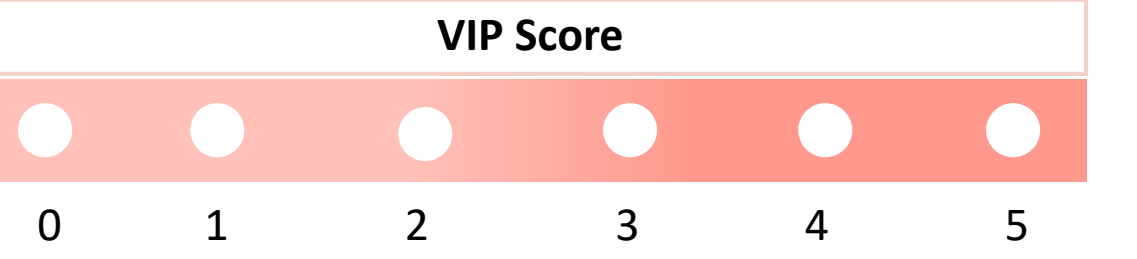


**A MULTI-CENTER STUDY of PERIPHERALLY INSERTED CENTRAL VENOUS CATHETERS (PICC-CF): PREDICTORS of DIFFICULT LINE INSERTION, MALFUNCTION and SOFT TISSUE INJURY**

JB Zuckerman, AC Hinton, AH Gifford and the PICC-CF Investigators\*

The primary outcomes for this study included catheter related venous thrombosis or occlusion of the catheter requiring removal or catheter-related blood stream infection, which were rare (1). Here we present several composite secondary outcomes.

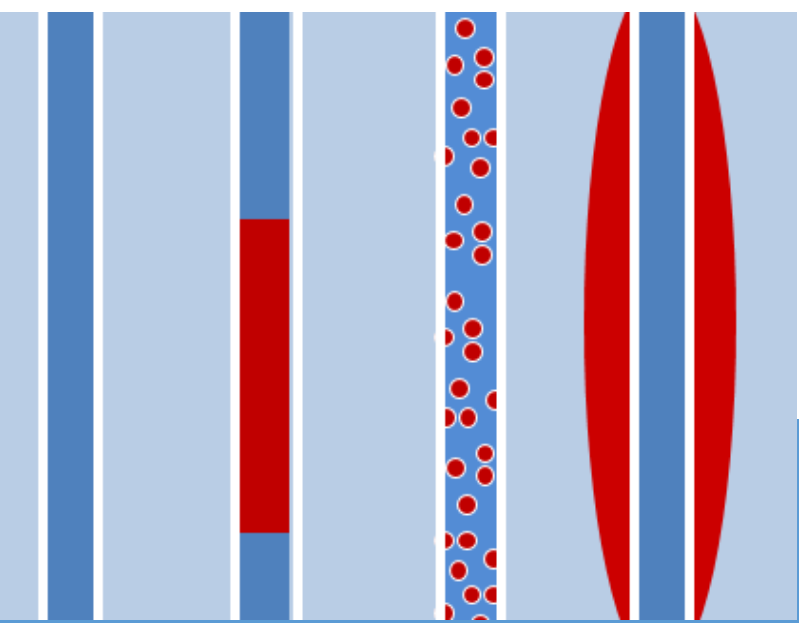
- 375 catheters enrolled over 3 years for a total of 4828 catheter-days of observation
- Clinical and demographic data collected at the time of PICC placement
- Visual Infusion Phlebitis (VIP) score (2) used to grade local reactions
- Observational data collected every 2-3 days thereafter and on the day of catheter removal



