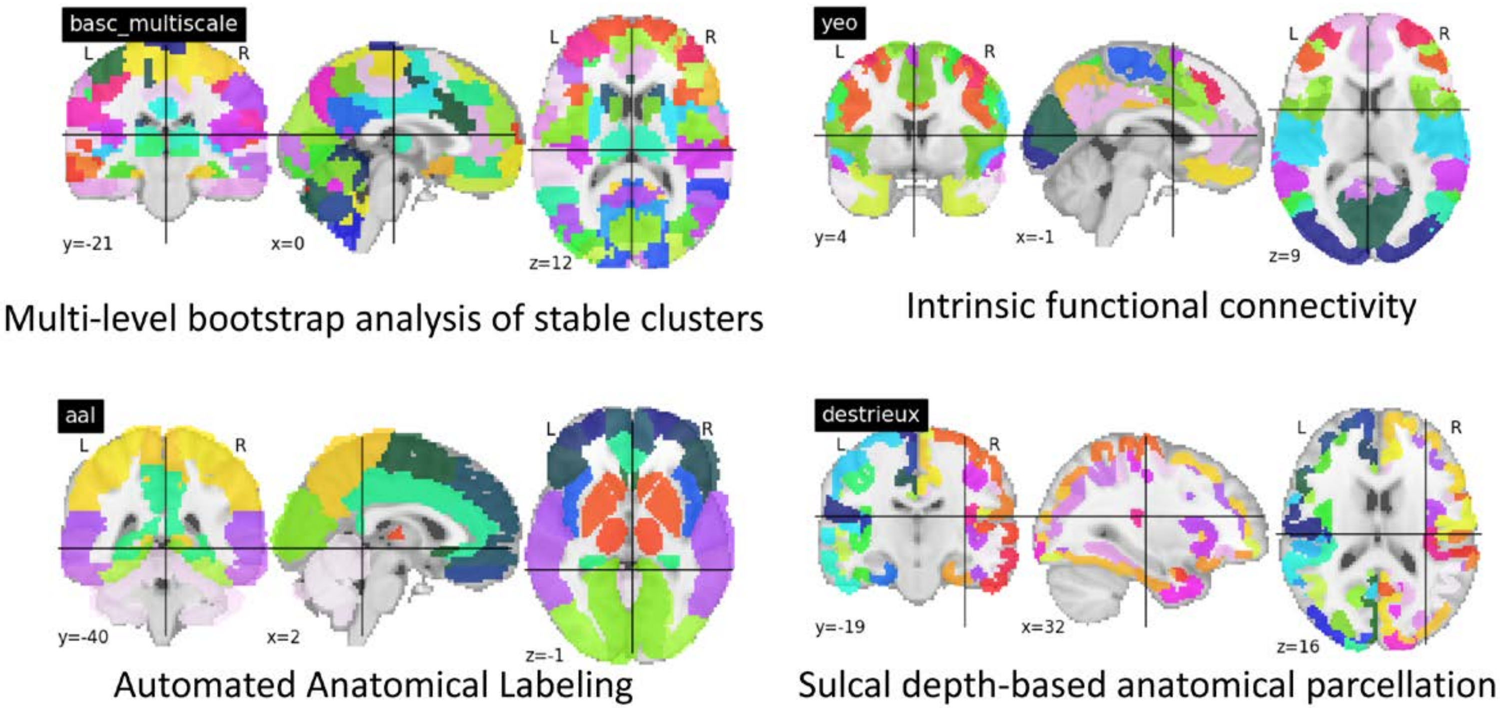
Supplementary Table 1: Description of studies that provided machine learning model for predicting schizophrenia using resting-state brain patterns (SCZ: Schizophrenia, HC: Healthy controls; AH: Auditory Hallucinations, FE: First episode, MDD: Major Depression, CV: Cross-validation, LOO : leave one out)

Study	Year	Sample size	Multi/Single Site	Data Acquisition	Feature selection/reduction	Classifier	CV	Accuracy	Reference
Shen	2010	32 SCZ, 20 HC	single-site (Second Xiangya Hospital of Central South University in Changsha, China)	Resting state	Kendall tau correlation - low-dimensional embedding	C-Means clustering	LOO	86.50%	Shen, H., Wang, L., Liu, Y., & Hu, D. (2010). Discriminative analysis of resting-state functional connectivity patterns of schizophrenia using low dimensional embedding of fMRI. NeuroImage, 49(4), 3110–3121. https://doi.org/10.1016/j.neuroimage.2009.11.011
Fan	2011	31 SCZ, 31 HC	Single-site (Institute of Mental Health, Second Xiangya Hospital, China)	Resting state	ICA + Grassmann manifold	SVM - various kernels	LOO	upto 87.1%	Fan, Y., Liu, Y., Wu, H., Hao, Y., Liu, H., Liu, Z., & Jiang, T. (2011). Discriminant analysis of functional connectivity patterns on Grassmann manifold. NeuroImage, 56(4), 2058–2067. https://doi.org/10.1016/j.neuroimage.2011.03.051
Anderson	2013	74 SCZ, 72 HC	single-site (COBRE dataset -multiple studies from University of New Mexico)	Resting state	ICA, graph-theoretic connectivity measures such as graph density, average path length, and small-worldness.	SVM	10-fold	65%	Anderson A, & Cohen MS. (2013). Decreased small-world functional network connectivity and clustering across resting state networks in schizophrenia: an fMRI classification tutorial. Frontiers in human neuroscience, 7, 520-520. doi: 10.3389/fnhum.2013.00520
Arbabshirani	2013	28 SCZ, 28 HC	single-site (Hartford hospital and Yale)	Resting state	ICA	Multiple Learners	LOO	upto 96%	Arbabshirani, M., Kiehl, K., Pearlson, G., & Calhoun, V. (2013). Classification of schizophrenia patients based on resting-state functional network connectivity . *Frontiers in Neuroscience* . Retrieved from http://journal.frontiersin.org/article/10.3389/fnins.2013.00133
Yu	2013	24 SCZ, 25 healthy siblings of SCZ, 22 HC	single-site (Second Xiangya Hospital of Central South University)	Resting state	PCA	SVM	LOO	62.00%	Yu, Y., Shen, H., Zhang, H., Zeng, L.-L., Xue, Z., & Hu, D. (2013). Functional connectivity-based signatures of schizophrenia revealed by multiclass pattern analysis of resting-state fMRI from schizophrenic patients and their healthy siblings. *Biomedical Engineering Online*, *12*, 10. https://doi.org/10.1186/1475-925X-12-10
Yu	2013	32 SCZ, 38 HC (+19 MDD)	Single-site (Second Xiangya Hospital of Central South University)	Resting state	intrinsic discriminant analysis	SVM	LOO	80.9%	Yu, Y., Shen, H., Zeng, L.-L., Ma, Q., & Hu, D. (2013). Convergent and divergent functional connectivity patterns in schizophrenia and depression. PloS One, 8(7), e68250. https://doi.org/10.1371/journal.pone.0068250
Anticevic	2014	90 SCZ, 90 HC	single-site (outpatient clinics and community mental health facilities in the Hartford area)	Resting state	MVPA	linear SVM	LOO	73.9%	Anticevic, A., Cole, M. W., Repovs, G., Murray, J. D., Brumbaugh, M. S., Winkler, A. M., … Glahn, D. C. (2014). Characterizing thalamo-cortical disturbances in schizophrenia and bipolar illness. Cerebral Cortex (New York, N.Y. : 1991), 24(12), 3116–3130. https://doi.org/10.1093/cercor/bht165

Watanabe	2014	54 SCZ, 67 HC	single-site (COBRE dataset -multiple studies from University of New Mexico)	Resting state	Fused Lasso or the GraphNet regularizer.	SVM	10-fold	73.50%	Watanabe, T., Kessler, D., Scott, C., Angstadt, M., & Sripada, C. (2014). Disease prediction based on functional connectomes using a scalable and spatially-informed support vector machine. NeuroImage, 96, 183–202. https://doi.org/10.1016/j.neuroimage.2014.03.067
Guo S	2014	69 SCZ, 62 HC	Single-site (National Taiwan University Hospital)	Resting state	FC link effect	SVM	LOO	80%	Guo, S., Kendrick, K. M., Yu, R., Wang, H.-L. S., & Feng, J. (2014). Key functional circuitry altered in schizophrenia involves parietal regions associated with sense of self. Human Brain Mapping, 35(1), 123–139. https://doi.org/10.1002/hbm.22162
Brodersen	2014	41 SCZ, 42 HC	Single-site (Department of Psychiatry and Psychotherapy (Campus Charité Mitte) of the Charité Universitätsmedizin)	n-back working-memory task	dynamic causal model (DCM), FC & regional activity	linear SVM, variational Bayesian Gaussian mixture model	5 fold CV	upto 78%	Brodersen, K. H., Deserno, L., Schlagenhauf, F., Lin, Z., Penny, W. D., Buhmann, J. M., & Stephan, K. E. (2014). Dissecting psychiatric spectrum disorders by generative embedding. NeuroImage. Clinical, 4, 98–111. https://doi.org/10.1016/j.nicl.2013.11.002
Arbabshirani	2014	195 SCZ, 175 HC	multi-site (7 sites)	Resting state	GICA + FC / Autoconnectivity (AR1) + minimum redundancy maximum relevancy	SVM (various kernels)	10 fold CV ?? (not clear)	85% ? (table says 88.2%)	Arbabshirani, M. R., Castro, E., & Calhoun, V. D. (2014). Accurate classification of schizophrenia patients based on novel resting-state fMRI features. Conference Proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual Conference, 2014, 6691–6694. https://doi.org/10.1109/EMBC.2014.6945163
Chyzhyk	2015	26 SCZ with history of AH, 14 SCZ without a history of AH, 28 HC		Resting state	Heschl's gyrus seed based FC computed by lattice auto-associative memories	SVM	10-fold	upto 97.1%	Chyzhyk, D., Grana, M., Ongur, D., & Shinn, A. K. (2015). Discrimination of schizophrenia auditory hallucinators by machine learning of resting-state functional MRI. *International Journal of Neural Systems*, *25*(3), 1550007. https://doi.org/10.1142/S0129065715500070
Cheng	2015	19 SCZ, 29 HC	single-site (Indiana University)	Resting state	Betweenness centrality	Linear SVM	LOO	79%	Cheng, H., Newman, S., Goni, J., Kent, J. S., Howell, J., Bolbecker, A., … Hetrick, W. P. (2015). Nodal centrality of functional network in the differentiation of schizophrenia. *Schizophrenia Research*, *168*(1–2), 345–352. https://doi.org/10.1016/j.schres.2015.08.011
Cheng	2015	415 SCZ, 405 HC	multi-site (UK, USA, Taiwan, and China)	Resting state	region and voxel-based brain-wide association	SVM	LOO	75.81 (overall)	Cheng, W., Palaniyappan, L., Li, M., Kendrick, K. M., Zhang, J., Luo, Q., … Feng, J. (2015). Voxel-based, brain-wide association study of aberrant functional connectivity in schizophrenia implicates thalamocortical circuitry. NPJ Schizophrenia, 1, 15016. https://doi.org/10.1038/npjschz.2015.16

Peters	2016	18 SCZ, 18 HC	single-site (Department of Psychiatry, Klinikum Rechts der Isar, TU München)	Resting state	Network and ROI FC	SVM	LOO	91% with allROIs-NWs	Peters, H., Shao, J., Scherr, M., Schwerthoffer, D., Zimmer, C., Forstl, H., … Sorg, C. (2016). More Consistently Altered Connectivity Patterns for Cerebellum and Medial Temporal Lobes than for Amygdala and Striatum in Schizophrenia. Frontiers in Human Neuroscience, 10, 55. https://doi.org/10.3389/fnhum.2016.00055
Mikolas	2016	63 SCZ with FES, 63 HC	single-site (Bohnice Psychiatric Hospital, Prague)	Resting state	seed-based connectivity	Linear SVM	LOO	73.00%	Mikolas, P., Melicher, T., Skoch, A., Matejka, M., Slovakova, A., Bakstein, E., … Spaniel, F. (2016). Connectivity of the anterior insula differentiates participants with first-episode schizophrenia spectrum disorders from controls: a machine-learning study. Psychological Medicine, 46(13), 2695–2704. https://doi.org/10.1017/S0033291716000878
Cabral	2016	66 SCZ, 66 HC	single-site (COBRE dataset -multiple studies from University of New Mexico)	Resting state (+ Structural MRI)	mutual Information + PCA	L2-regularized Logistic Regression	20 x 20 repeated double CV framework	70.5% (75% when combined with structural)	Cabral, C., Kambeitz-Ilankovic, L., Kambeitz, J., Calhoun, V. D., Dwyer, D. B., von Saldern, S., … Koutsouleris, N. (2016). Classifying Schizophrenia Using Multimodal Multivariate Pattern Recognition Analysis: Evaluating the Impact of Individual Clinical Profiles on the Neurodiagnostic Performance. *Schizophrenia Bulletin*, *42 Suppl 1*, S110-7. https://doi.org/10.1093/schbul/sbw053
Skåtun	2016	182 SCZ spectrum, 348 HC	multi-site (1 from the University of Oslo, Norway and 2 from Karolinska Institutet, Stockholm, Sweden)	Resting state	ICA	regularized linear discriminant analysis		upto 78.3%	Skatun, K. C., Kaufmann, T., Doan, N. T., Alnaes, D., Cordova-Palomera, A., Jonsson, E. G., … Westlye, L. T. (2016). Consistent Functional Connectivity Alterations in Schizophrenia Spectrum Disorder: A Multisite Study. Schizophrenia Bulletin. https://doi.org/10.1093/schbul/sbw145
Yang	2016	40 SCZ, 46 HC	single-site (University of New Mexico, USA.)	Resting state(+ Structural MRI)	GICA	SVM, Maximum-uncertainty linear discriminant analysis		77·91% (combined)	Yang, H., He, H., & Zhong, J. (2016). Multimodal MRI characterisation of schizophrenia: a discriminative analysis. *Lancet (London, England)*, *388 Suppl*, S36. https://doi.org/10.1016/S0140-6736(16)31963-8
Iwabuchi	2017	62 SCZ, 71 HC	single-site (COBRE dataset -multiple studies from University of New Mexico)	Resting state	seed-based Granger causality analysis	SVM-multiple kernel learning classifier	LOO	78.04% (ReHO) - combined was lesser	Iwabuchi, S. J., & Palaniyappan, L. (2017). Abnormalities in the effective connectivity of visuothalamic circuitry in schizophrenia. Psychological Medicine, 1–11. https://doi.org/10.1017/S0033291716003469
Lottman	2017	34 unmedicated (17 drug-naïve) SCZ + follow-up post-treatment, 35 HC	single-site (University of Alabama at Birmingham)	Resting state	GICA -Static & Dynamic FC	linear SVM	LOO	83.8% (combined static & Dynamic FC) - static only:	Lottman, K. K., Kraguljac, N. V, White, D. M., Morgan, C. J., Calhoun, V. D., Butt, A., & Lahti, A. C. (2017). Risperidone Effects on Brain Dynamic Connectivity-A Prospective Resting-State fMRI Study in Schizophrenia. Frontiers in Psychiatry, 8, 14. https://doi.org/10.3389/fpsyt.2017.00014

								73.5%	
Guo W	2017	28 FE drug-naive SCZ, 28 family-based controls, 40 HC	single-site (Mental Health Center of the First Affiliated Hospital, Guangxi Medical University in China)	Resting state	Voxel-mirrored homotopic connectivity	rbf SVM	LOO	92.86% (overfitting ??)	Guo, W., Liu, F., Chen, J., Wu, R., Li, L., Zhang, Z., & Zhao, J. (2017). Family-based case-control study of homotopic connectivity in first-episode, drug-naive schizophrenia at rest. *Scientific Reports*, *7*, 43312. https://doi.org/10.1038/srep43312



Supplementary Figure 1 : MRI overlay of representative atlases that were used for parcellation in the study.

The coordinate mapping information used to these create figures comes from public data made available by the studies cited in the manuscript. Here, the basic boundaries of 3D areas from the schematic atlases is redrawn on one of our study subjects.

Supplementary Table 2. Demographic and clinical profile of study subjects

Characteristic	Schizophrenia	Control	Stat	p
N	81	93		
Sex [M:F]	53:28	60:33	0.001 ¶	0.97
Age	30.72 ± 6.16	29.41 ± 5.71	1.45 $	0.15
Total Intracranial Volume (TICV, mL)	1400 ± 135	1480 ± 144	3.76 $	<0.001
Age at onset	26.6 ± 6.17	-	-	-
Duration of untreated illness (months)	36.95 ± 51.08	-	-	-
Total positive symptoms (SAPS)	27.65 ± 12.22	-	-	-
Total negative symptoms (SANS)	32.11 ± 27.79	-	-	-

$ Independent Samples Test [t]

¶ Chi-Square test [χ^2]

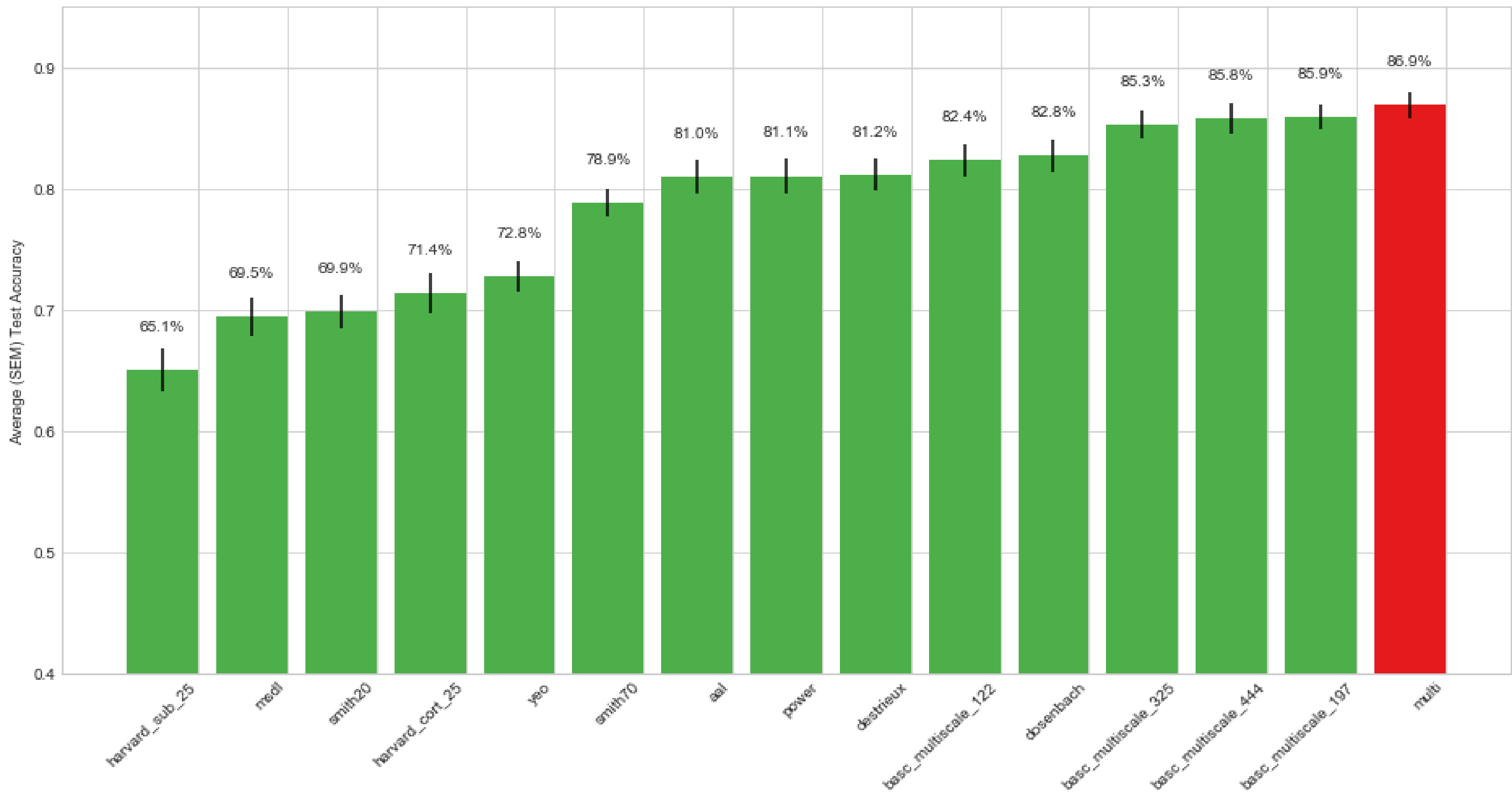
Men had significantly greater TICV than women (Stat$ = 6.7, p < 0.001), and age showed significant negative correlation with TICV (pearson r = -0.24, p = 0.001)

Supplementary Table 3. Performance accuracy in percentage of single-source and stacked models for various feature-type and parcellations

	FC_corr		FC_part		FC_prec		ALFF		ReHo		fALFF	
	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev	Mean	Stdev
harvard_sub_25	0.67	0.12	0.55	0.12	0.52	0.10	0.67	0.10	0.69	0.10	0.61	0.11
smith20	0.68	0.12	0.63	0.11	0.65	0.10	0.64	0.12	0.67	0.12	0.67	0.12
msdl	0.72	0.12	0.59	0.11	0.59	0.11	0.67	0.09	0.71	0.10	0.70	0.11
harvard_cort_25	0.67	0.12	0.67	0.10	0.70	0.11	0.70	0.11	0.70	0.12	0.73	0.12
yeo	0.67	0.11	0.71	0.10	0.71	0.09	0.69	0.11	0.71	0.10	0.72	0.10
smith70	0.79	0.11	0.73	0.12	0.76	0.09	0.69	0.11	0.73	0.10	0.70	0.11
aal	0.71	0.09	0.75	0.11	0.78	0.12	0.72	0.11	0.72	0.11	0.73	0.10
destrieux	0.73	0.11	0.74	0.09	0.75	0.09	0.74	0.10	0.75	0.11	0.72	0.11
dosenbach	0.75	0.09	0.74	0.10	0.75	0.10	0.73	0.10	0.74	0.11	0.75	0.11
basc_multiscale_122	0.76	0.09	0.78	0.09	0.78	0.09	0.74	0.10	0.73	0.11	0.75	0.10
power	0.75	0.11	0.75	0.08	0.77	0.10	0.79	0.10	0.76	0.10	0.75	0.11
basc_multiscale_197	0.82	0.11	0.80	0.08	0.82	0.09	0.77	0.10	0.76	0.11	0.72	0.11
basc_multiscale_325	0.81	0.10	0.79	0.09	0.81	0.09	0.78	0.09	0.76	0.10	0.75	0.11
basc_multiscale_444	0.81	0.09	0.77	0.08	0.83	0.10	0.77	0.10	0.77	0.11	0.78	0.08
stack_*	0.82	0.09	0.79	0.10	0.84	0.08	0.76	0.10	0.74	0.11	0.75	0.10

Supplementary Table 4. Model performance (in percentage) of the various parcellation-wise stacked learners: average (standard errors). All results are 10-fold CV.

