Supplemental Appendix I. Distinguishing Treatment Response/Durability Based on Thickness-based Features

To distinguish the treatment response based on thickness-based features (F_t), we measured the thickness of individual subcompartments from each of the OCT scans. A total of 7 statistics (mean, median, standard deviation, kurtosis, skewness, maximum and minimum thickness) were derived from the thickness of each individual OCT subcompartment and averaged over the 43 mid-central slices per patient. The top 8 discriminating baseline features were determined by mRmR feature selection method from F_t and used in conjunction with 4 different ML classifiers (RF, LDA, QDA, and SVM) to predict early response to anti-VEGF. The AUC, ACC, sensitivity, and specificity yielded by the different classifiers on F_t are presented in **Supplemental Table 5.** The QDA classifier yielded highest AUC of 0.58±0.12, AUC-PRC of 0.53±0.14 and ACC of 0.56±0.14 in distinguishing the two groups of patients using F_t.

Supplemental Table 5: Supervised Classification Results on Baseline Thickness Features

Features	Classifier	AUC	AUC-PRC	ACC	Sensitivity	Specificity
F_t	RF	0.55±0.14	0.51±0.14	0.51±0.14	0.53±0.21	0.51±0.11
	LDA	0.56±0.13	0.52±0.15	0.52±0.19	0.54±0.12	0.55 ±0.14
	QDA	**0.58±0.12**	**0.53±0.14**	**0.56±0.14**	**0.64±0.09**	**0.56±0.16**
	SVM (Linear Kernel)	0.57±0.7	0.53±0.14	0.53±0.11	0.61±0.12	0.53 ± 0.12
	SVM (Gaussian Kernel)	0.55±0.9	0.54±0.15	0.55±0.18	0.59±0.13	0.54 ± 0.12

The most discriminating baseline thickness features which were found to be statistically significant between the two groups of patients were: Mean RPE-BM Thickness (p-value=0.0022), Skewness SHRM Thickness (p-value=2.285e-09) and Kurtosis SHRM Thickness (p-value=2.4586e-09). The box and whisker plots of these 3 baseline thickness features are presented in **Supplemental Figure 2**.

Supplemental Figure 2. Box and Whisker plot of Baseline Thickness Features (a) Mean RPE-BM Thickness (p=0.0022), (b) Kurtosis SHRM Thickness (p=2.4586e-09) and (c) Skewness SHRM Thickness (p=4.2842e-09) that significantly distinguished between Super Responders (N=15) and Non-super Responders (N=66). RPE, retinal pigment epithelium; BM, Bruch's membrane, SHRM, subretinal hyper-reflective material.