

# Correlations of FACT with MDADI, and SSQ Toxicity Questionnaires in a Prospective Cohort of Head and Neck Cancer Patients

L. Peng<sup>1</sup>, X. Hui<sup>1</sup>, Z. Cheng<sup>1</sup>, M. R. Bowers<sup>1</sup>, J. Moore<sup>1</sup>, A. Choflet<sup>1</sup>, A. Thompson<sup>1</sup>, M. Muse<sup>1</sup>, A. P. Kiess<sup>1</sup>, B. R. Page<sup>1</sup>, C. G. Gourin<sup>1</sup>, C. Fakhry<sup>1</sup>, M. Szczesniak<sup>2</sup>, J. Maclean<sup>3</sup>, I. Cook<sup>3</sup>, T. R. McNutt<sup>1</sup>, and H. Quon<sup>1</sup>

<sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>St. George Hospital, New South Wales, Australia, <sup>3</sup>University of New South Wales, St. George Hospital, New South Wales, Australia



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M E D I C I N E

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## Purpose/Objectives

- Patient-reported outcomes (PRO's) are vital tools for comparing treatment deintensification efforts in HPV+ Head and Neck cancer (HNC)
- A variety of PRO's are utilized in practice, including the MD Anderson Dysphagia Inventory (MDADI), the Sydney Swallow Questionnaire (SSQ), and the Functional Assessment of Cancer Therapy (FACT) which comprises a suite of several distinct but partially overlapping measures
- We sought to describe correlations between these PROs and to explore the potential benefits of utilizing multiple PRO's for a single cohort

## Materials/Methods

- HNC patients concurrently completed MDADI, SSQ, and FACT instruments at all radiation oncology clinic visits from 2015 to 2016.
- Spearman correlation coefficients were calculated between the FACT instruments and MDADI or SSQ.
- Unsupervised K-means cluster analyses were performed for each comparison to identify groups of patients for which the PROs trended similarly. Clusters were visualized using CLUSPLOT.
- Principal component analysis (PCA) identified the degree of variability explained by each PRO

## Results

**Table 1: Correlations of FACT, SSQ, MDADI**

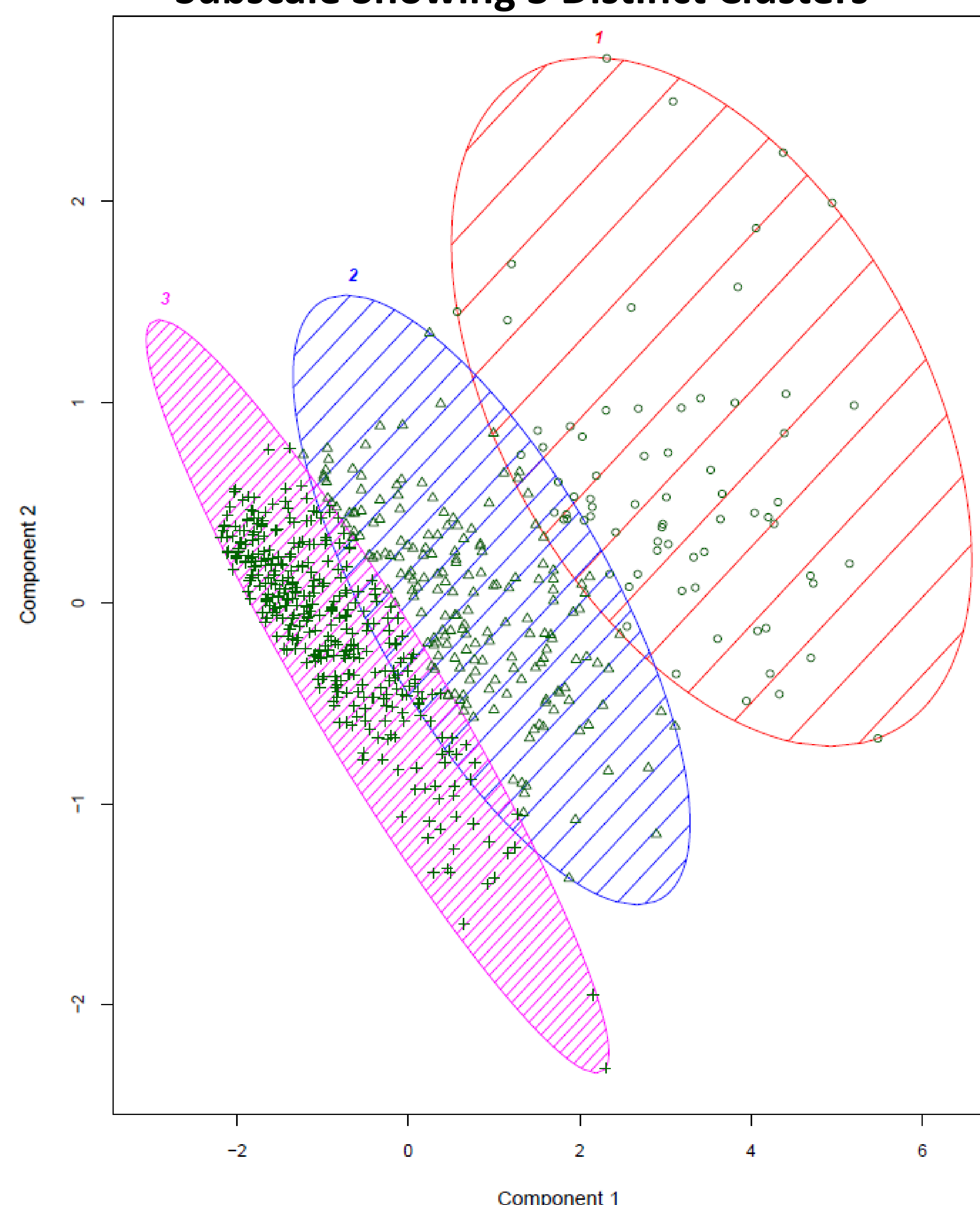
	SSQ	MDADI
FACT-General	-0.404	0.548
FACT-HN	-0.547	0.681
FACT-HNSI	-0.625	0.715
FACT-HN Subscale	-0.699	0.776