	Accuracy	Precision	Sensitivity	Specificity
stacked-multi	86.9 (1.1)	91.9 (1.4)	79.8 (1.8)	93.1 (1.2)
stacked-aal	81.0 (1.4)	83.1 (1.9)	76.1 (2.1)	85.3 (1.6)
stacked-basc_multiscale_122	82.4 (1.3)	86.0 (1.8)	76.1 (1.6)	87.9 (1.7)
stacked-basc_multiscale_197	85.9 (1.0)	89.9 (1.3)	79.9 (1.8)	91.1 (1.3)
stacked-basc_multiscale_325	85.3 (1.1)	89.6 (1.4)	78.2 (1.8)	91.5 (1.2)
stacked-basc_multiscale_444	85.8 (1.3)	89.8 (1.6)	80.2 (2.3)	90.7 (1.6)
stacked-destrieux	81.2 (1.3)	86.2 (1.8)	72.7 (2.2)	88.6 (1.6)
stacked-dosenbach	82.8 (1.4)	87.3 (1.7)	76.1 (2.2)	88.6 (1.8)
stacked-harvard_cort_25	71.4 (1.7)	74.7 (2.3)	61.9 (2.7)	79.7 (2.2)
stacked-harvard_sub_25	65.1 (1.8)	64.5 (2.4)	58.8 (2.7)	70.5 (2.2)
stacked-msdl	69.5 (1.6)	69.7 (1.9)	62.1 (2.5)	75.9 (1.9)
stacked-power	81.1 (1.5)	82.3 (1.9)	77.8 (2.3)	84.0 (1.9)
stacked-smith20	69.9 (1.4)	71.8 (2.2)	62.5 (2.1)	76.4 (2.0)
stacked-smith70	78.9 (1.2)	83.8 (1.8)	70.8 (2.2)	85.9 (1.8)
stacked-yeo	72.8 (1.3)	71.8 (1.5)	69.9 (2.2)	75.3 (1.6)

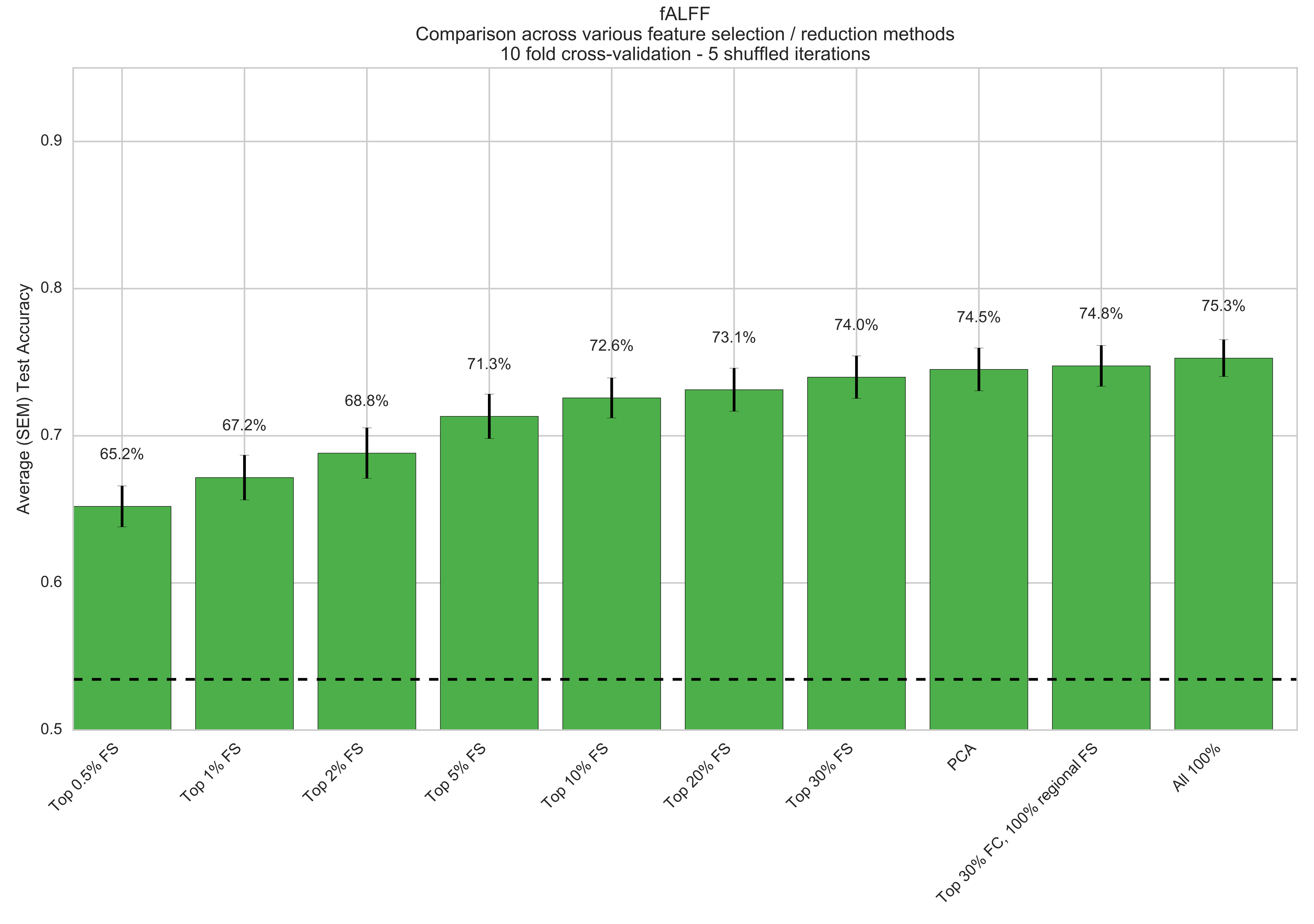


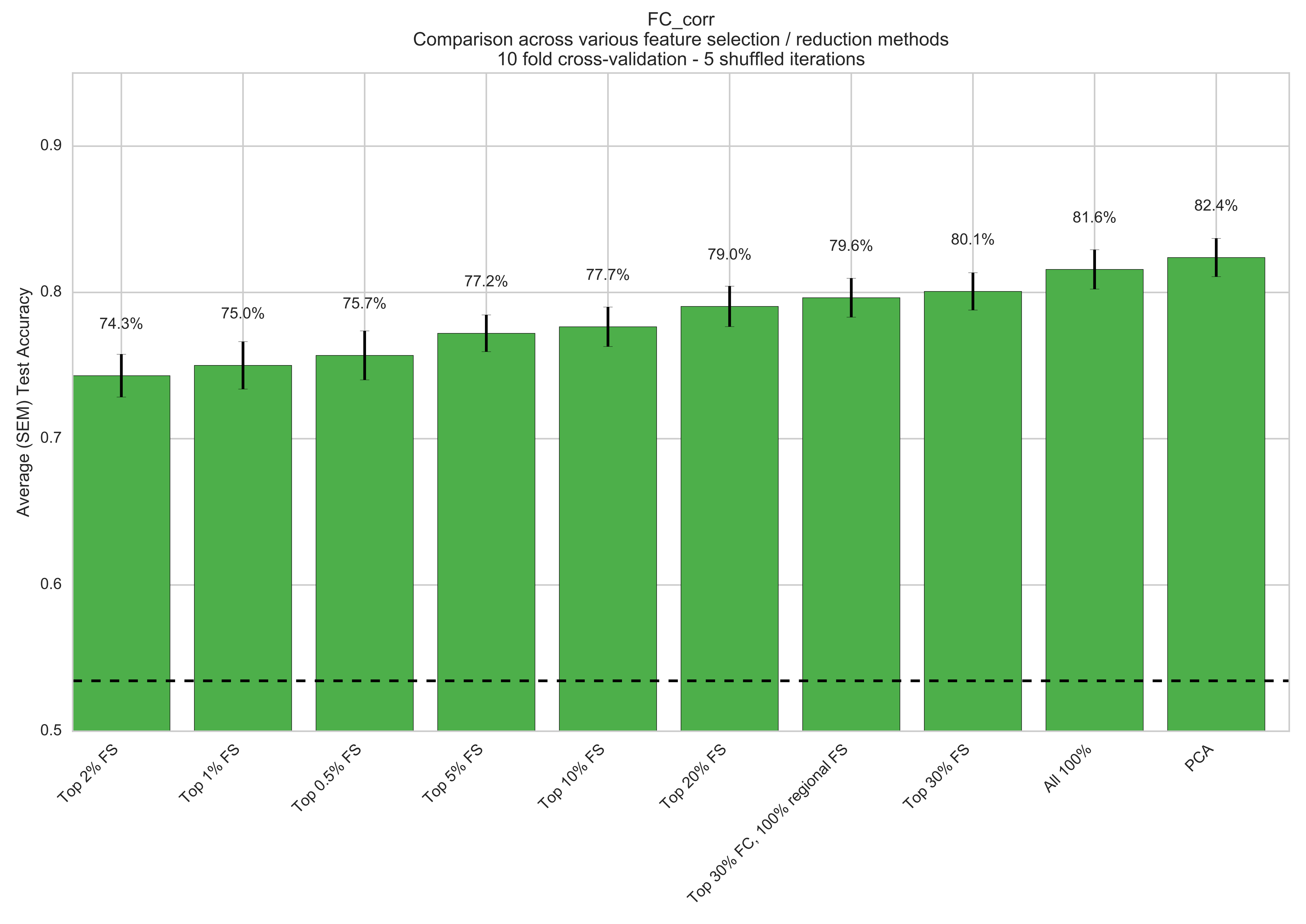
Supplementary Figure 2. Comparison of 10-fold cross-validation prediction accuracies for parcellation-wise stacked learners.

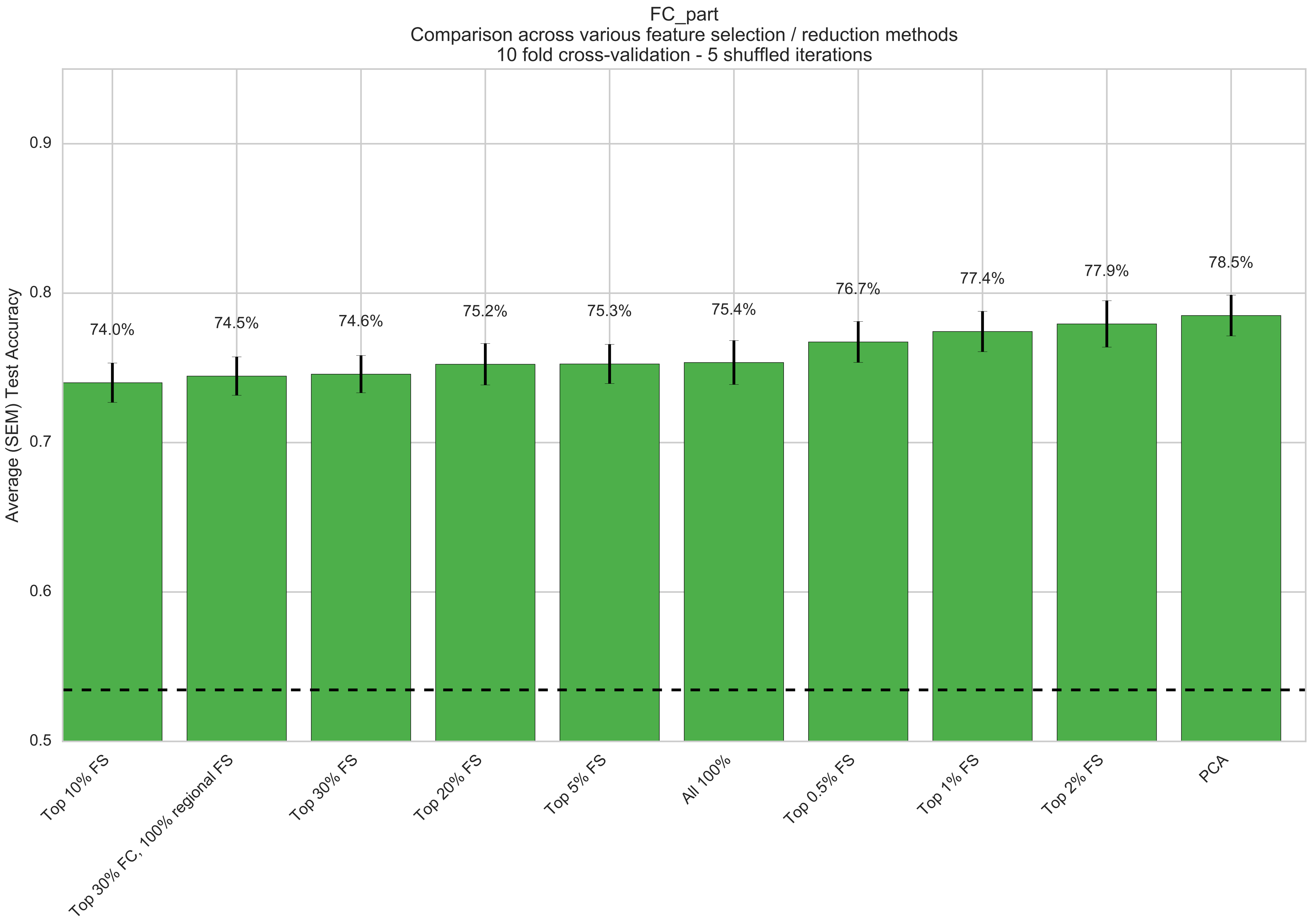
Supplementary Table 5. Performance in percentage of multi-source ensemble models with various feature selection (FS) / reduction criteria (Average and standard errors)

	Accuracy	Precision	Sensitivity	Specificity
PCA	**0.87 (0.01)**	**0.92 (0.01)**	**0.8 (0.02)**	**0.93 (0.01)**
Top 0.5 % FS	0.82 (0.01)	0.92 (0.01)	0.67 (0.02)	0.95 (0.01)
Top 1 % FS	0.82 (0.01)	0.92 (0.01)	0.69 (0.02)	0.94 (0.01)
Top 2 % FS	0.83 (0.01)	0.93 (0.01)	0.69 (0.02)	0.95 (0.01)
Top 5 % FS	0.83 (0.01)	0.93 (0.01)	0.69 (0.02)	0.95 (0.01)
Top 10 % FS	0.83 (0.01)	0.93 (0.01)	0.69 (0.02)	0.95 (0.01)
Top 20 % FS	0.82 (0.01)	0.91 (0.01)	0.7 (0.02)	0.94 (0.01)
Top 30 % FS	0.83 (0.01)	0.93 (0.02)	0.69 (0.02)	0.95 (0.01)
Top 30 % FC, 100 % Regional FS	0.84 (0.01)	0.92 (0.01)	0.72 (0.02)	0.94 (0.01)
All 100 % FS (No FS)	0.85 (0.01)	0.93 (0.01)	0.73 (0.02)	0.95 (0.01)

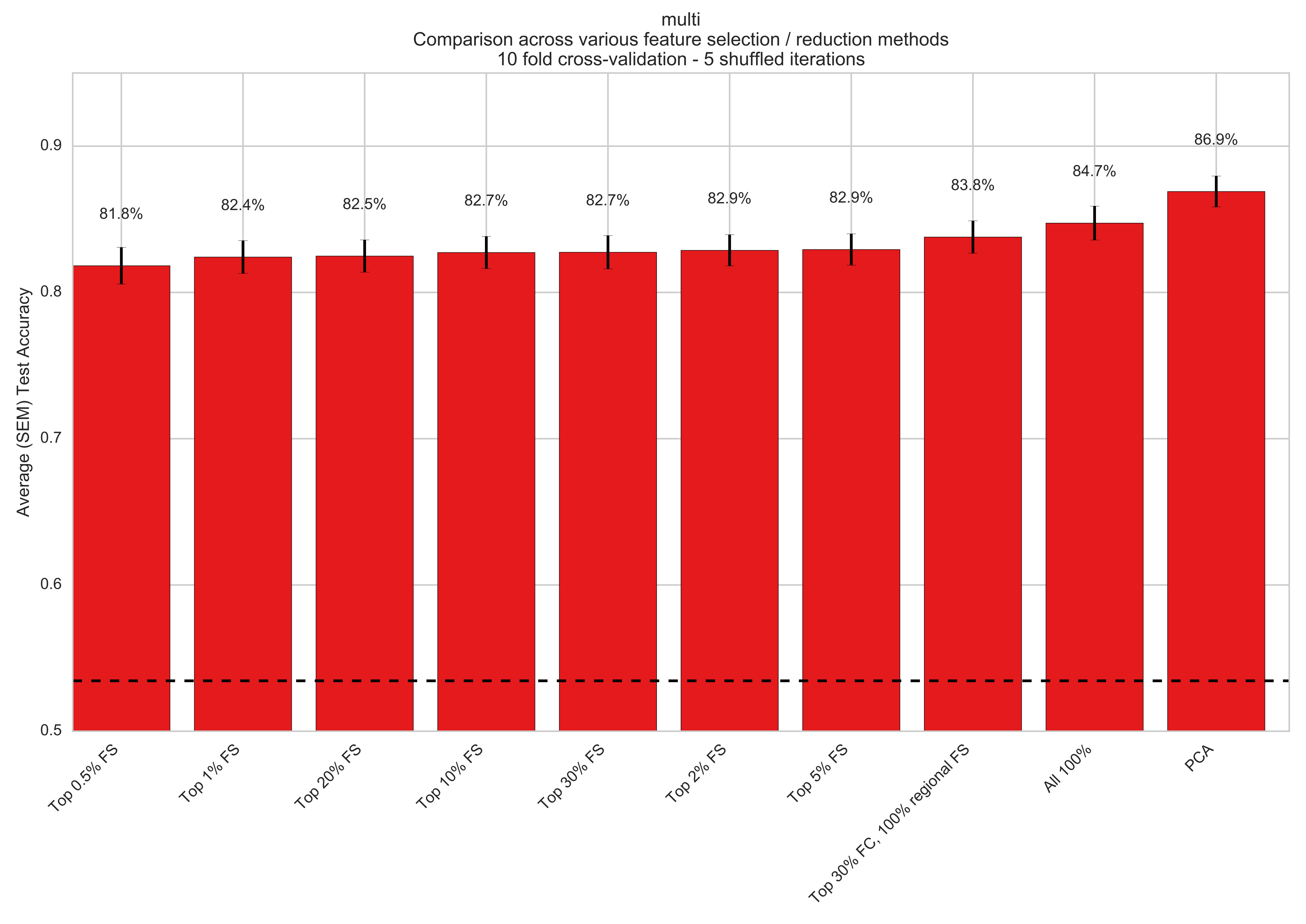
Comparison of prediction accuracy for stacked models with various feature selection/reduction methods.
Final ensemble model shown in red.