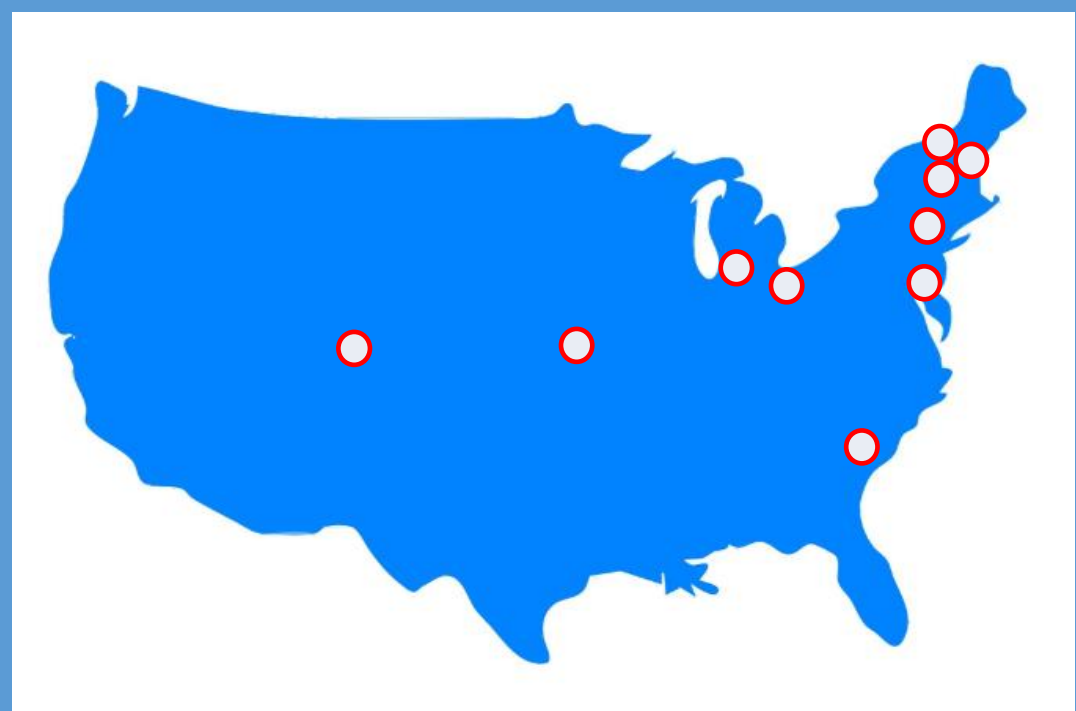
- 0 = Site appears healthy
- 1= One of the following
- slight pain near IV site
  - slight erythema near IV site
- 2= Two of the following
- pain near the IV site
  - erythema
  - swelling
- 3= All of the following
- pain along the catheter
  - erythema
  - induration
- 4= All of the following
- pain along the catheter
  - erythema
  - palpable venous cord
- 5=All of the following
- pain along the catheter
  - erythema
  - palpable venous cord
  - fever > 38° C core

