with limited movement of toes, legs; fingers, arms
3-6 months	Home	PT/OT - Recovery continues culminating with return of secondary functions at 6 months
Month 7-10	Home	Recovery plateaus - Apply to Mayo Clinic stem cell trial for spinal cord injury
Month 11	Mayo Clinic , Rochester, MN	Receive stem cells
Year 1-3	Home / Mayo Clinic	PT/OT - Physical evaluation

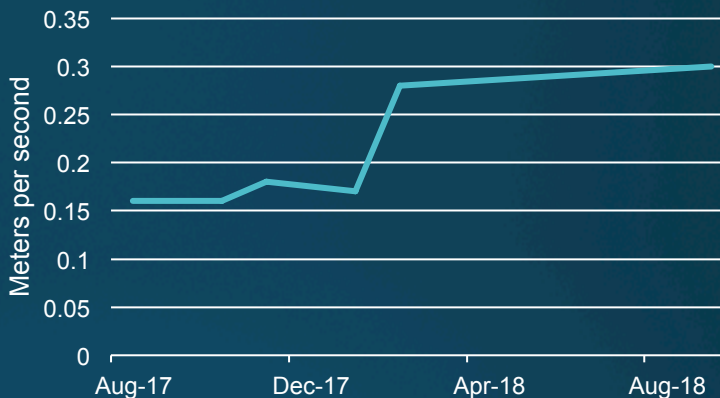
# Stem Cell Injection: January 2018

## Legs

46 cm sit to stand



10 meter walk



## Hands

Gross grip



Lateral pinch



# Best Practices?

I. The “Big Ugly...”

II. Acute care

- Blood Pressure
- Decompression Timing
- Surgery Timing

III. Chronic Care

- PT / OT
- Proprioceptive Neuromuscular Facilitation (PNF)

IV. Clinical Interventions

- Neuro-regeneration (stem cells)
- Neuro-protection (peptides)
- Neuro-modulation (stimulation)