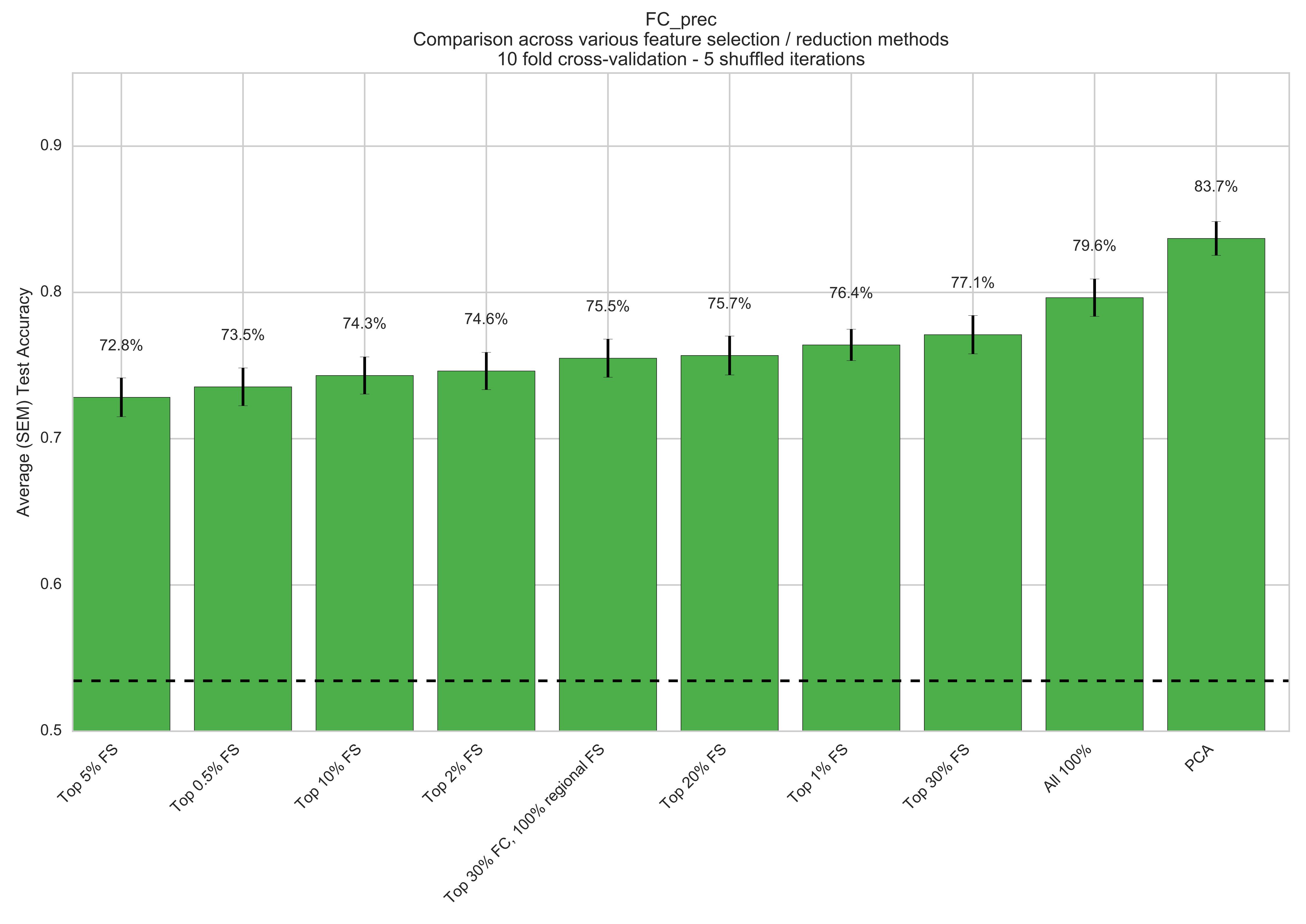

fALFF
Comparison across various feature selection / reduction methods
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
65.2%
67.2%
68.8%
71.3%
72.6%
73.1%
74.0%
74.5%
74.8%
75.3%
Top 0.5% FS
Top 1% FS
Top 2% FS
Top 5% FS
Top 10% FS
Top 20% FS
Top 30% FS
PCA
Top 30% FC, 100% regional FS
All 100%

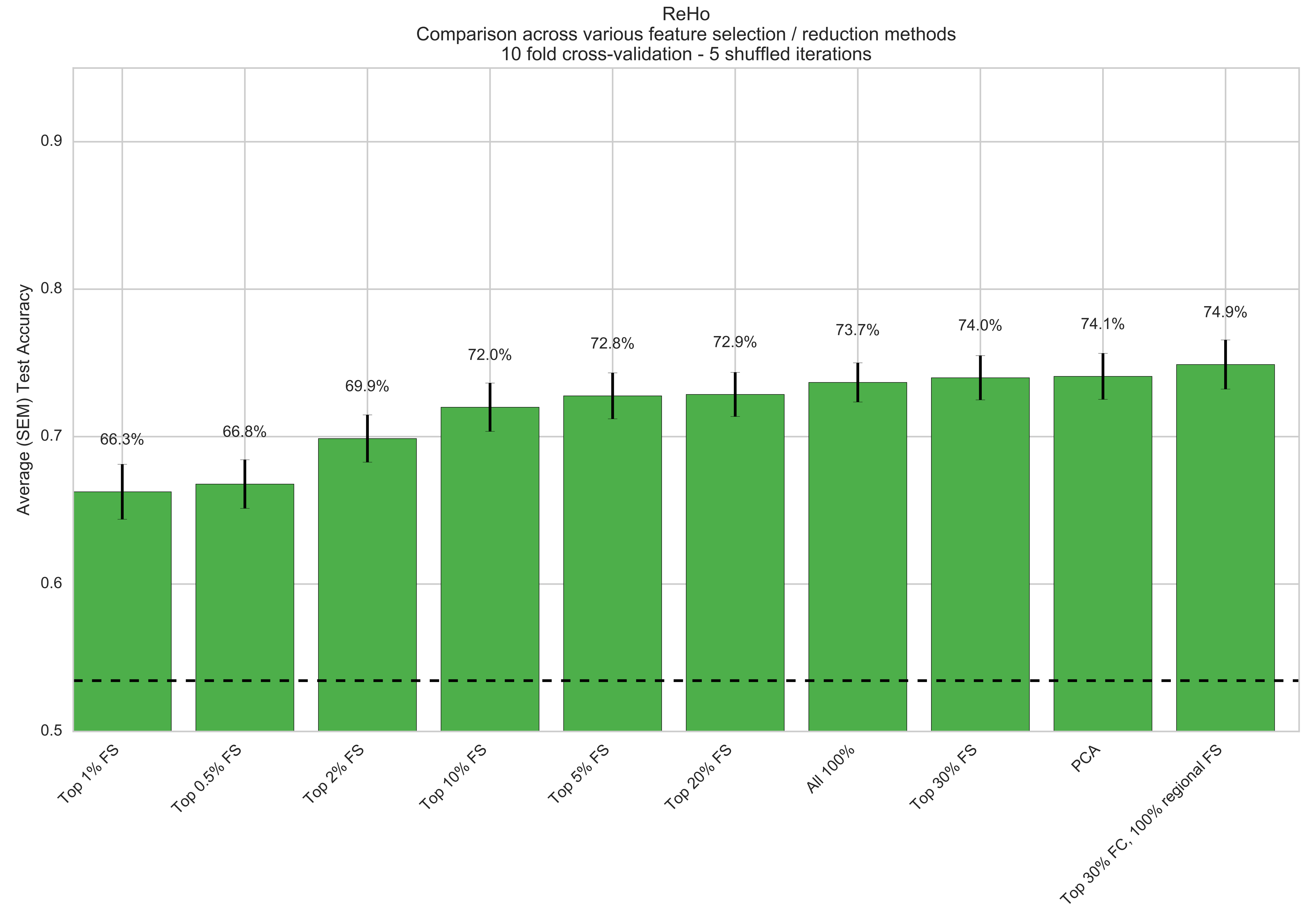

FC_corr
Comparison across various feature selection / reduction methods
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.5
0.6
0.7
0.8
0.9
74.3%
75.0%
75.7%
77.2%
77.7%
79.0%
79.6%
80.1%
81.6%
82.4%
Top 2% FS
Top 1% FS
Top 0.5% FS
Top 5% FS
Top 10% FS
Top 20% FS
Top 30% FC, 100% regional FS
Top 30% FS
All 100%
PCA

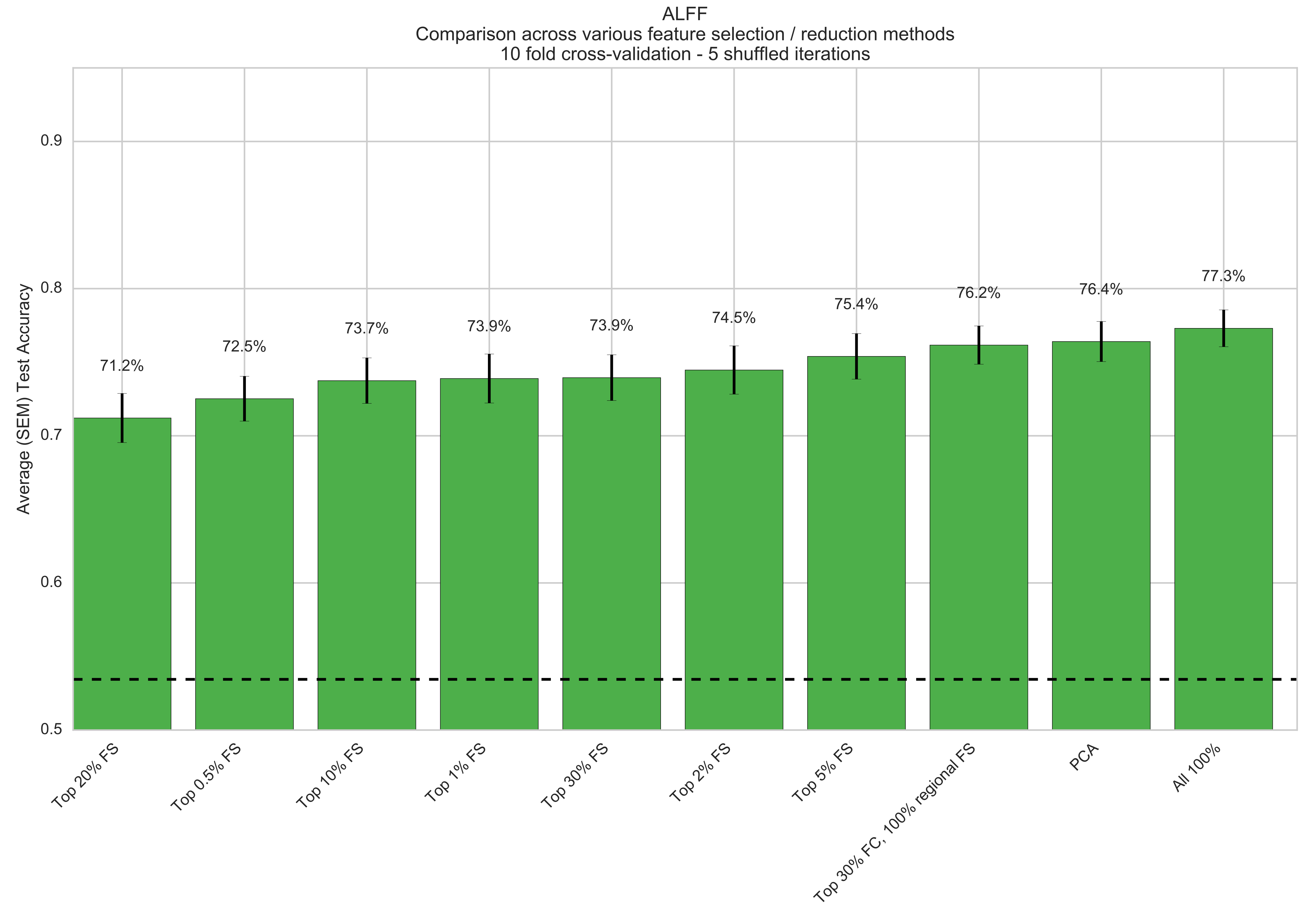


FC_part
Comparison across various feature selection / reduction methods
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.5
0.6
0.7
0.8
0.9
74.0%
74.5%
74.6%
75.2%
75.3%
75.4%
76.7%
77.4%
77.9%
78.5%
Top 10% FS
Top 30% FC, 100% regional FS
Top 30% FS
Top 20% FS
Top 5% FS
All 100%
Top 0.5% FS
Top 1% FS
Top 2% FS
PCA

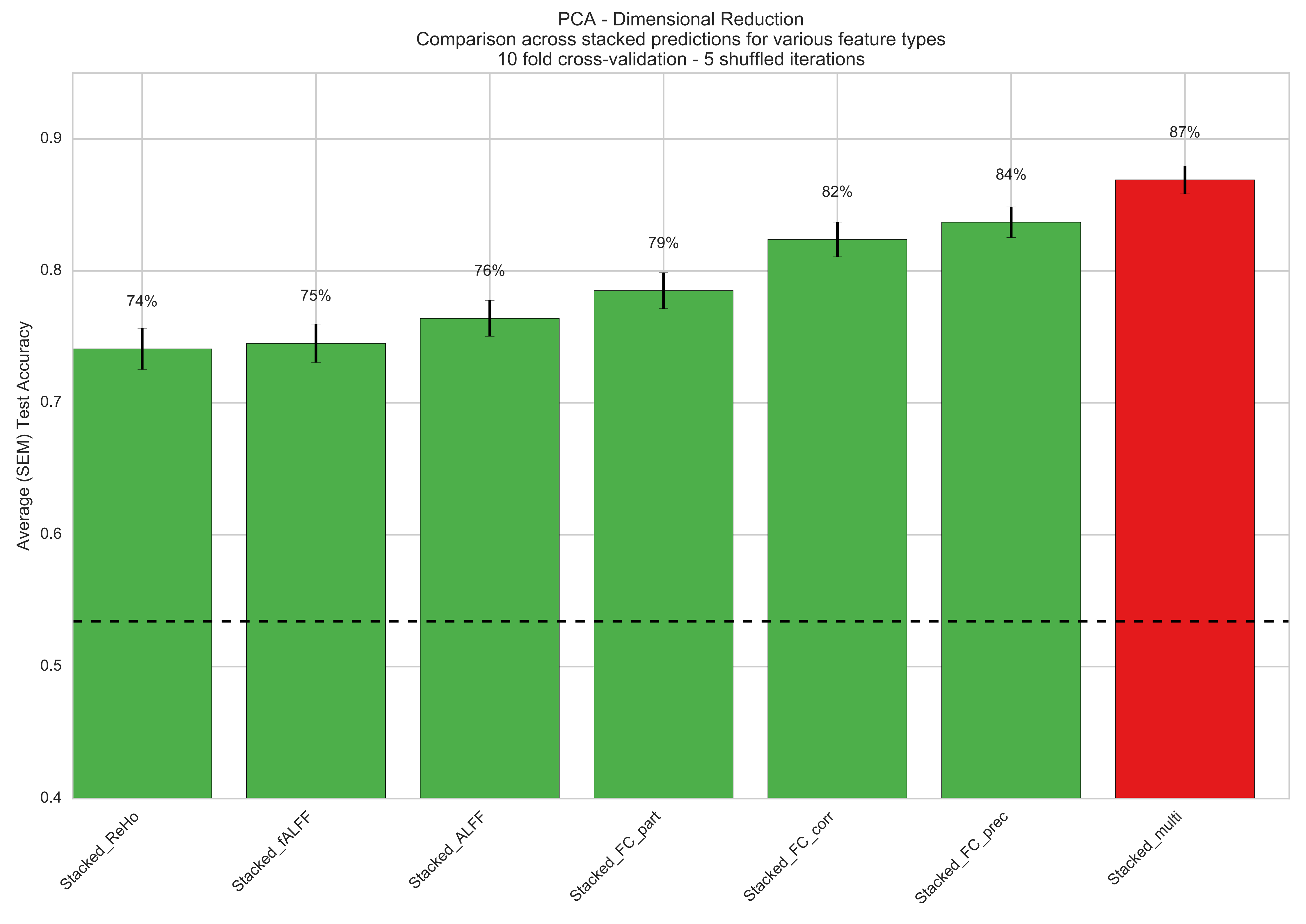

multi
Comparison across various feature selection / reduction methods
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.5
0.6
0.7
0.8
0.9
81.8%
82.4%
82.5%
82.7%
82.7%
82.9%
82.9%
83.8%
84.7%
86.9%
Top 0.5% FS
Top 1% FS
Top 20% FS
Top 10% FS
Top 30% FS
Top 2% FS
Top 5% FS
Top 30% FC, 100% regional FS
All 100%
PCA

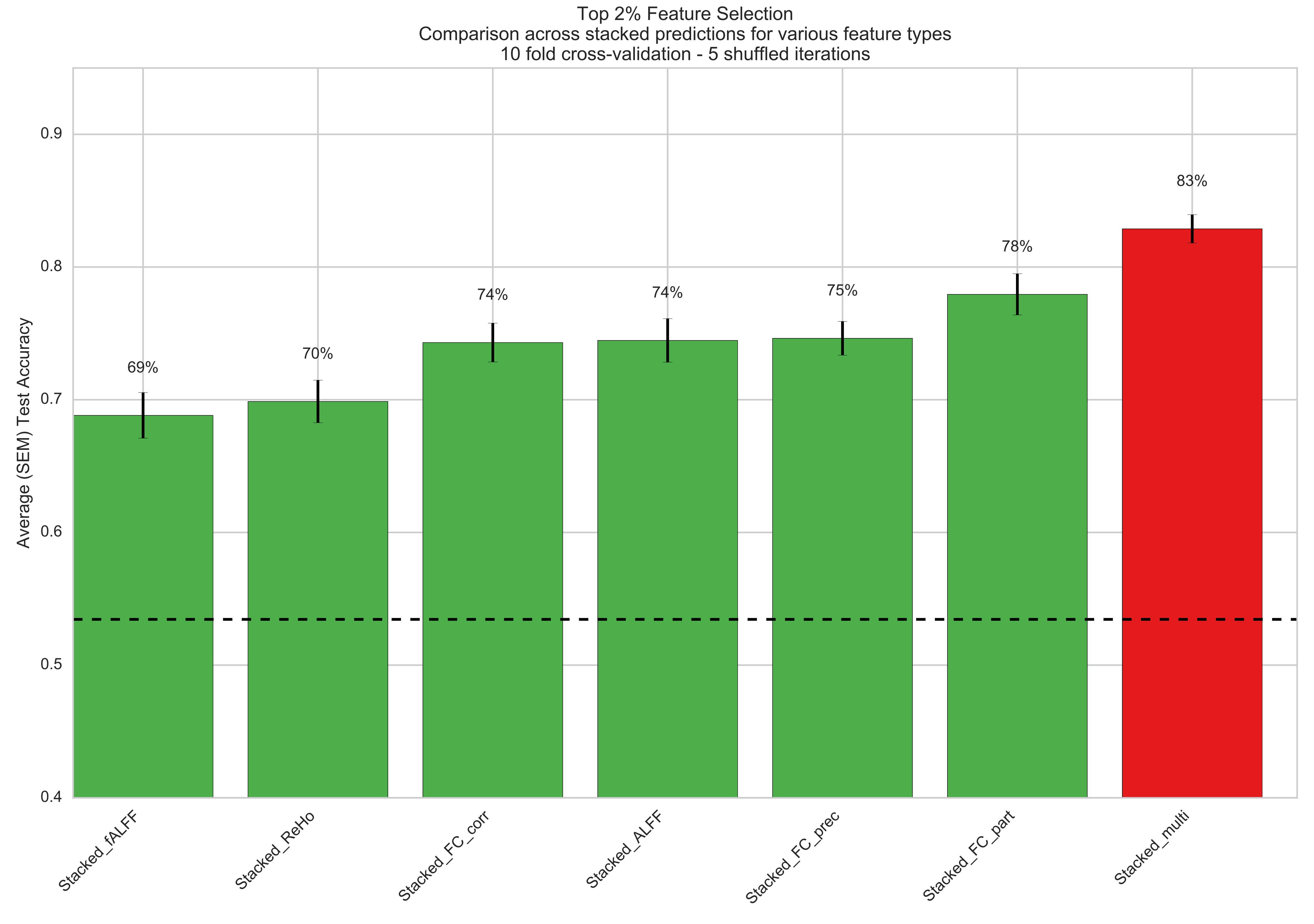

FC_prec
Comparison across various feature selection / reduction methods
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.5
0.6
0.7
0.8
0.9
72.8%
73.5%
74.3%
74.6%
75.5%
75.7%
76.4%
77.1%
79.6%
83.7%
Top 5% FS
Top 0.5% FS
Top 10% FS
Top 2% FS
Top 30% FC, 100% regional FS
Top 20% FS
Top 1% FS
Top 30% FS
All 100%
PCA

