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TITLE: Prevention of Bone Loss after Acute SCI by Zoledronic Acid: Durability, Effect on Bone Strength, and Use of Biomarkers to Guide Therapy

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13. SUPPLEMENTARY NOTES

14. ABSTRACT
Rapid bone loss is a universal accompaniment of acute spinal cord injury (SCI) and leads to severe loss of bone mass and bone strength with a marked increased risk of fracture. This 24 month double-blind, randomized, placebo-controlled study evaluates in 60 participants the efficacy (bone mass and bone strength) and safety of zoledronic acid administered early after acute SCI to prevent bone loss, the duration of its effects and the value of using biomarkers to guide therapy. Data collection (bone imaging and biomarkers) occurs at baseline and after 3, 6 and 12 months during the first year; participants are re-randomized after 12 months with subsequent data collection at 18 and 24 months. Currently, all regulatory requirements for the study have been completed. Twelve (12) participants have been randomized and treated. No unexpected safety events have occurred. Data collection is on-going and additional patients are being screened for study entry.

15. SUBJECT TERMS
Spinal cord injury, bone mass, bone strength, osteoporosis, zoledronic acid

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only minor modifications of the protocol have been made to permit more efficient management of the study.

KEY RESEARCH ACCOMPLISHMENTS:

There are no outcome data available to date. As this is a blinded clinical trial, scientific data relating to study objectives will not be available until all participants have concluded the study, data cleaned and data base locked, and analyses completed.

CONCLUSION:

This project has not progressed to the point of being able to provide any conclusions in regard to the effect of these specific interventions on bone mass or bone quality in people after spinal cord injury. If benefit is shown, this intervention has the potential to reduce fracture incidence in people experiencing acute SCI.

PUBLICATIONS, ABSTRACTS AND PRESENTATIONS:

None.

INVENTIONS, PATENTS AND LICENSES:

None.

REPORTABLE OUTCOMES:

None.

OTHER ACHIEVEMENTS:

None.

REFERENCES:

None.

APPENDICES:

None.

Prevention of Bone Loss after Acute SCI by Zoledronic Acid: Durability, Effect on Bone Strength and Use of Biomarkers to Guide Therapy

Proposal Log Number SC130125; Award # W81XWH-14-2-0193; HRPO Log A-18350



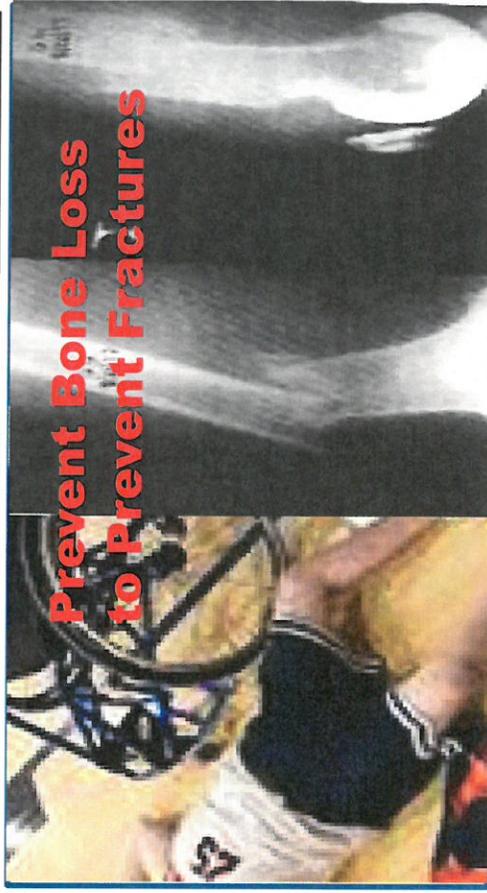
PI: Dr. Thomas J. Schnitzer Org: Northwestern University Feinberg School of Medicine Award Amount: \$2,011,846

Study/Product Aims

- Define timing and frequency of administration of zoledronic acid that will result in optimal prevention of bone loss after acute SCI.
- Evaluate the use of serum markers of bone metabolism to guide therapeutic decisions of timing and need for retreatment with zoledronic acid after acute SCI.
- Evaluate effects of zoledronic acid in mitigating loss of bone strength that occurs after acute SCI.

Approach

This is a 2 year, randomized, double-blind placebo-controlled study. Subjects will be randomized at baseline and again at 12 months to receive either zoledronic acid or placebo each time. Subject will be followed for 24 months with repeat DXA scans, CT scans, and serum bone markers.



IRB approval received at all sites. Recruitment and enrollment has begun. 12 participants have been randomized and remain active.

Goals/Milestones

- CY14 Goals** – Begin study start-up
- Obtain regulatory approval at all sites
- CY15 Goal** – Complete start-up, Begin recruitment and enrollment
- Enroll 20-25 subjects into study
- CY16 Goal** – Continue recruitment and enrollment
- Enroll 20-25 subjects into study
- CY17 Goal** – Complete subject enrollment
- CY18 Goal** – Complete data collection and data analysis
- Final study report

Comments/Challenges/Issues/Concerns

- Delayed HRPO approval led to 2 month delay from projected timelines, altered goals: CY Goals (CY15 Goal = 20-25 subjects)
- No major changes in budget.

Budget Expenditure to Date (Sep 30, 2015)

Projected Expenditure: \$539,499

Actual Expenditure: \$287,176 (subcontract invoices outstanding)

Timeline and Cost						
Activities	CY	14	15	16	17	18
Study Start-Up Activities			■			
Participant Enrollment			■ ■			
Data Collection and Entry			■ ■			
Data Analysis						■
Estimated Budget (\$K)		\$138K	\$541K	\$503K	\$465K	\$365K

Updated: 22 Sep 2015