# Evaluation of Peripherally Inserted Catheter Complications in CF Patients

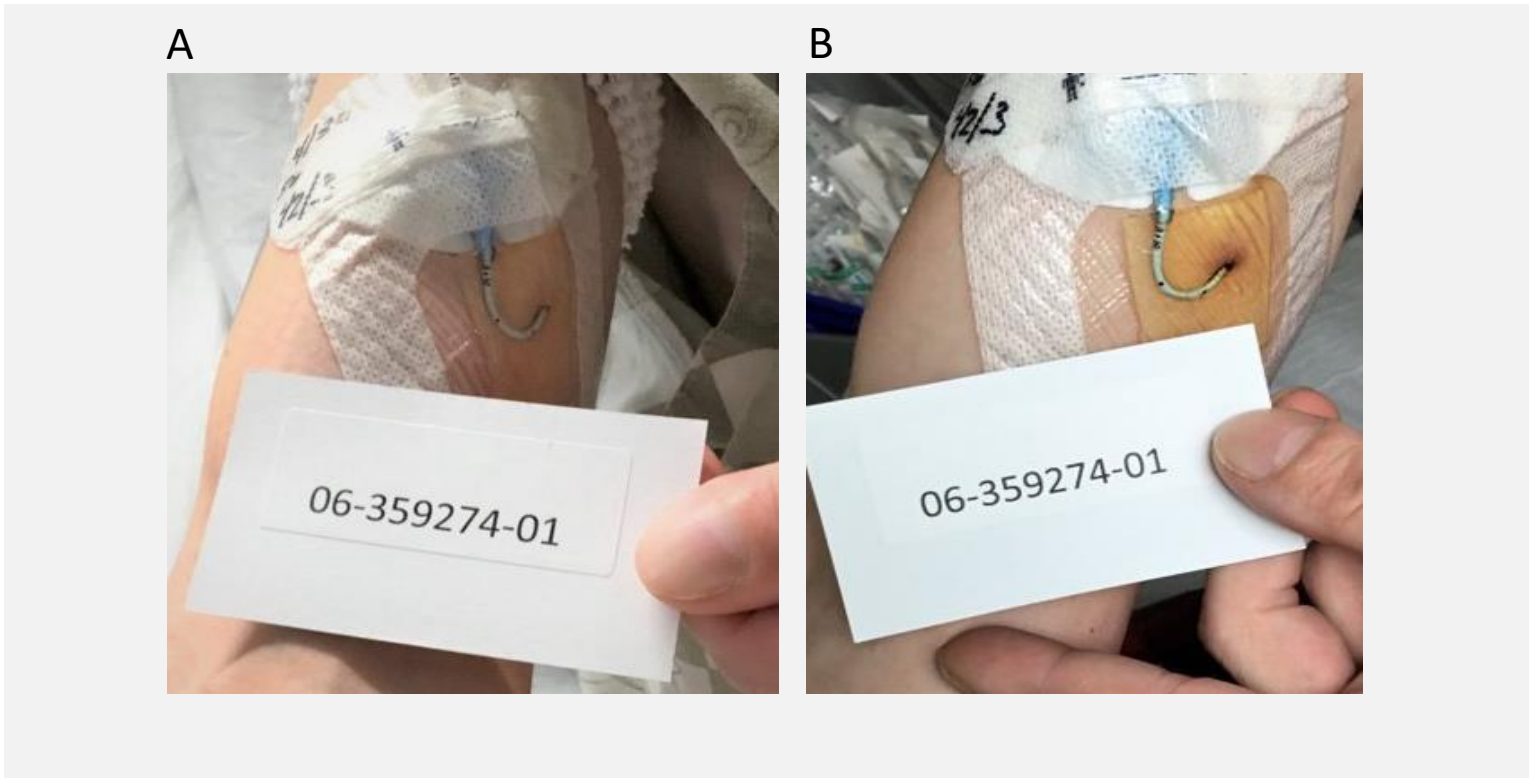
CLINICAL TRIALS PROTOCOL ID: NCT03674216 | SUPPORTED BY: CYSTIC FIBROSIS FOUNDATION AWARD ZUCKER18A0 AND NORTHERN NEW ENGLAND CLINICAL AND TRANSLATIONAL RESEARCH GRANT US4GM115516