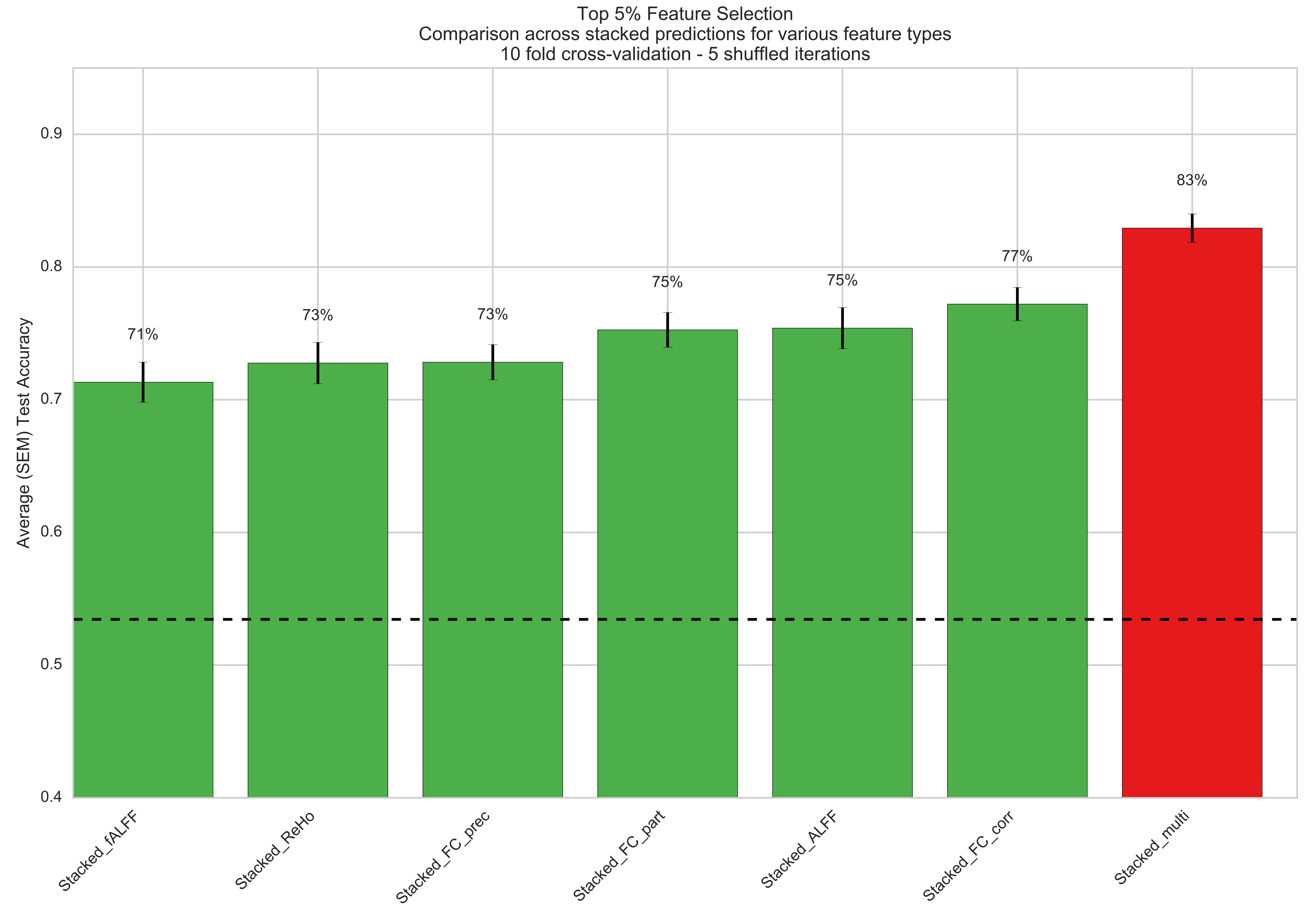

ReHo
Comparison across various feature selection / reduction methods
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
66.3%
66.8%
69.9%
72.0%
72.8%
72.9%
73.7%
74.0%
74.1%
74.9%
Top 1% FS
Top 0.5% FS
Top 2% FS
Top 10% FS
Top 5% FS
Top 20% FS
All 100%
Top 30% FS
PCA
Top 30% FC, 100% regional FS

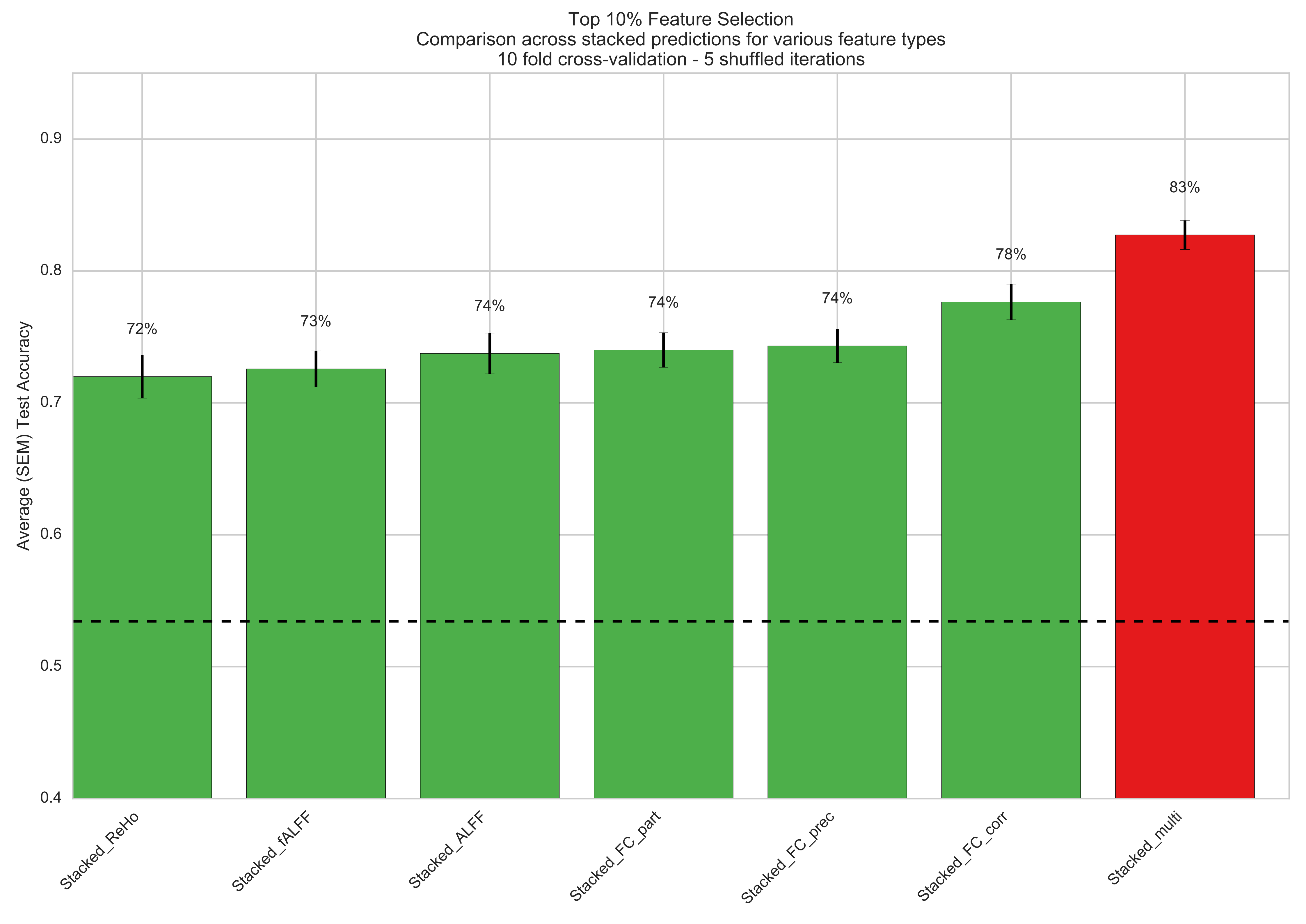

ALFF
Comparison across various feature selection / reduction methods
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
71.2%
72.5%
73.7%
73.9%
73.9%
74.5%
75.4%
76.2%
76.4%
77.3%
Top 20% FS
Top 0.5% FS
Top 10% FS
Top 1% FS
Top 30% FS
Top 2% FS
Top 5% FS
Top 30% FC, 100% regional FS
PCA
All 100%

Comparison of prediction accuracy for stacked models of various feature types.
Final ensemble model shown in red.

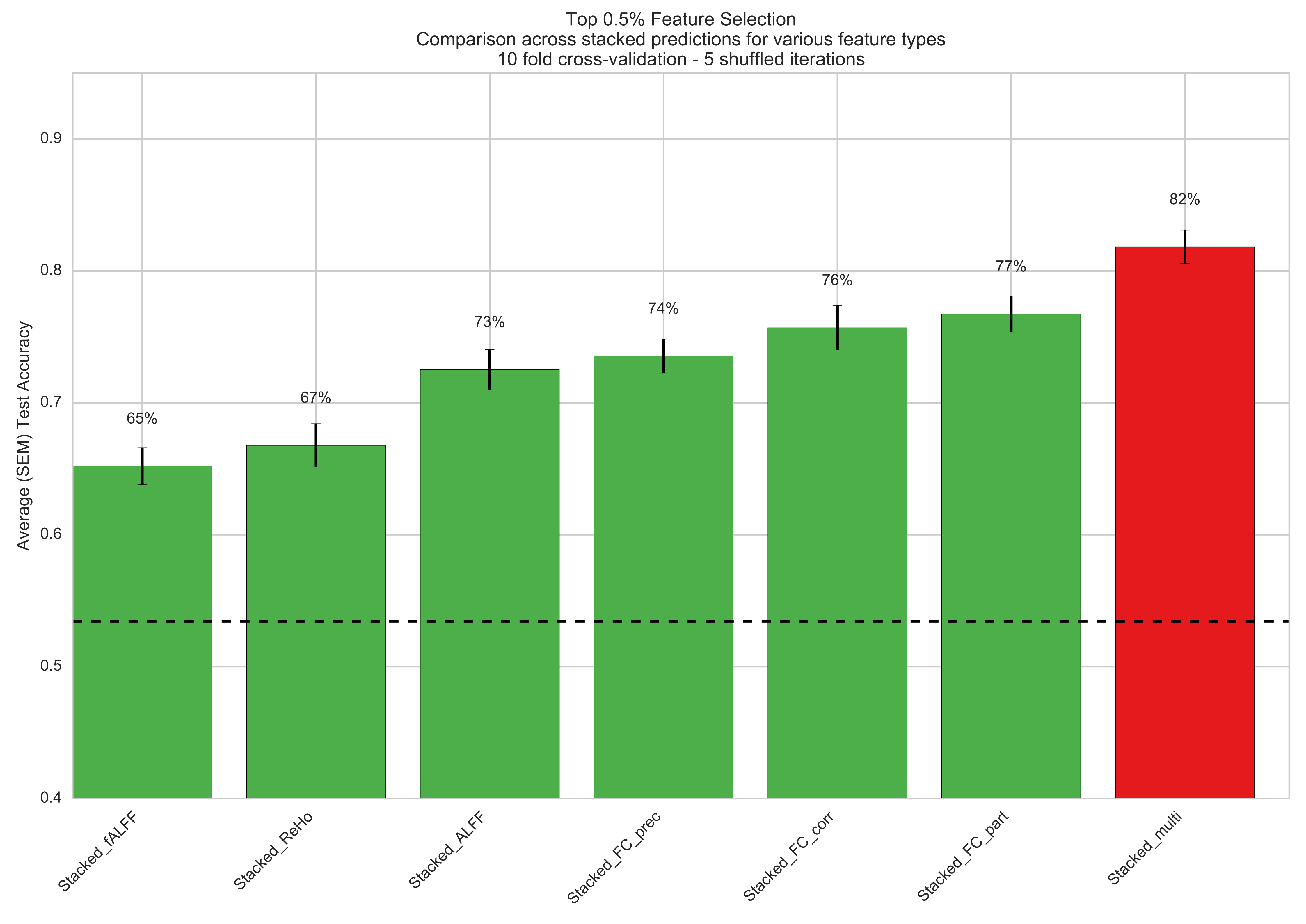

PCA - Dimensional Reduction
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
74%
75%
76%
79%
82%
84%
87%
Stacked_ReHo
Stacked_fALFF
Stacked_ALFF
Stacked_FC_part
Stacked_FC_corr
Stacked_FC_prec
Stacked_multi


Top 2% Feature Selection
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
69%
70%
74%
74%
75%
78%
83%
Stacked_fALFF
Stacked_ReHo
Stacked_FC_corr
Stacked_ALFF
Stacked_FC_prec
Stacked_FC_part
Stacked_multi

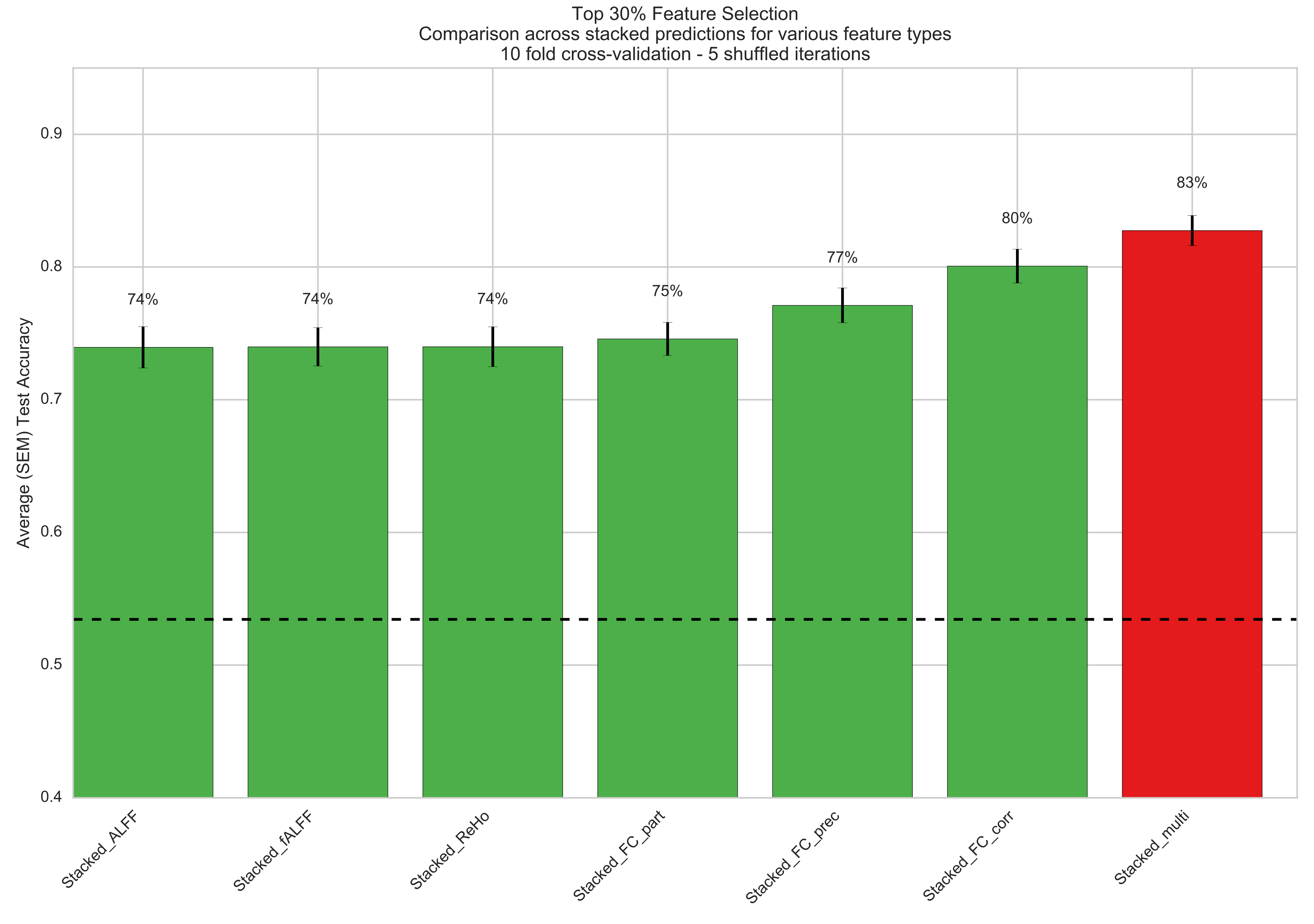

Top 5% Feature Selection
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
71%
73%
73%
75%
75%
77%
83%
Stacked_fALFF
Stacked_ReHo
Stacked_FC_prec
Stacked_FC_part
Stacked_ALFF
Stacked_FC_corr
Stacked_multi

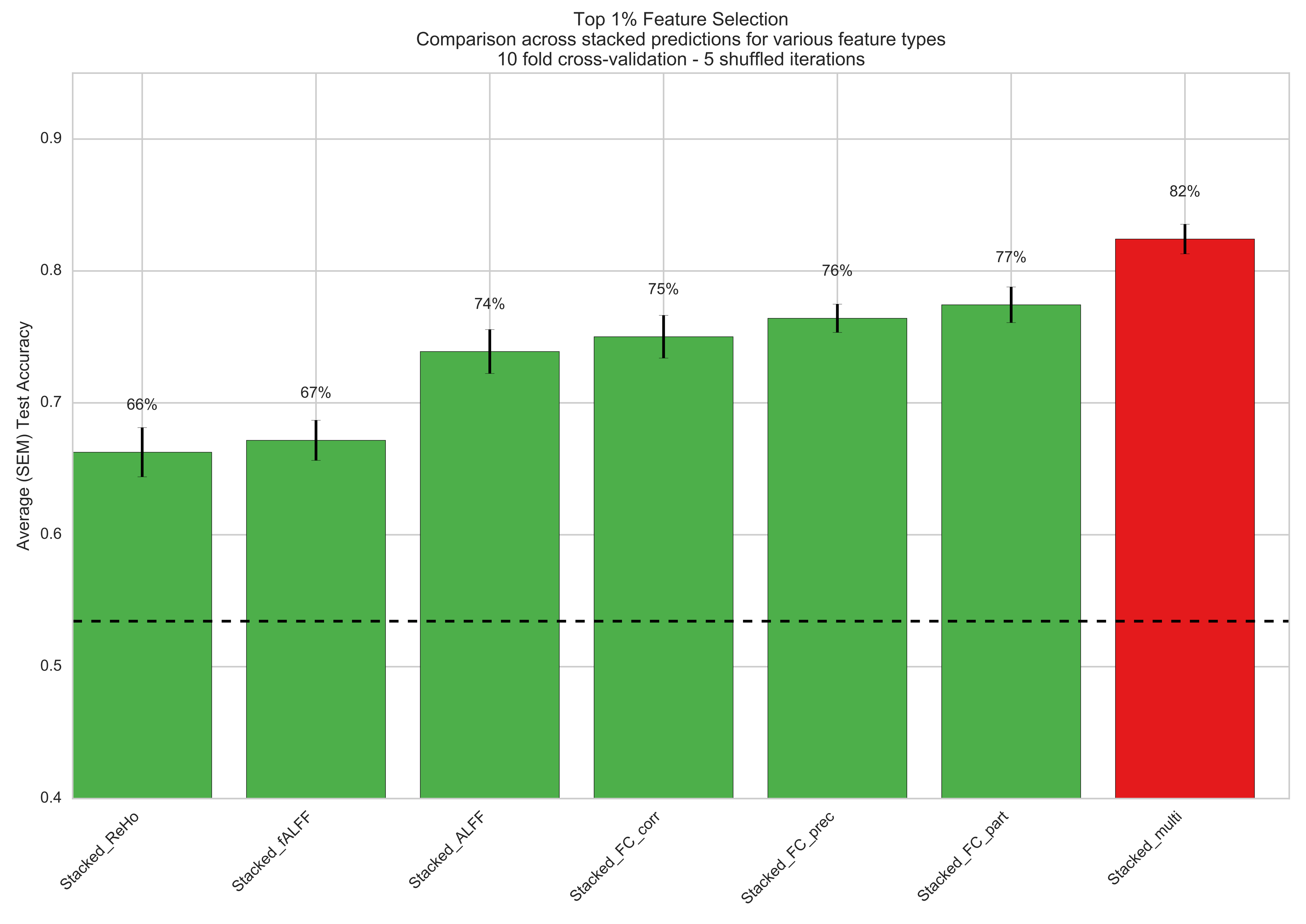


Top 10% Feature Selection
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
72%
73%
74%
74%
74%
78%
83%
Stacked_ReHo
Stacked_fALFF
Stacked_ALFF
Stacked_FC_part
Stacked_FC_prec
Stacked_FC_corr
Stacked_multi

