Supplemental Table 1. Objectives for the Resident Research Certificate Program

Identify strategies for creating an effective database
Given a research question and data, identify the correct statistical test
Calculate and interpret number needed to treat, relative risk and odds ratio
Obtain information needed for a baseline characteristics table from a database
List the typical steps in the journal submission process
Describe the advantages and disadvantages of various study designs
List assumptions of linear, logistic and cox regression
Differentiate between a meta-analysis and a systematic review

Supplemental Table 2. Selected Sample Questions from Worksheets Utilized in the Certificate Program

1. Categorize each variable is nominal, ordinal or continuous:
   - Blood glucose:
   - Race:
   - HASBLED score:
   - Mortality status:
   - LDL:
   - Uncontrolled blood pressure:

2. Use the following data to calculate a 95% confidence interval.
   - Sample size= 158
   - Mean= 92
   - Standard deviation= 33

3. Determine which characteristics are consistent with a normal distribution:

   Symmetrical or Skewed?
   _____ % of the data are encompassed in ±2 standard deviations from the mean

4. Which of these results represent a statistically significant difference?
   a. 13% vs 15%, $p = 0.07$
   b. Mean difference = 4 mmHg (95%CI = -5 to 15)
   c. Relative risk = 1.7 (95%CI = 1.5 to 1.9)
   d. Odds ratio = 1.3 (95%CI = 0.8 to 1.9)

5. A Pearson's correlation coefficient (r) of 0.25 represents:
   a. A moderate positive linear relationship
   b. A moderate negative linear relationship
   c. No linear relationship
   d. A weak positive linear relationship
   e. A weak negative linear relationship

Supplemental Table 3. Responses to Items Assessing Attitude, Confidence and Knowledge Stratified by Postgraduate Year [a,b]

	Baseline		Follow-up	
	PGY1 **n (%)** **n=9**	**PGY2** **n (%)** **n=12**	**PGY1** **n (%)** **n=9**	**PGY2** **n (%)** **n=12**
Attitude				
Understand majority of statistical terms	1 (11.1)	4 (33.3)	5 (55.6)	10 (83.3)
Statistical information assists in decisions for patient care	6 (66.7)	11 (91.7)	9 (100)	12 (100)
Confidence				
Critique statistical methods	2 (22.2)	4 (33.3)	5 (56.6)	10 (83.3)
Discuss statistical methods with colleagues	0 (0)	2 (16.7)	4 (44.4)	10 (83.3)
Forming my own opinion even if it differs from author(s)	4 (44.4)	9 (75.0)	7 (77.8)	11 (91.7)
Interpret p value	8 (88.9)	11 (91.7)	9 (100)	12 (100)
Identify what influences study power	4 (44.4)	8 (66.7)	7 (77.8)	12 (100)
Calculate number needed to treat	8 (88.9)	8 (66.7)	7 (77.8)	11 (91.7)
Knowledge				
Mean (SD) score, %	57.8 (24.4)	62.5 (21.4)	53.3 (21.1)	71.7 (15.3)
Median (IQR) score, %	70.0 (30.0-80.0)	65.0 (42.5-77.5)	60.0 (35.0-65.0)	70.0 (62.5-80.0)

[a]Data represent number of residents who agreed or strongly agreed unless otherwise indicated
[b]IQR=interquartile range; SD=standard deviation