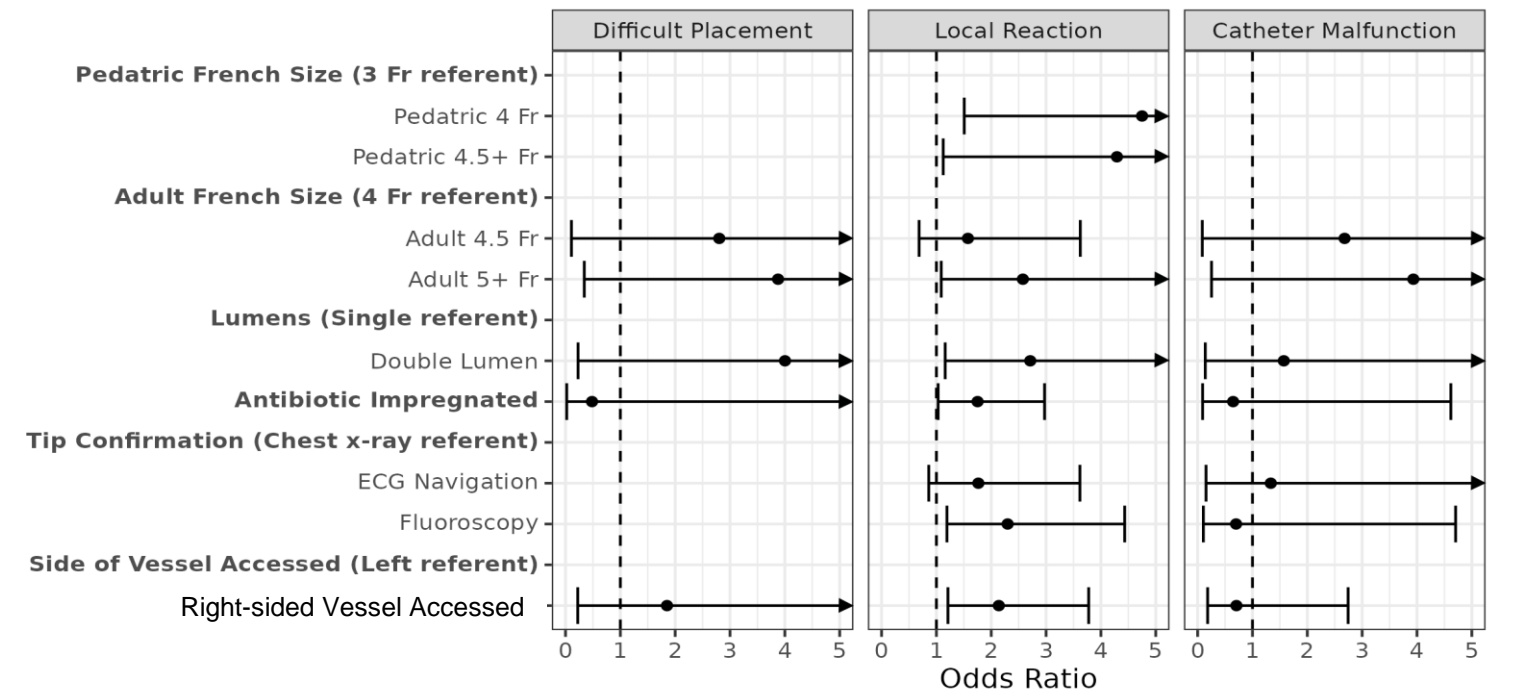
More than 60% of inserted catheters had an uncomplicated course, and in 95.7% of cases lines were maintained for a full course of treatment without early removal\*



- \*PICC-CF Sites and Investigators:**
- Children’s Hospital Colorado : Edith Zemanick, PI; Dana Coyle, RC
  - Cleveland Clinic: Elliott Dasenbrook, PI; Dave Weaver, RC
  - Columbia University Medical Center: Hossein Sadeghi, PI; Emily Dimango, PI; Carmen Liriano, RC
  - Dartmouth-Hitchcock Medical Center: Alex Gifford, PI; Margaret Guill, PI; Leah McGinley, RC
  - Johns Hopkins University Medical Center: Rebecca Dezube, PI; Natalie West, PI; Shivani Patel, RC
  - Maine Medical Center: Jonathan Zuckerman, PI; Amanda Cass, RC
  - Medical University of South Carolina: Patrick Flume, PI; Angela Millare, RC
  - University of Kansas Medical Center: Joel Mermis, PI; Deepika Pollineni, PI; Megan White, RC
  - University of Michigan Medical Center: Shijing Jia, PI; Samya Nasr, PI; Nicole Schafer, RC
  - University of Vermont Medical Center: Thomas Lahiri, PI; Charlotte Teneback, PI; Julie Sweet, RC



A. Catheter site and dressing shortly after insertion. B. Line site with VIP score 2 before early removal.



Forest plot of risk factors for secondary outcomes. Whiskers denote 95% CI for point estimates. Arrows signify that the upper bounds of 95% CI extend beyond scale. Data is not shown when modeling resulted in unstable estimates (e.g., low event rate).

**CONCLUSIONS**

A number of predictors of common problems associated with PICC use were identified, including catheter size, lumen number, antibiotic impregnation, and insertion site. However, despite these problems, 95.7% of inserted lines were maintained for a full course of treatment.

**REFERENCES**

1. Zuckerman J, et al. J Cyst Fibros. 2021;20(S2): s89-90.
2. Ray-Burruel G, et al. J Eval Clin Pract. 2014;20(2):191-202

\* For details join us at **Workshop 7** | Thursday November 3, 2022 3:30 PM – 5:30 PM or look HERE