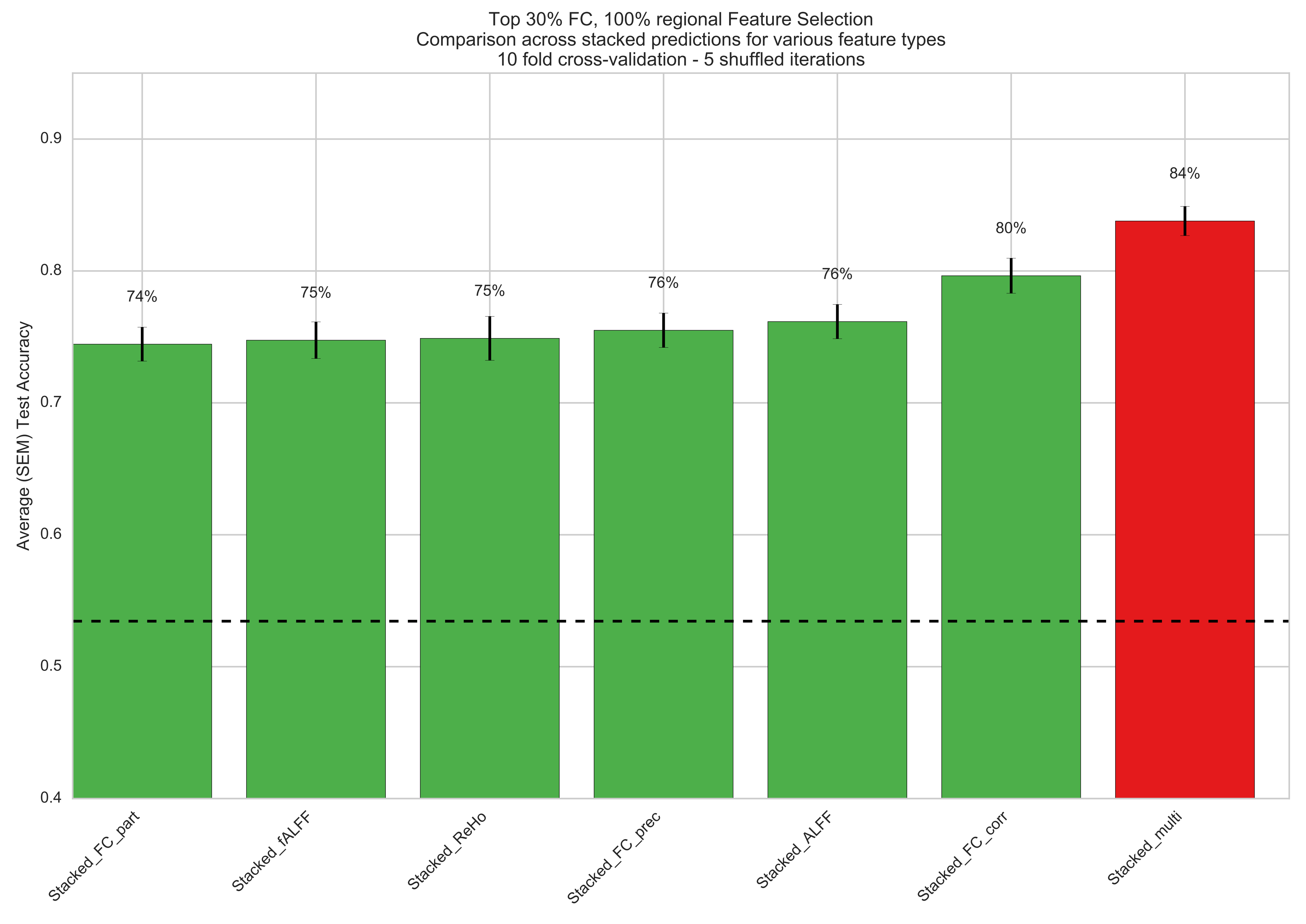


Top 0.5% Feature Selection
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
65%
67%
73%
74%
76%
77%
82%
Stacked_fALFF
Stacked_ReHo
Stacked_ALFF
Stacked_FC_prec
Stacked_FC_corr
Stacked_FC_part
Stacked_multi

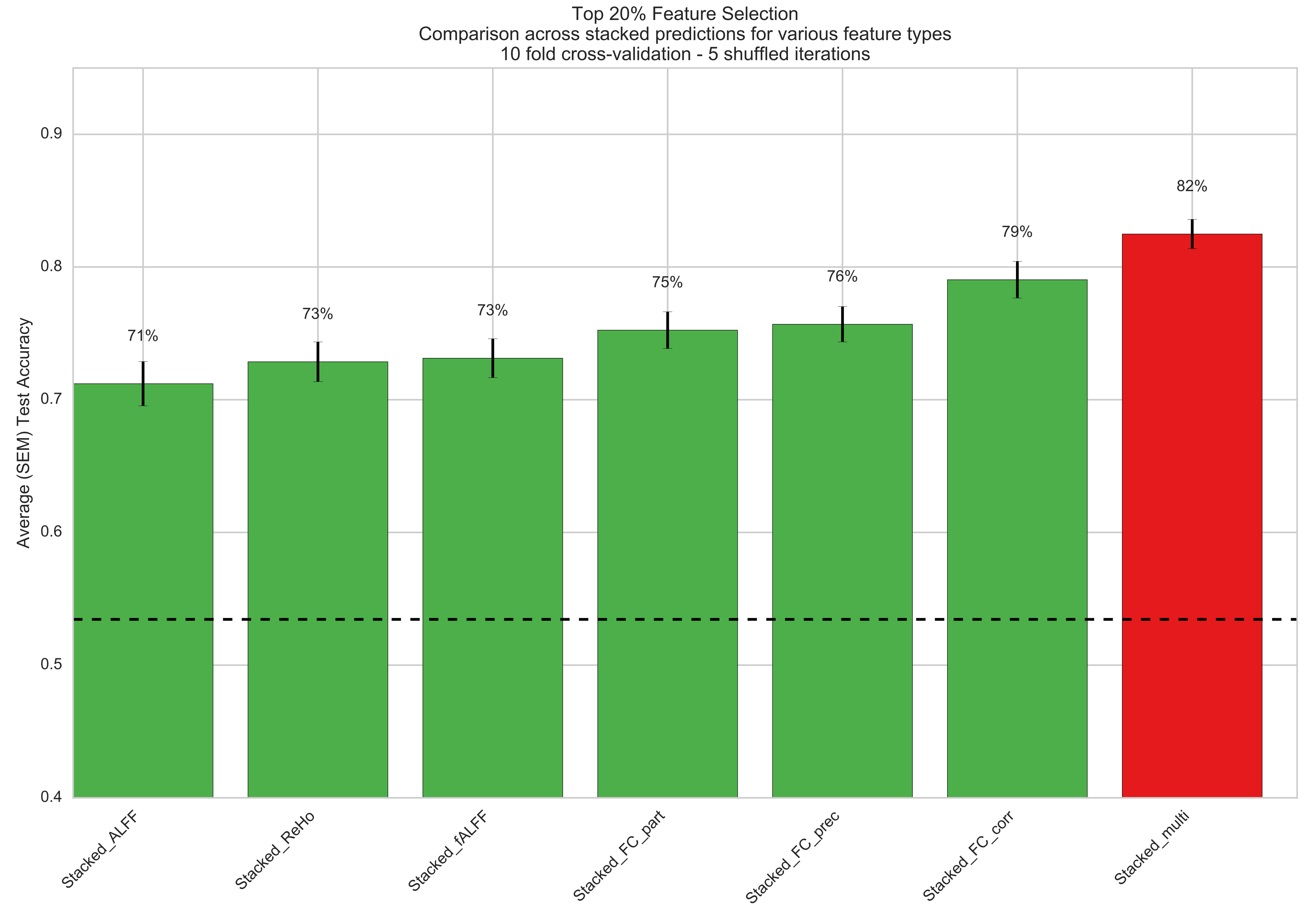

Top 30% Feature Selection
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
74%
74%
74%
75%
77%
80%
83%
Stacked_ALFF
Stacked_fALFF
Stacked_ReHo
Stacked_FC_part
Stacked_FC_prec
Stacked_FC_corr
Stacked_multi

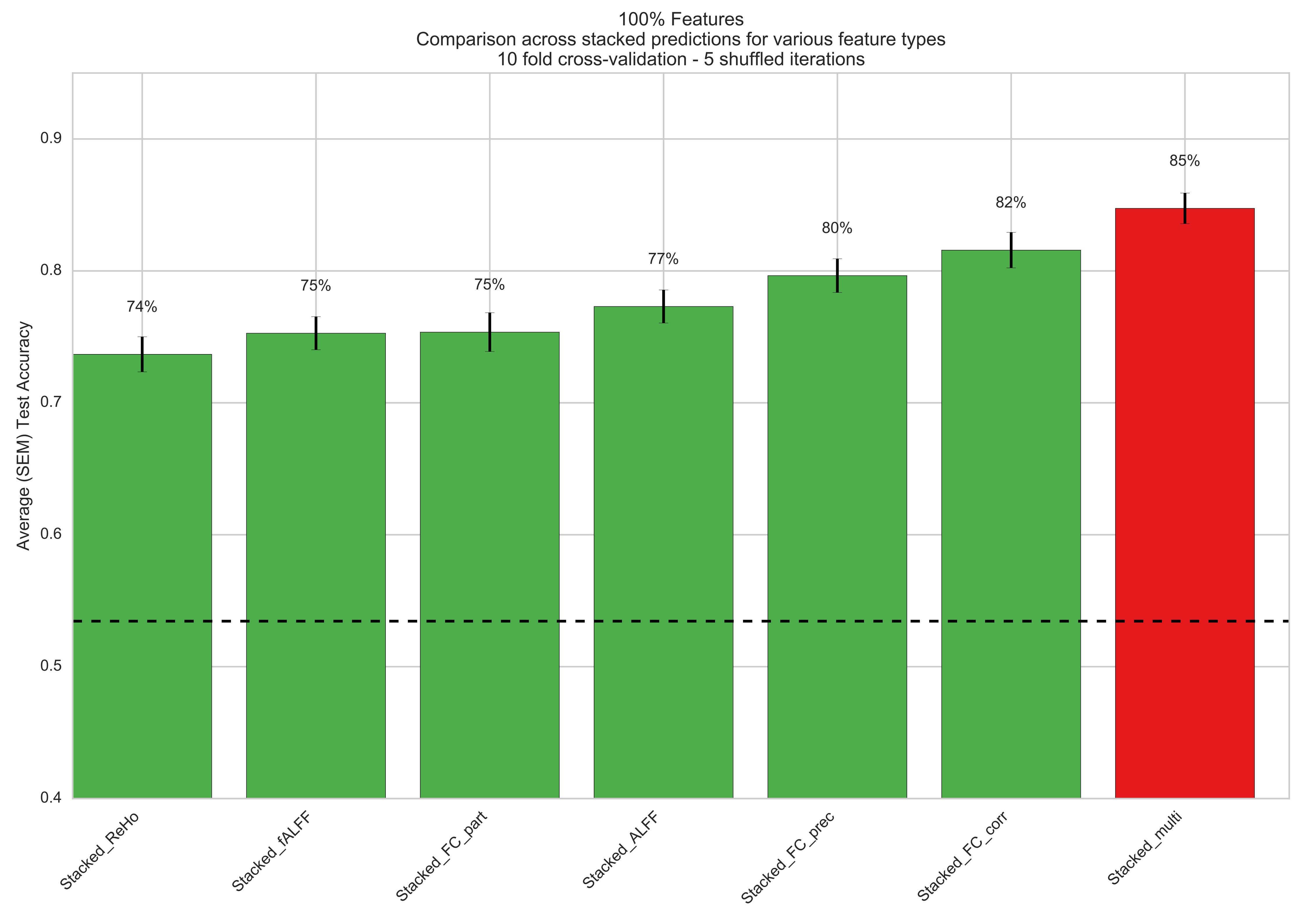


Top 1% Feature Selection
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
66%
67%
74%
75%
76%
77%
82%
Stacked_ReHo
Stacked_fALFF
Stacked_ALFF
Stacked_FC_corr
Stacked_FC_prec
Stacked_FC_part
Stacked_multi



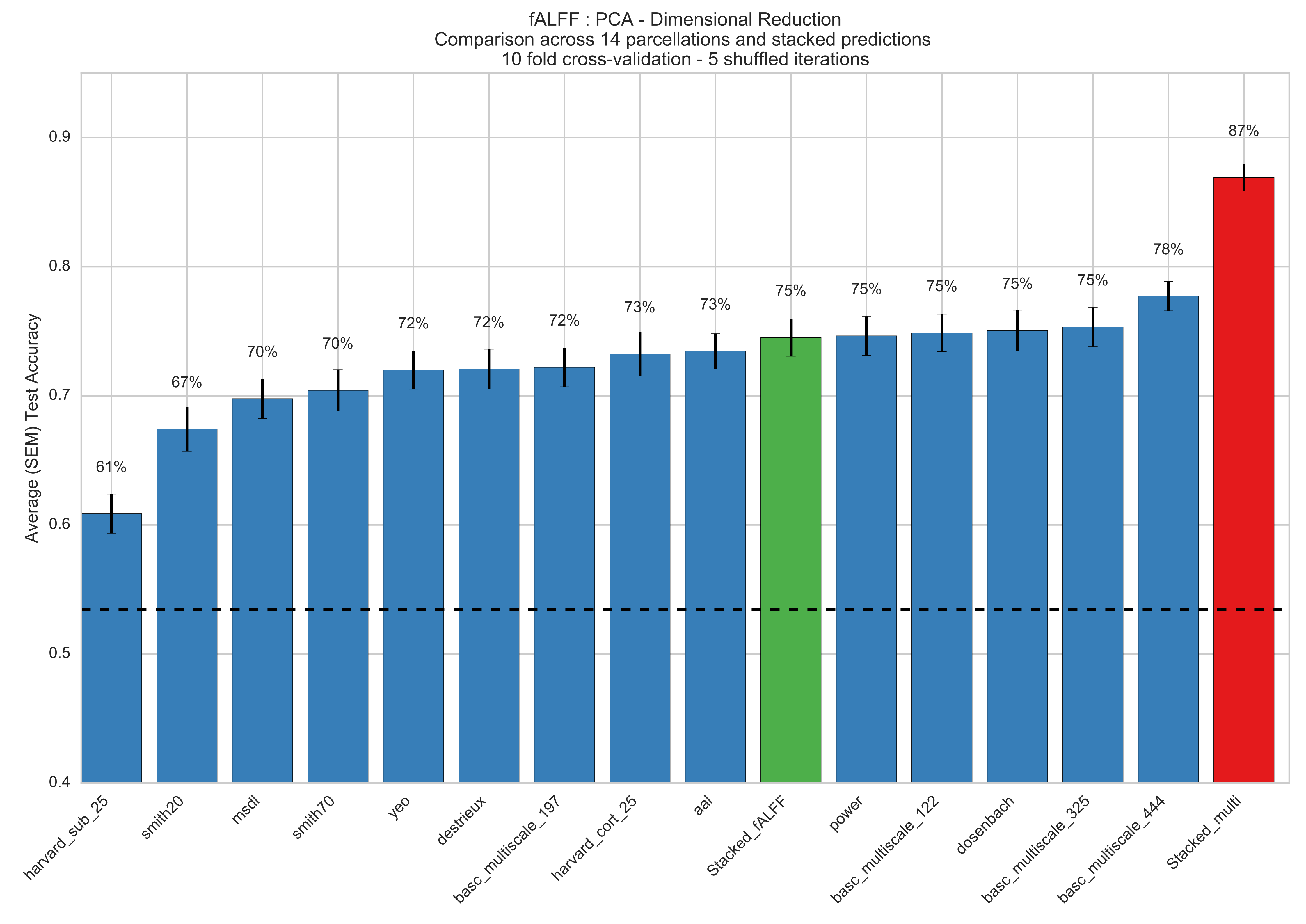
Top 30% FC, 100% regional Feature Selection
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
74%
75%
75%
76%
76%
80%
84%
Stacked_FC_part
Stacked_fALFF
Stacked_ReHo
Stacked_FC_prec
Stacked_ALFF
Stacked_FC_corr
Stacked_multi

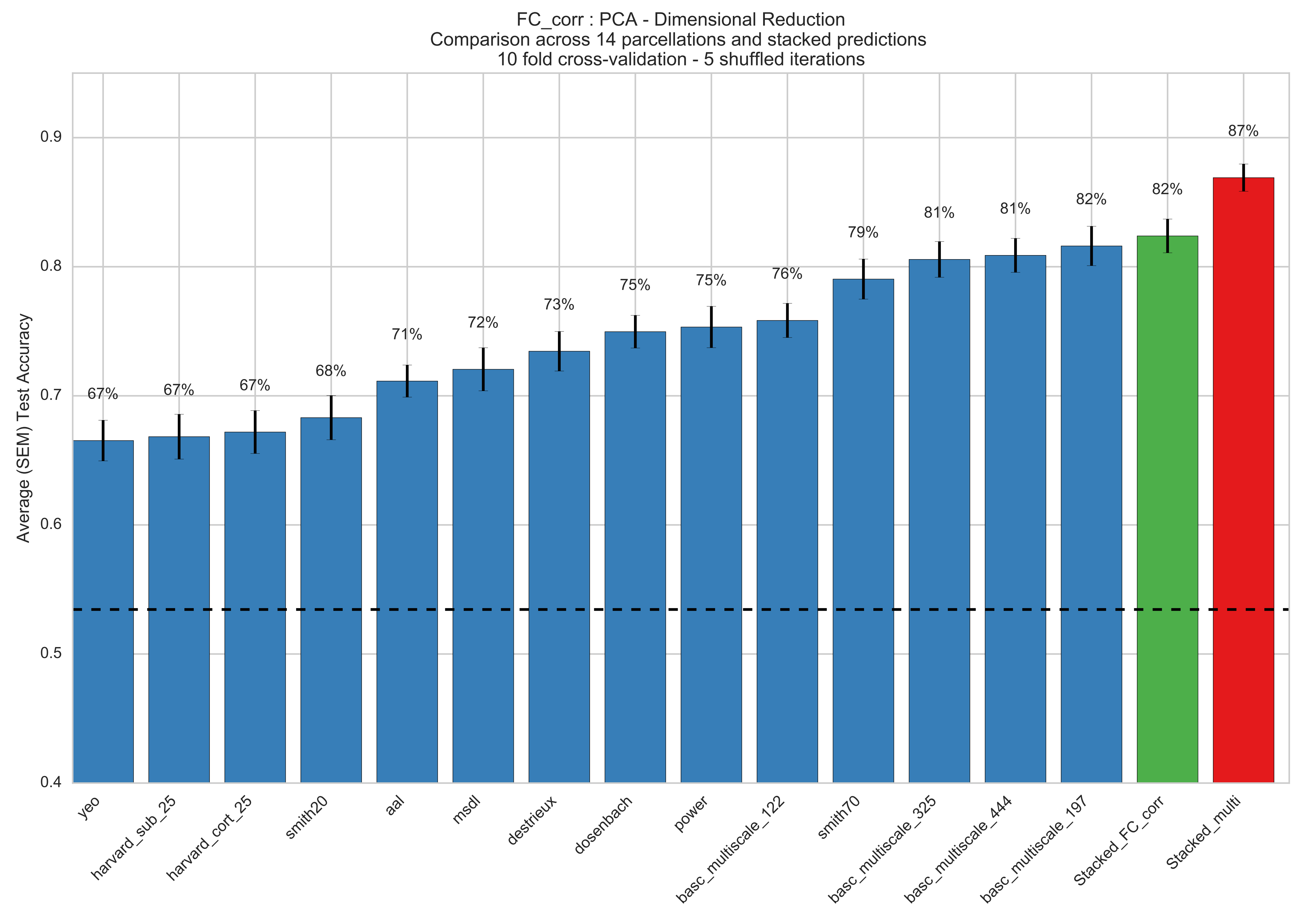

Top 20% Feature Selection
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
71%
73%
73%
75%
76%
79%
82%
Stacked_ALFF
Stacked_ReHo
Stacked_fALFF
Stacked_FC_part
Stacked_FC_prec
Stacked_FC_corr
Stacked_multi

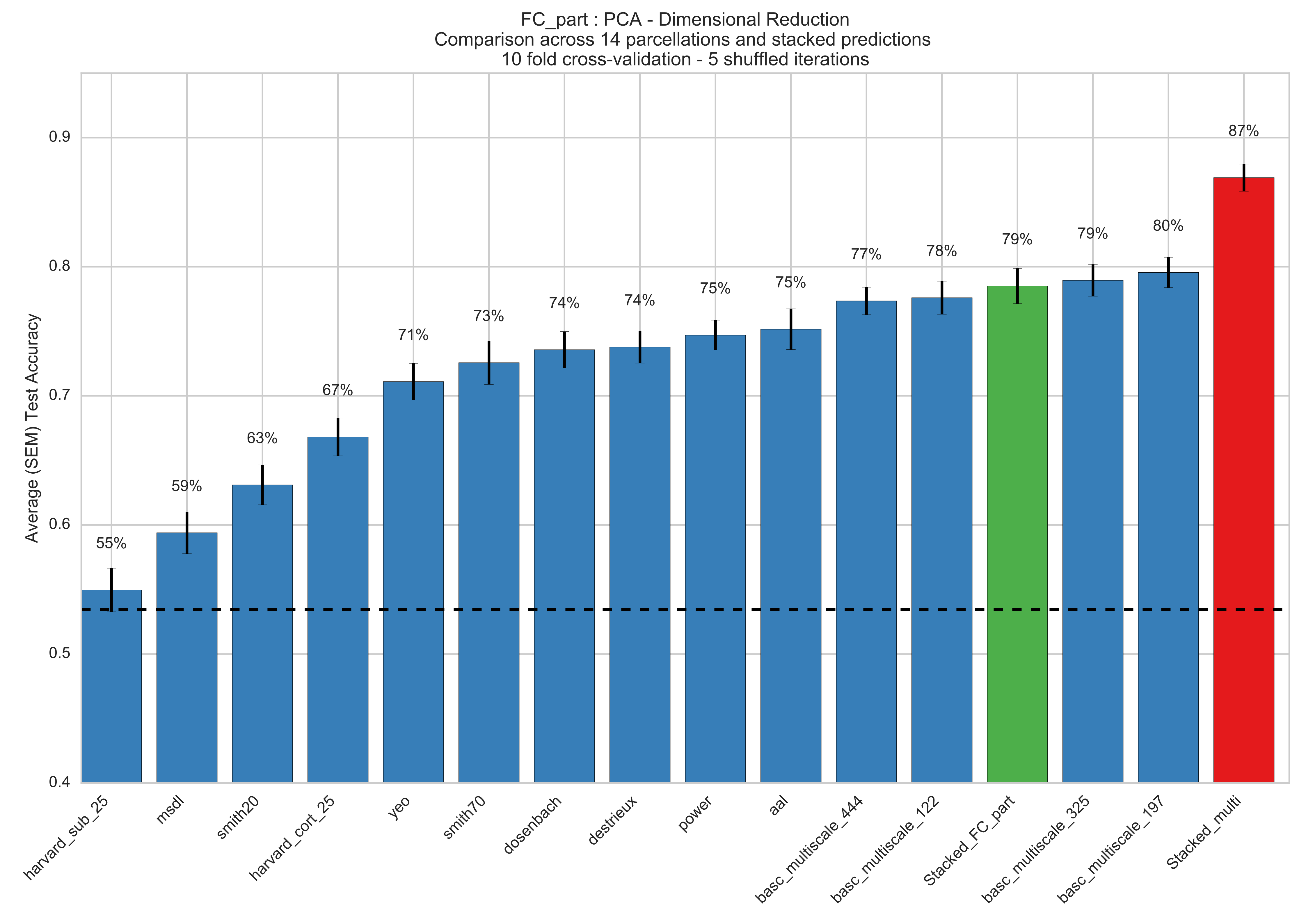

100% Features
Comparison across stacked predictions for various feature types
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
74%
75%
75%
77%
80%
82%
85%
Stacked_ReHo
Stacked_fALFF
Stacked_FC_part
Stacked_ALFF
Stacked_FC_prec
Stacked_FC_corr
Stacked_multi