N=631; All correlations significant,  $p < 0.001$

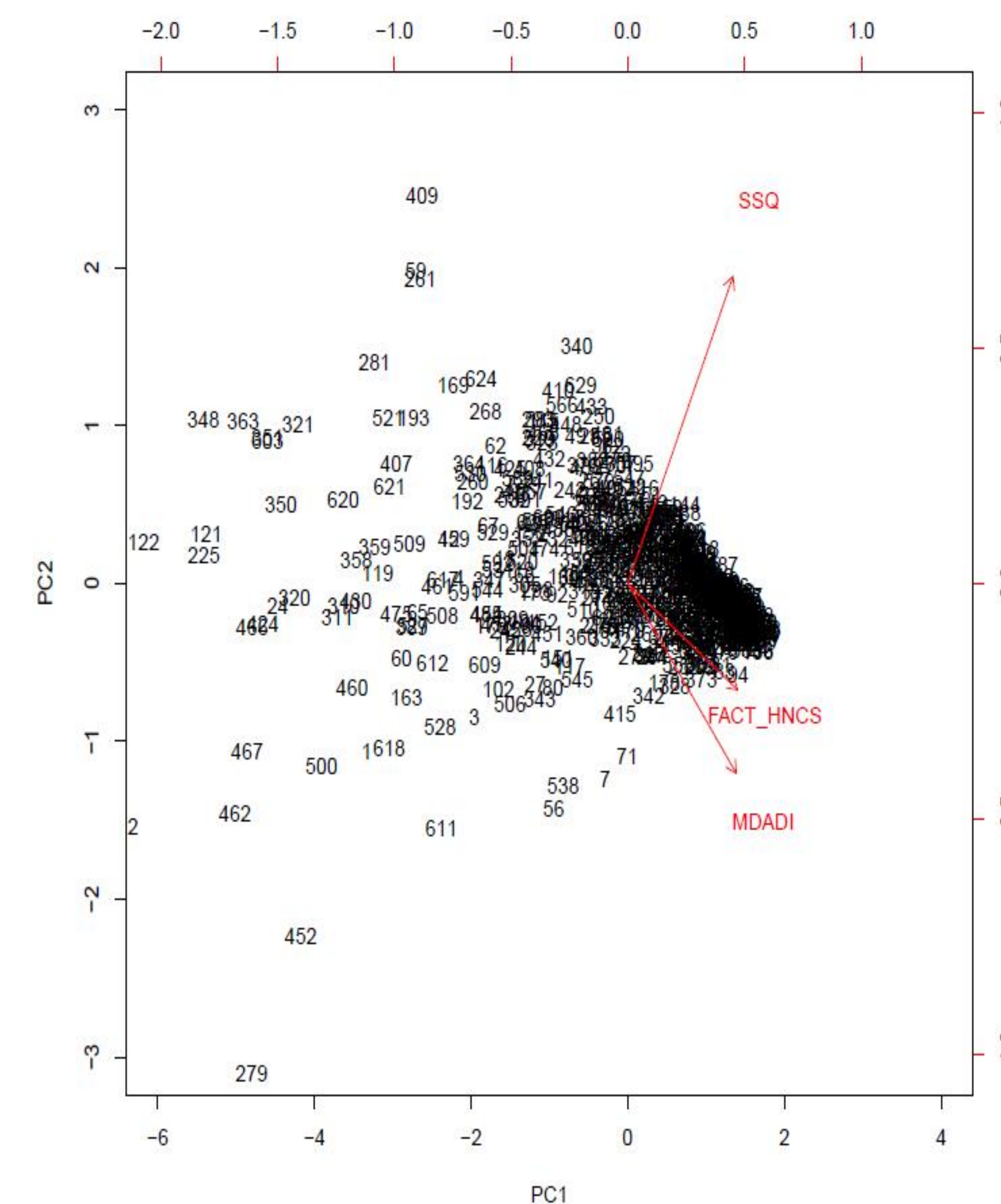
**Table 2: Number of Clusters Identified (*k-means*)**

	SSQ	MDADI	SSQ and MDADI
FACT-General	3	2	3
FACT-HN	3	3	3
FACT-HNSI	3	3	3
FACT-HN Subscale	3	3	3

**Fig 1: CLUSPLOT of MDADI, SSQ, and FACT-HN Subscale Showing 3 Distinct Clusters**



**Fig 2: Variability Explained by MDADI, SSQ, and FACT-HN Subscale on PCA**



## Conclusions

- The HN-subscale and FACT-HNSI strongly correlate with other established PROs, and may be the measures most readily interpretable when FACT is used in clinical trials.
- Cluster analysis consistently stratifies patients into high, medium, and low toxicity subgroups.
- The MDADI and FACT instruments appear to measure and explain variability quite similarly, and their concurrent administration may not provide additional useful information.
- Including a functional dysphagia metric like SSQ along with a QoL-focused PRO such as FACT or MDADI may provide finer resolution in measurements of patient toxicity experiences