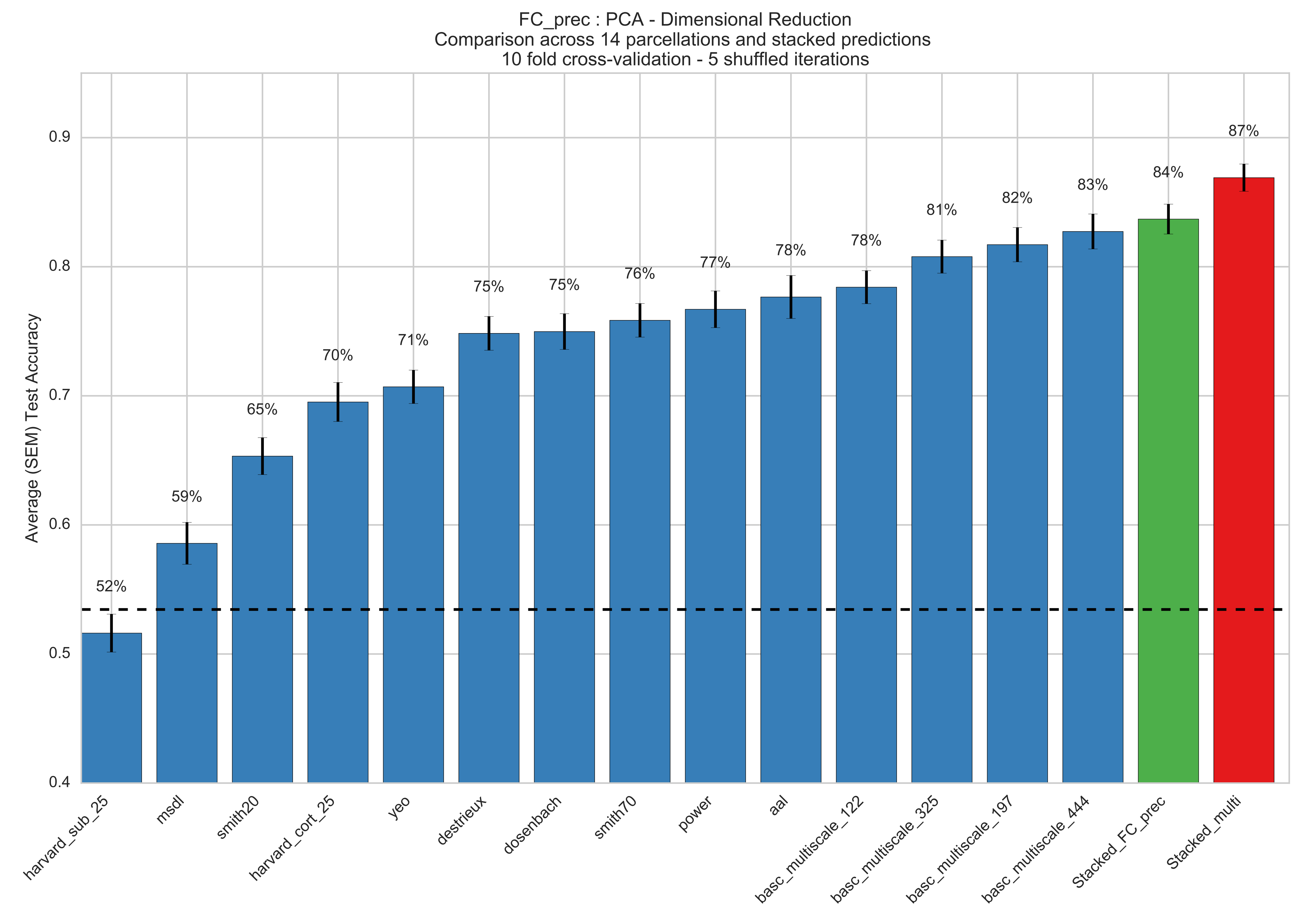
Comparison of prediction accuracy for single-source models (blue) and stacked model (green) for a feature type.
Final ensemble model shown in red

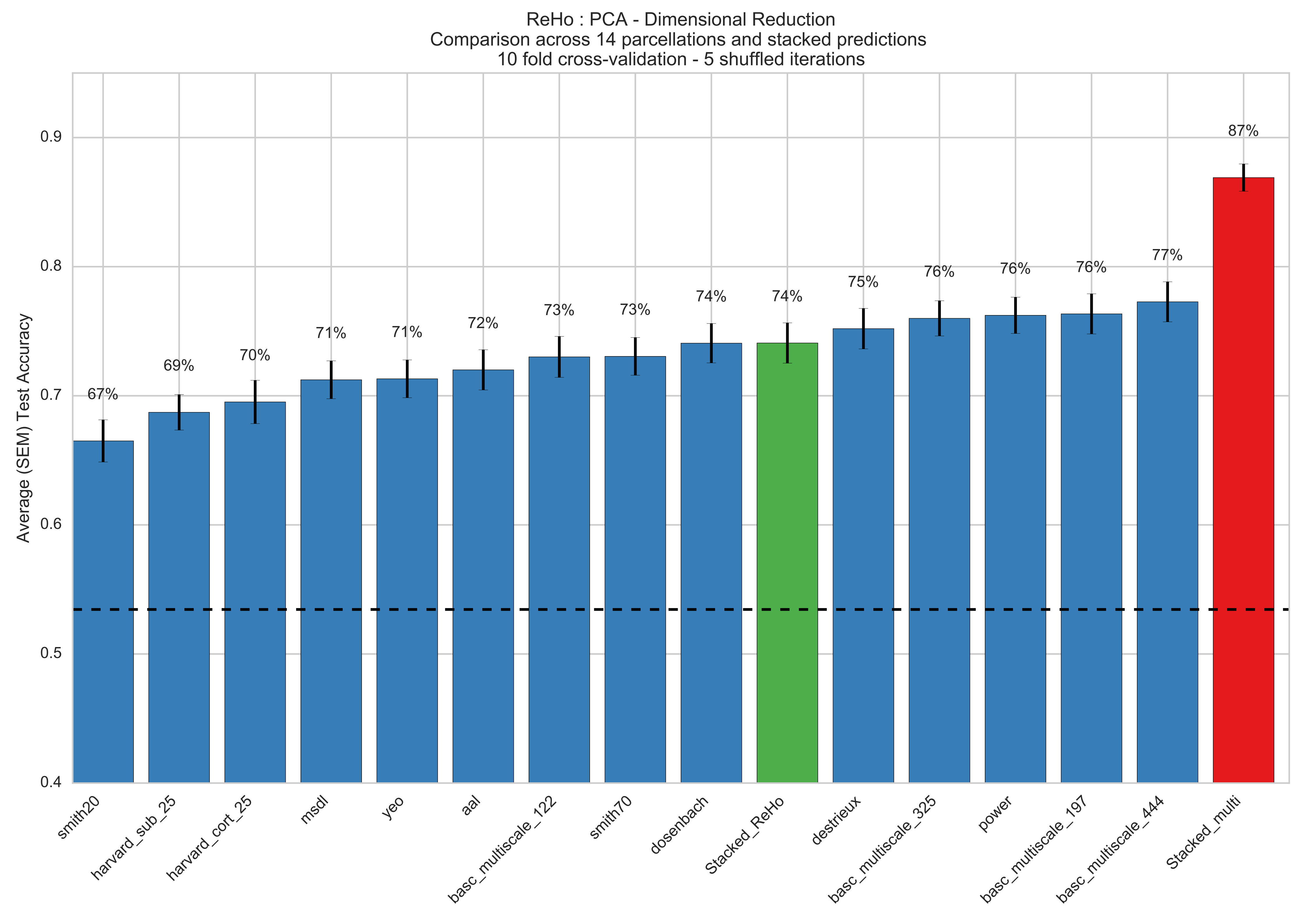
Feature selection / reduction method :PCA - Dimensional Reduction

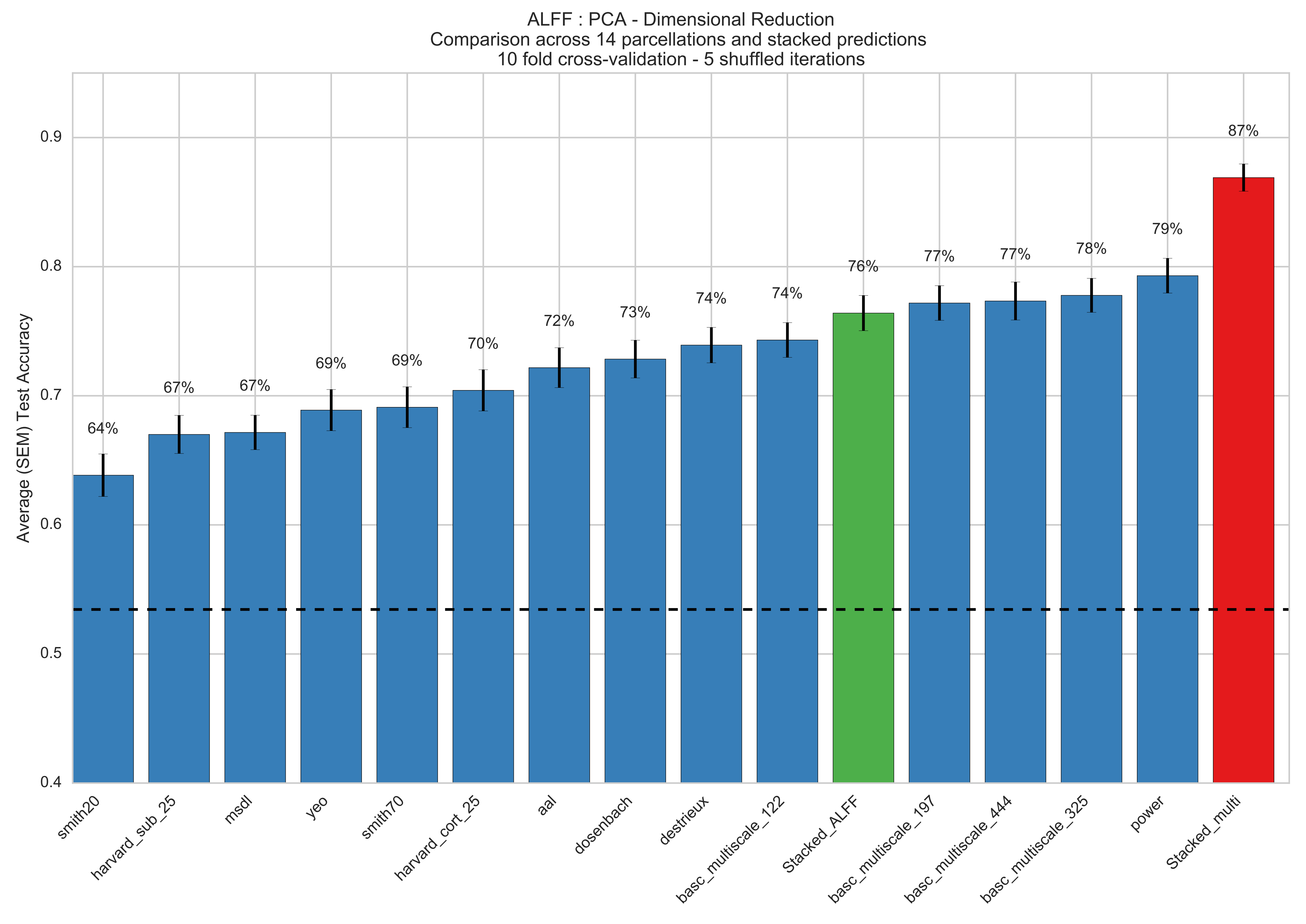

fALFF : PCA - Dimensional Reduction
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
61%
67%
70%
70%
72%
72%
72%
73%
73%
75%
75%
75%
75%
75%
78%
87%
harvard_sub_25
smith20
msdl
smith70
yeo
destrieux
basc_multiscale_197
harvard_cort_25
aal
Stacked_fALFF
power
basc_multiscale_122
dosenbach
basc_multiscale_325
basc_multiscale_444
Stacked_multi


FC_corr : PCA - Dimensional Reduction
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
67%
67%
67%
68%
71%
72%
73%
75%
75%
76%
79%
81%
81%
82%
82%
87%
yeo
harvard_sub_25
harvard_cort_25
smith20
aal
msdl
destrieux
dosenbach
power
basc_multiscale_122
smith70
basc_multiscale_325
basc_multiscale_444
basc_multiscale_197
Stacked_FC_corr
Stacked_multi

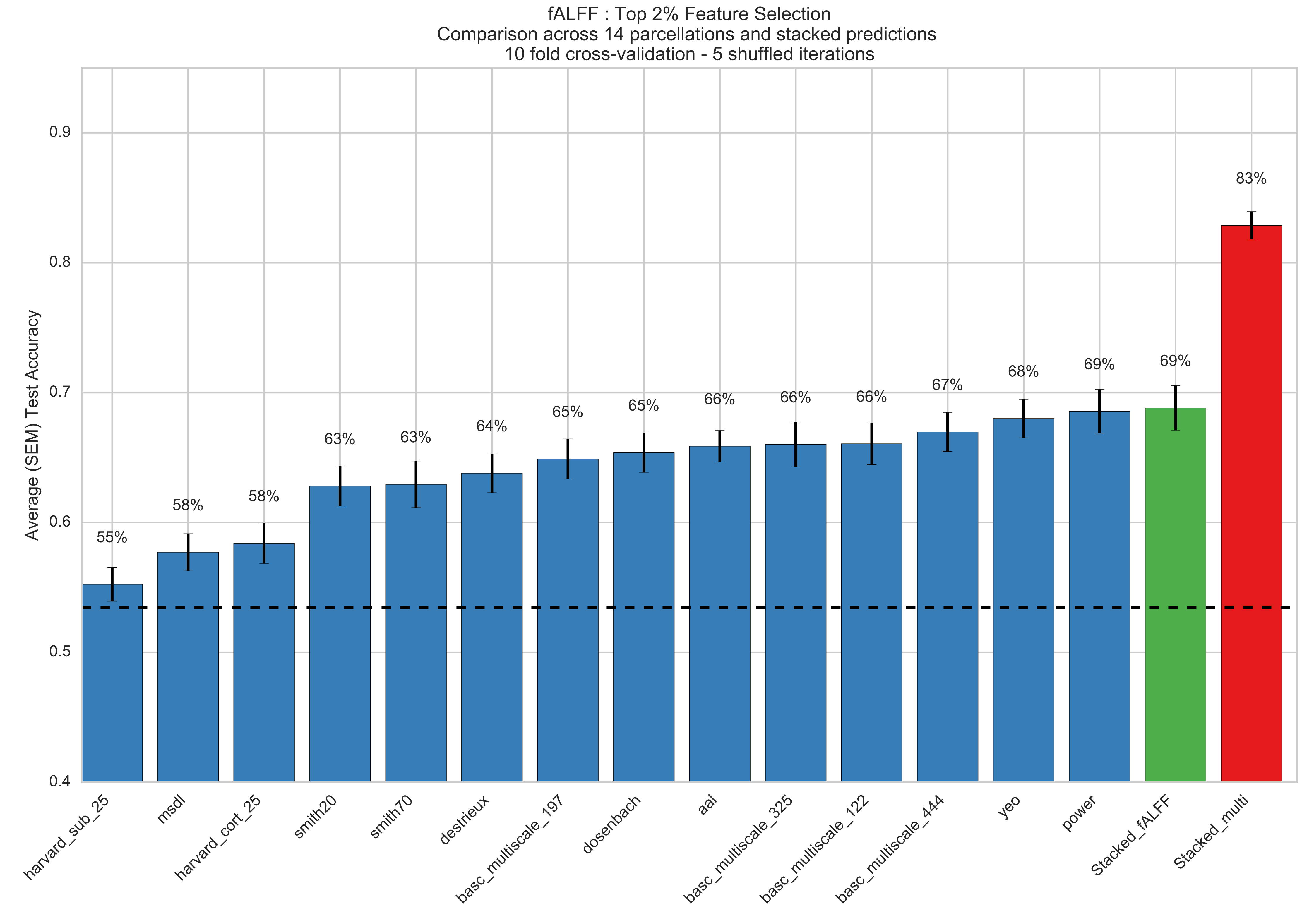

FC_part : PCA - Dimensional Reduction
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
55%
59%
63%
67%
71%
73%
74%
74%
75%
75%
77%
78%
79%
79%
80%
87%
harvard_sub_25
msdl
smith20
harvard_cort_25
yeo
smith70
dosenbach
destrieux
power
aal
basc_multiscale_444
basc_multiscale_122
Stacked_FC_part
basc_multiscale_325
basc_multiscale_197
Stacked_multi

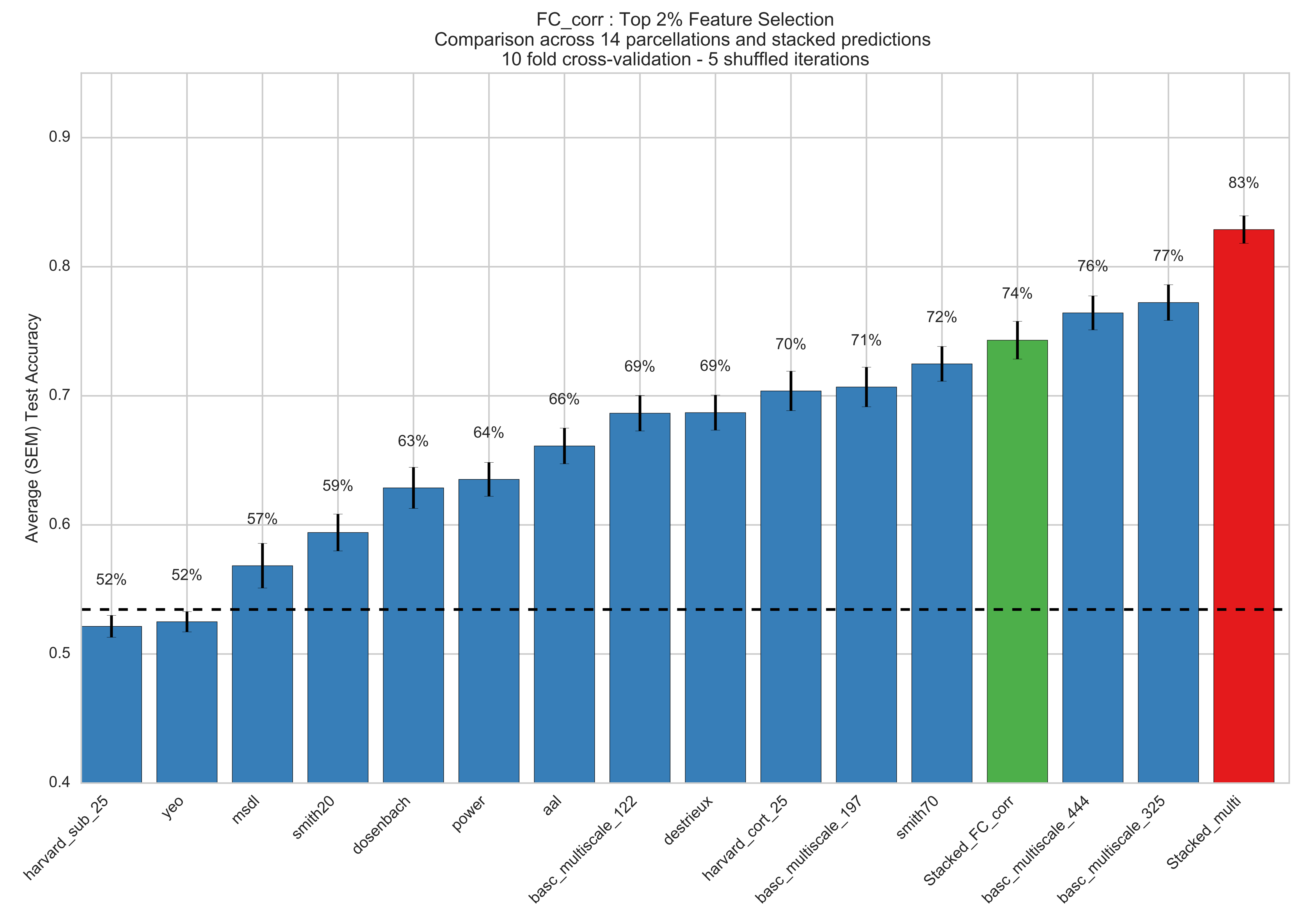

FC_prec : PCA - Dimensional Reduction
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
52%
59%
65%
70%
71%
75%
75%
76%
77%
78%
78%
81%
82%
83%
84%
87%
harvard_sub_25
msdl
smith20
harvard_cort_25
yeo
destrieux
dosenbach
smith70
power
aal
basc_multiscale_122
basc_multiscale_325
basc_multiscale_197
basc_multiscale_444
Stacked_FC_prec
Stacked_multi

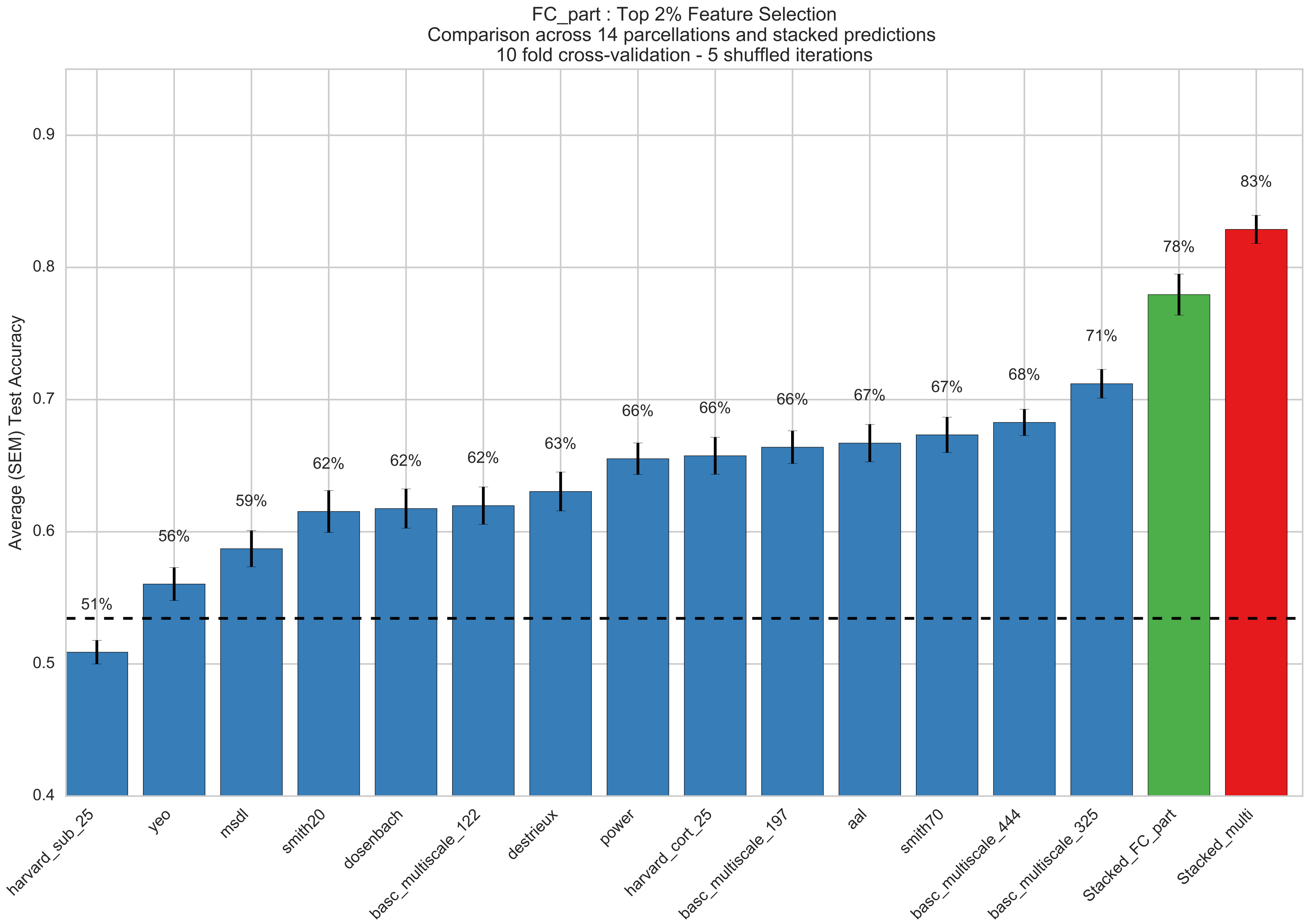

ReHo : PCA - Dimensional Reduction
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
67%
69%
70%
71%
71%
72%
73%
73%
74%
74%
75%
76%
76%
76%
77%
87%
smith20
harvard_sub_25
harvard_cort_25
msdl
yeo
aal
basc_multiscale_122
smith70
dosenbach
Stacked_ReHo
destrieux
basc_multiscale_325
power
basc_multiscale_197
basc_multiscale_444
Stacked_multi

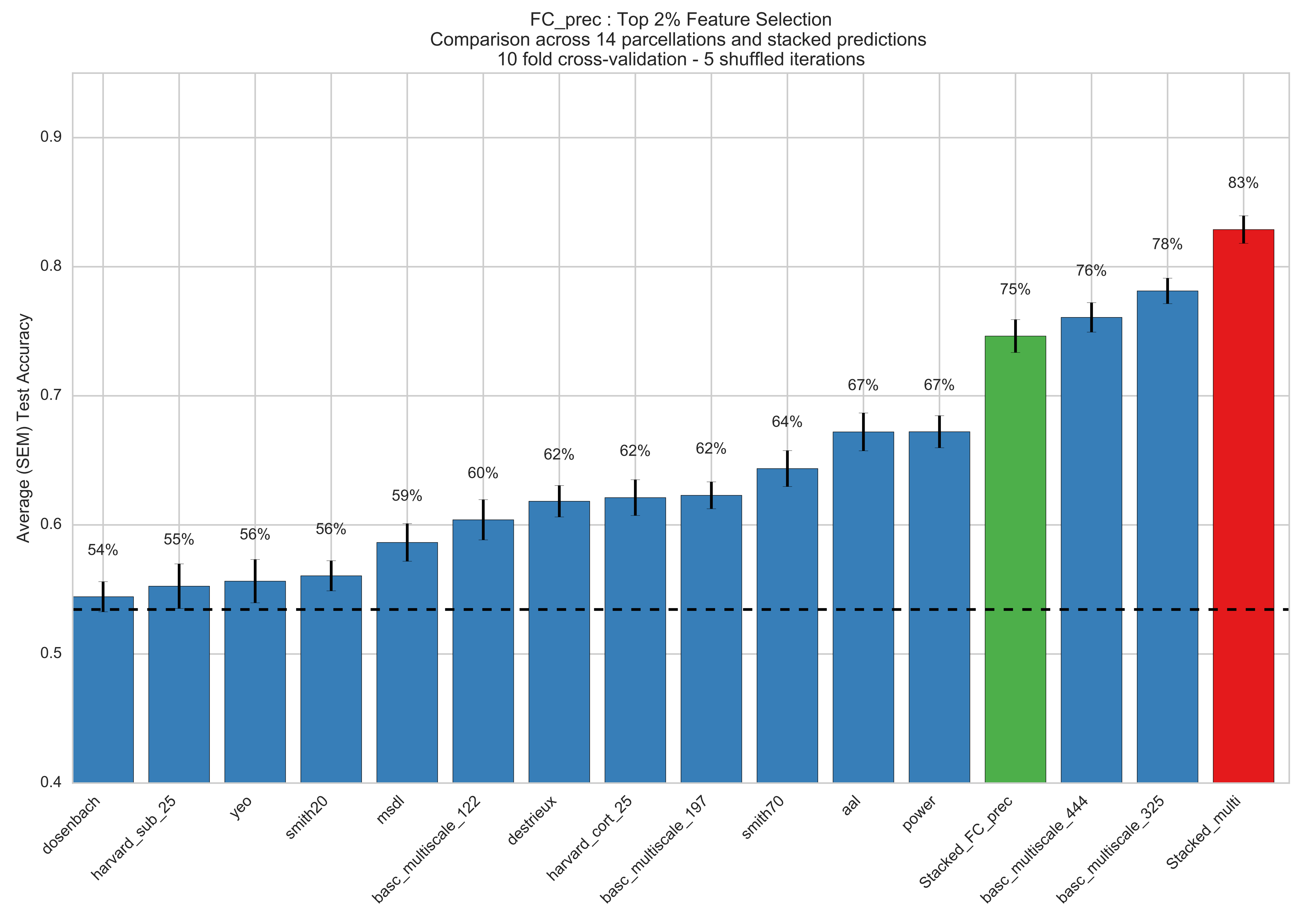

ALFF : PCA - Dimensional Reduction
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
64%
67%
67%
69%
69%
70%
72%
73%
74%
74%
76%
77%
77%
78%
79%
87%
smith20
harvard_sub_25
msdl
yeo
smith70
harvard_cort_25
aal
dosenbach
destrieux
basc_multiscale_122
Stacked_ALFF
basc_multiscale_197
basc_multiscale_444
basc_multiscale_325
power
Stacked_multi

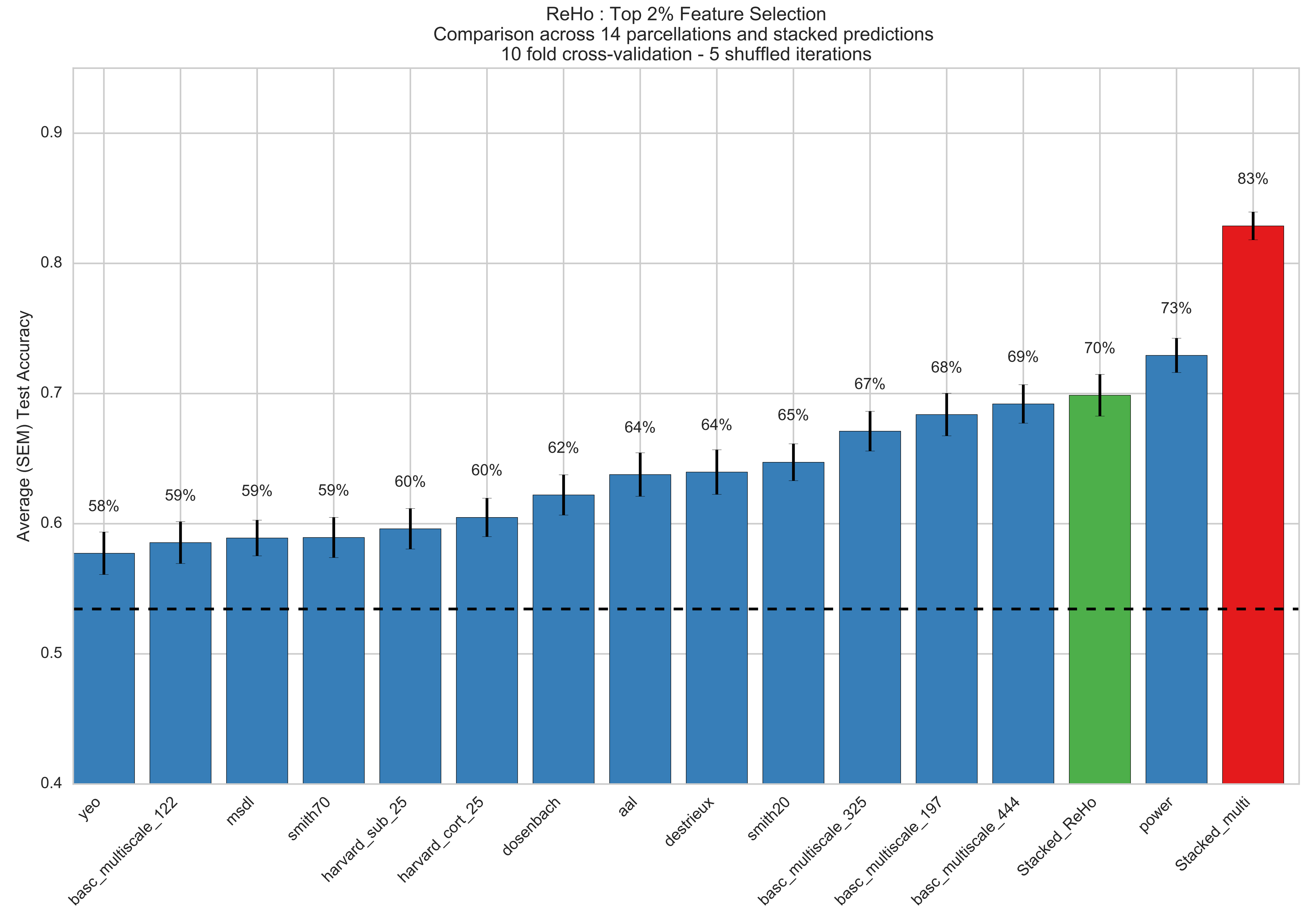
Feature selection / reduction method :Top 2% Feature Selection


fALFF : Top 2% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
55%
58%
58%
63%
63%
64%
65%
65%
66%
66%
66%
67%
68%
69%
69%
83%
harvard_sub_25
msdl
harvard_cort_25
smith20
smith70
destrieux
basc_multiscale_197
dosenbach
aal
basc_multiscale_325
basc_multiscale_122
basc_multiscale_444
yeo
power
Stacked_fALFF
Stacked_multi

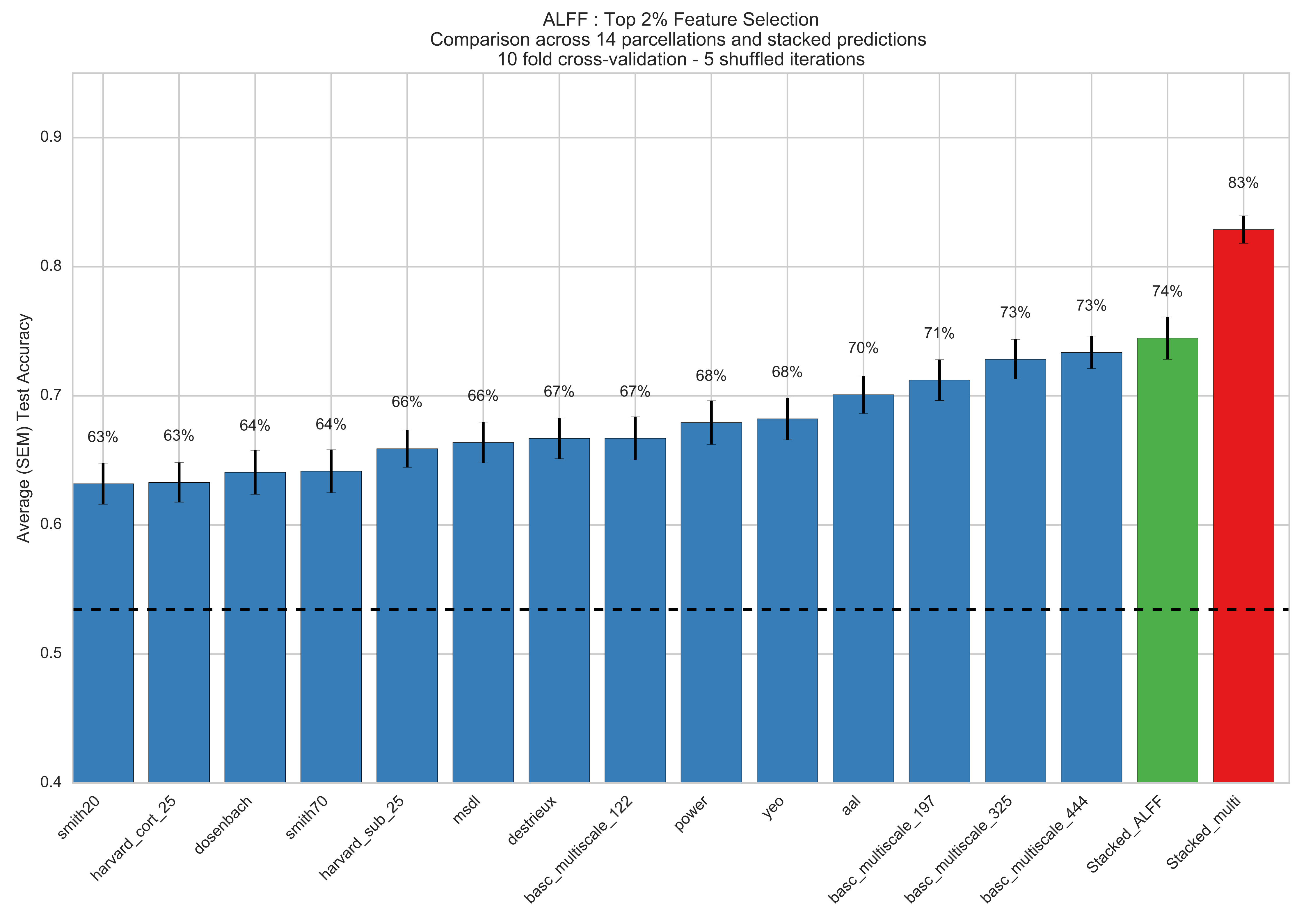

FC_corr : Top 2% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
52%
52%
57%
59%
63%
64%
66%
69%
69%
70%
71%
72%
74%
76%
77%
83%
harvard_sub_25
yeo
msdl
smith20
dosenbach
power
aal
basc_multiscale_122
destrieux
harvard_cort_25
basc_multiscale_197
smith70
Stacked_FC_corr
basc_multiscale_444
basc_multiscale_325
Stacked_multi


FC_part : Top 2% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
51%
56%
59%
62%
62%
62%
63%
66%
66%
66%
67%
67%
68%
71%
78%
83%
harvard_sub_25
yeo
msdl
smith20
dosenbach
basc_multiscale_122
destrieux
power
harvard_cort_25
basc_multiscale_197
aal
smith70
basc_multiscale_444
basc_multiscale_325
Stacked_FC_part
Stacked_multi

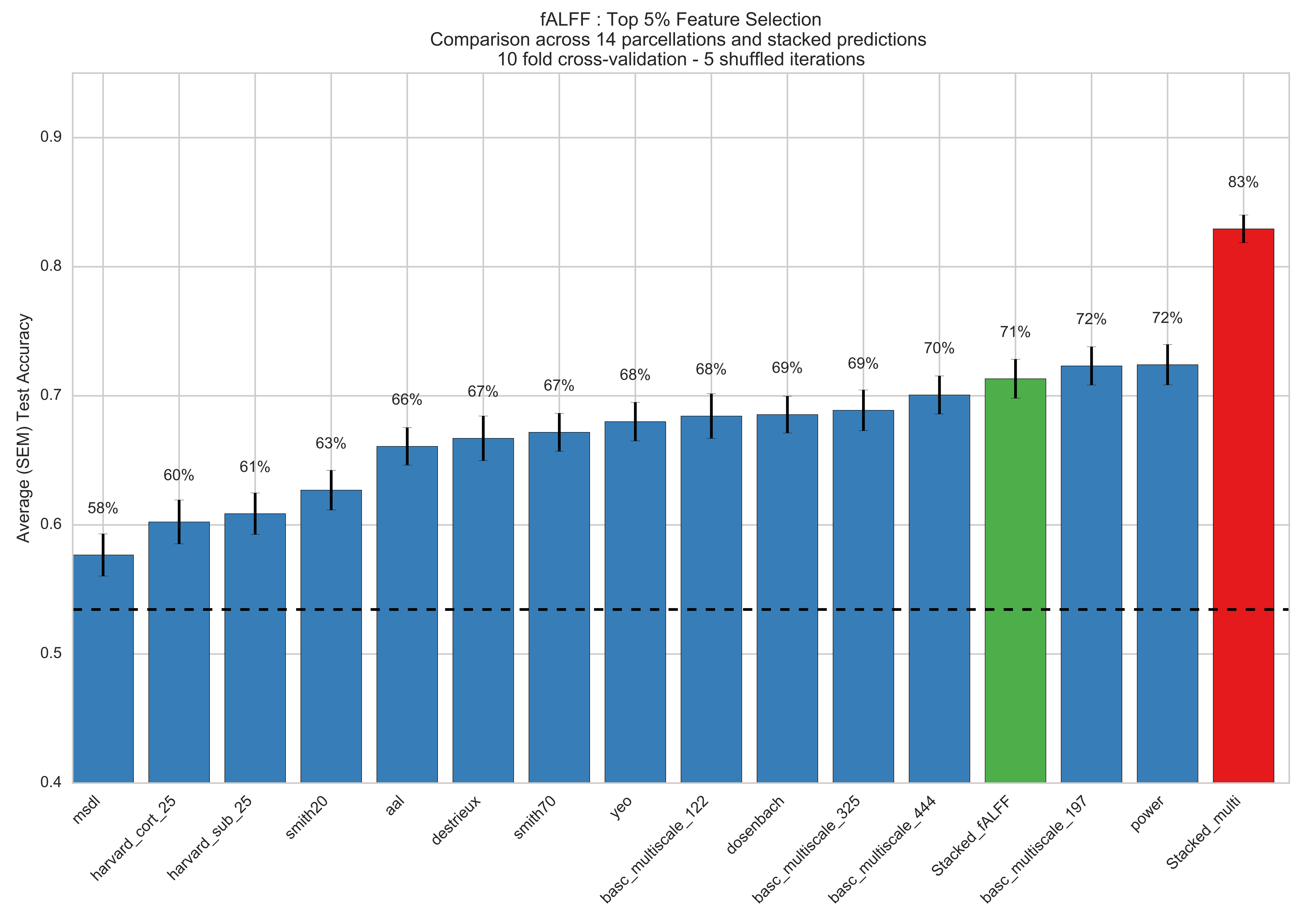

FC_prec : Top 2% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
54%
55%
56%
56%
59%
60%
62%
62%
62%
64%
67%
67%
75%
76%
78%
83%
dosenbach
harvard_sub_25
yeo
smith20
msdl
basc_multiscale_122
destrieux
harvard_cort_25
basc_multiscale_197
smith70
aal
power
Stacked_FC_prec
basc_multiscale_444
basc_multiscale_325
Stacked_multi

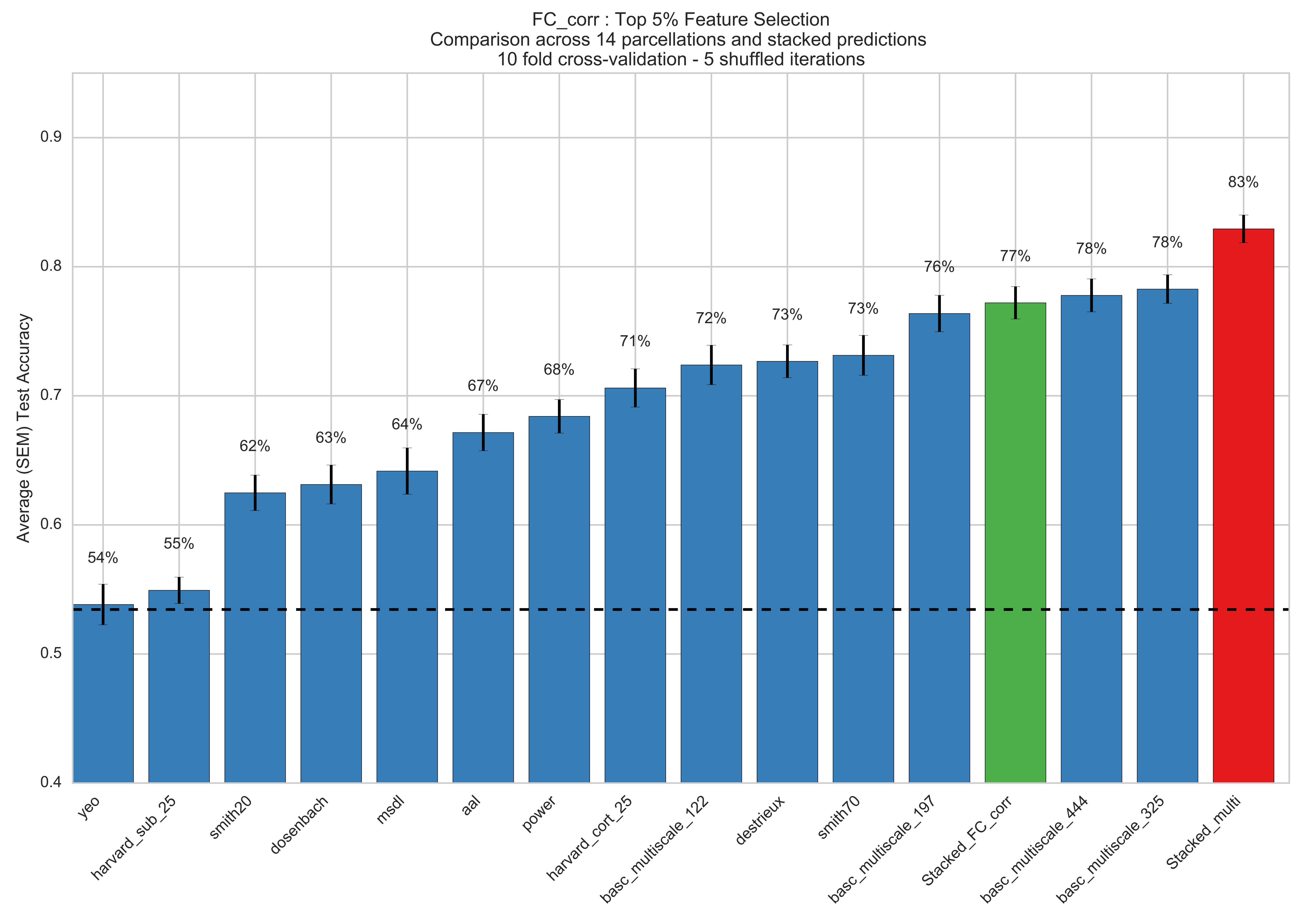


ReHo : Top 2% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
58%
59%
59%
59%
60%
60%
62%
64%
64%
65%
67%
68%
69%
70%
73%
83%
yeo
basc_multiscale_122
msdl
smith70
harvard_sub_25
harvard_cort_25
dosenbach
aal
destrieux
smith20
basc_multiscale_325
basc_multiscale_197
basc_multiscale_444
Stacked_ReHo
power
Stacked_multi

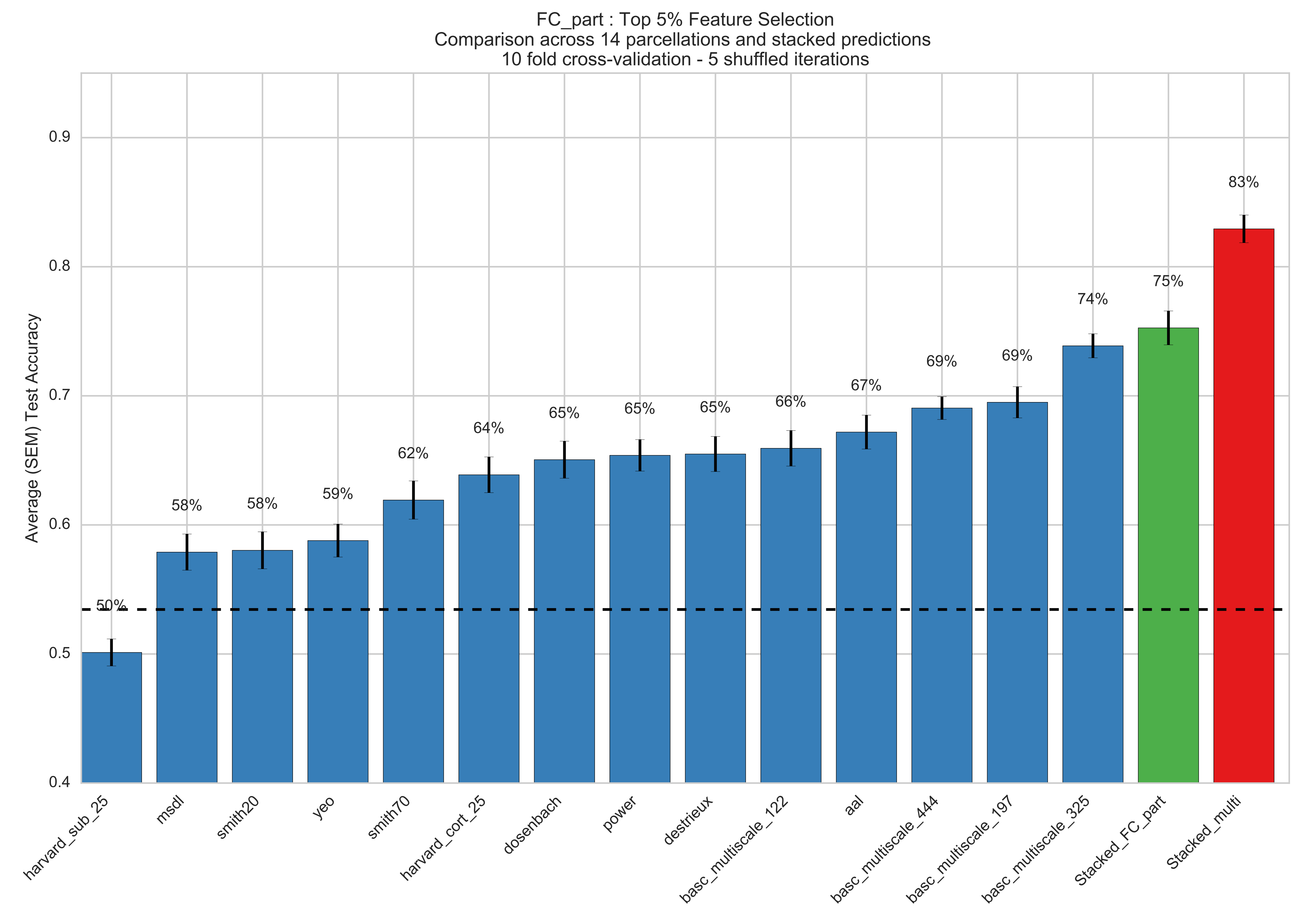

ALFF : Top 2% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
63%
63%
64%
64%
66%
66%
67%
67%
68%
68%
70%
71%
73%
73%
74%
83%
smith20
harvard_cort_25
dosenbach
smith70
harvard_sub_25
msdl
destrieux
basc_multiscale_122
power
yeo
aal
basc_multiscale_197
basc_multiscale_325
basc_multiscale_444
Stacked_ALFF
Stacked_multi

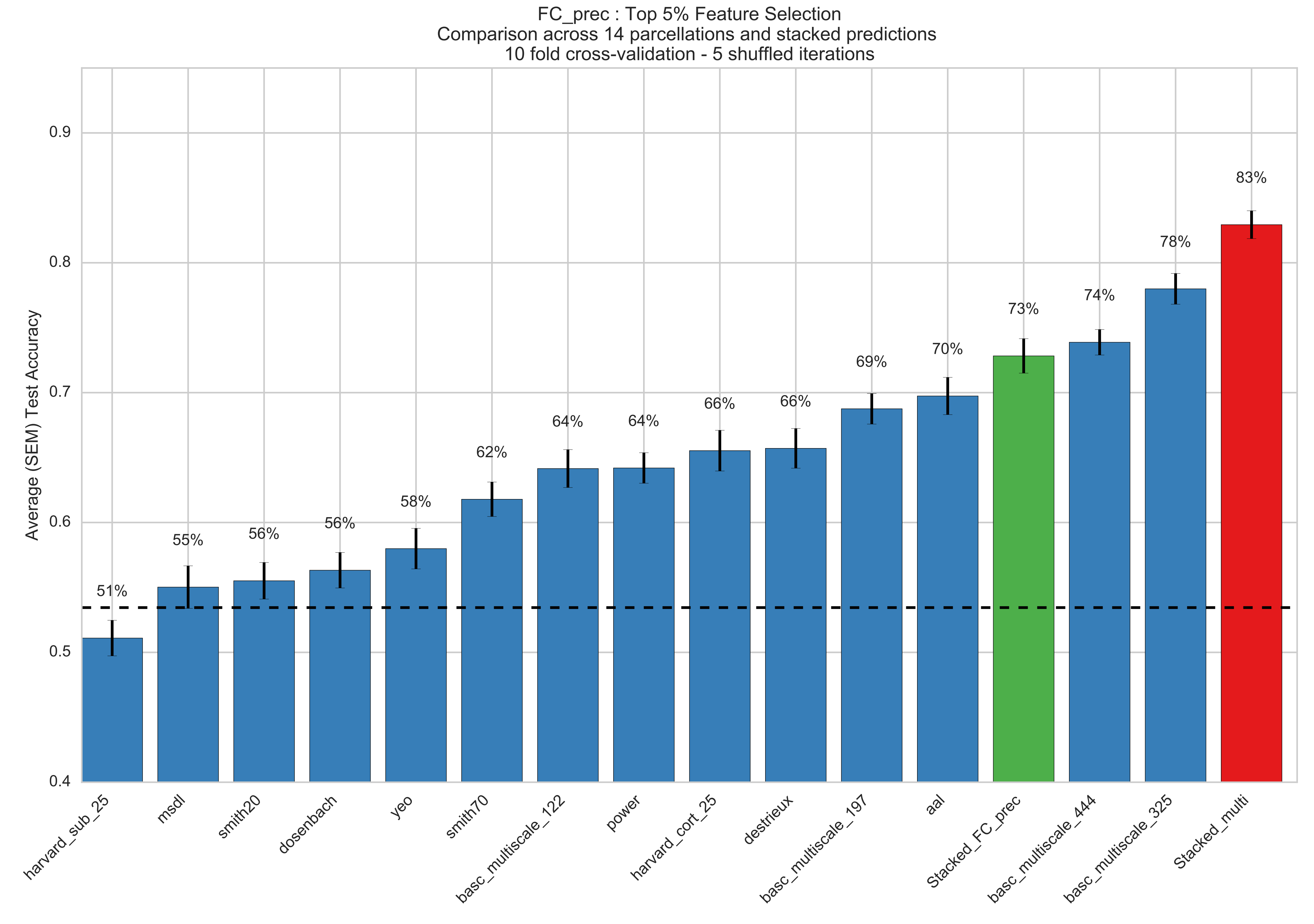
Feature selection / reduction method :Top 5% Feature Selection

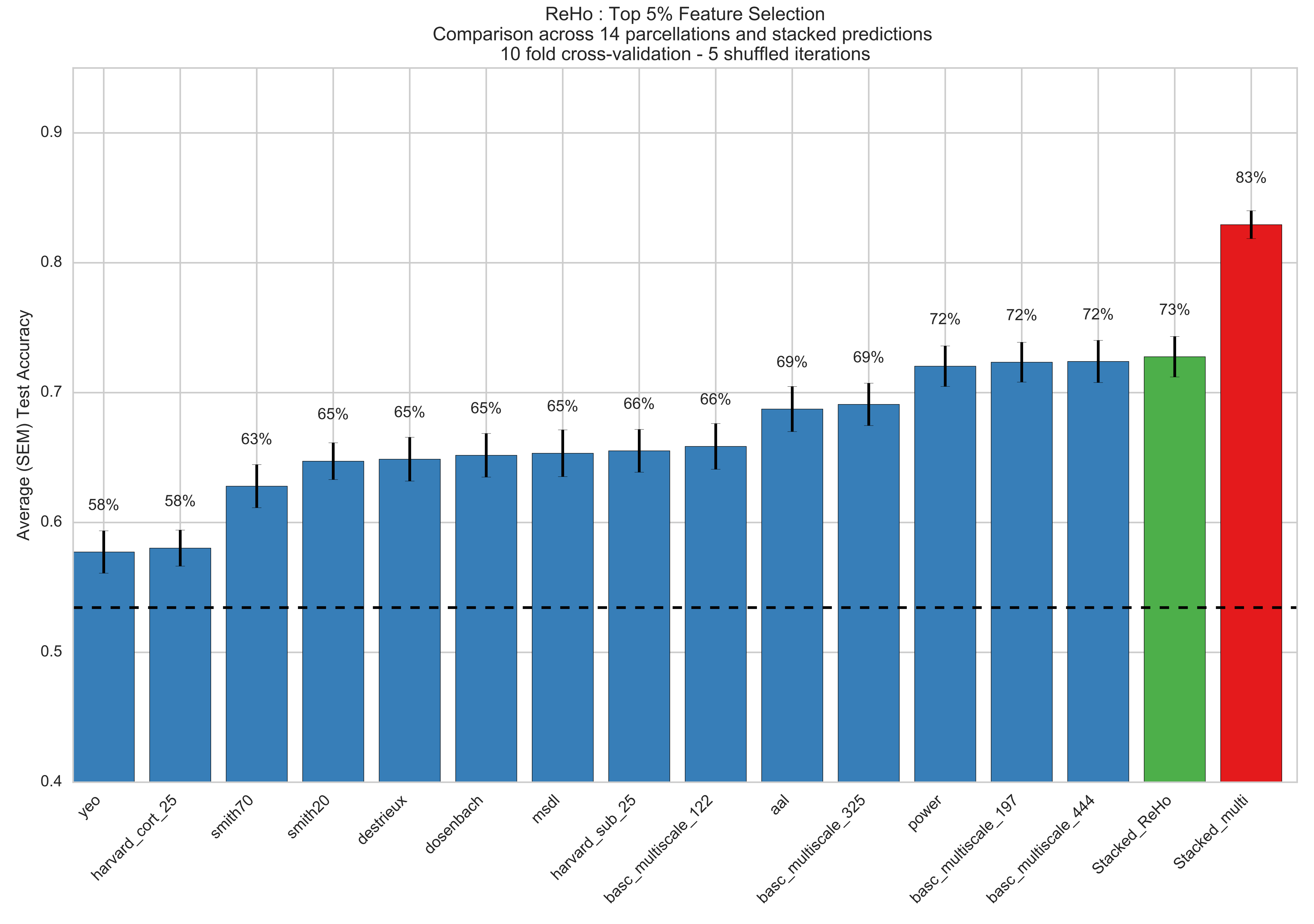

fALFF : Top 5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
58%
60%
61%
63%
66%
67%
67%
68%
68%
69%
69%
70%
71%
72%
72%
83%
msdl
harvard_cort_25
harvard_sub_25
smith20
aal
destrieux
smith70
yeo
basc_multiscale_122
dosenbach
basc_multiscale_325
basc_multiscale_444
Stacked_fALFF
basc_multiscale_197
power
Stacked_multi



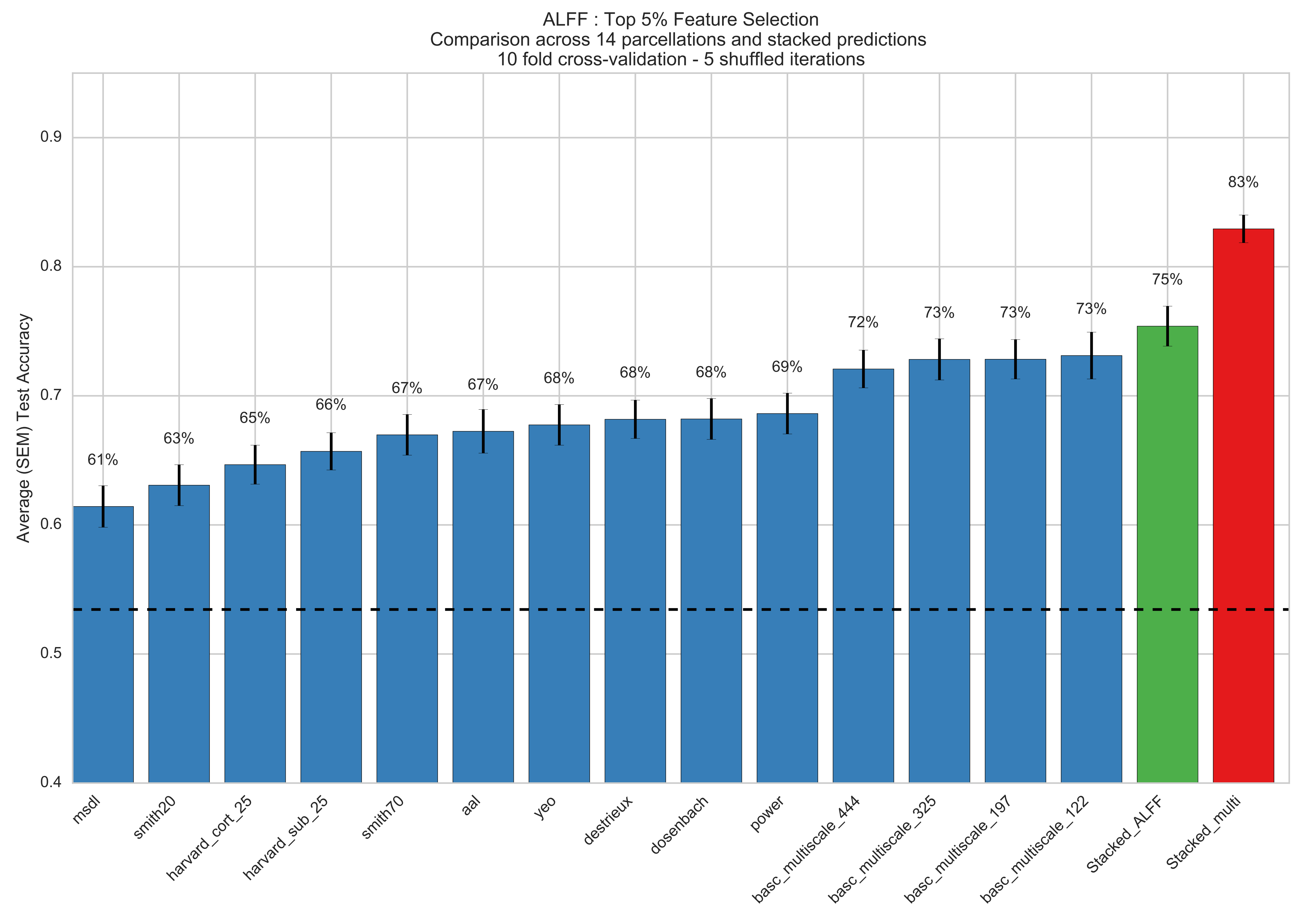
FC_corr : Top 5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
54%
55%
62%
63%
64%
67%
68%
71%
72%
73%
73%
76%
77%
78%
78%
83%
yeo
harvard_sub_25
smith20
dosenbach
msdl
aal
power
harvard_cort_25
basc_multiscale_122
destrieux
smith70
basc_multiscale_197
Stacked_FC_corr
basc_multiscale_444
basc_multiscale_325
Stacked_multi


FC_part : Top 5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
50%
58%
58%
59%
62%
64%
65%
65%
65%
66%
67%
69%
69%
74%
75%
83%
harvard_sub_25
msdl
smith20
yeo
smith70
harvard_cort_25
dosenbach
power
destrieux
basc_multiscale_122
aal
basc_multiscale_444
basc_multiscale_197
basc_multiscale_325
Stacked_FC_part
Stacked_multi

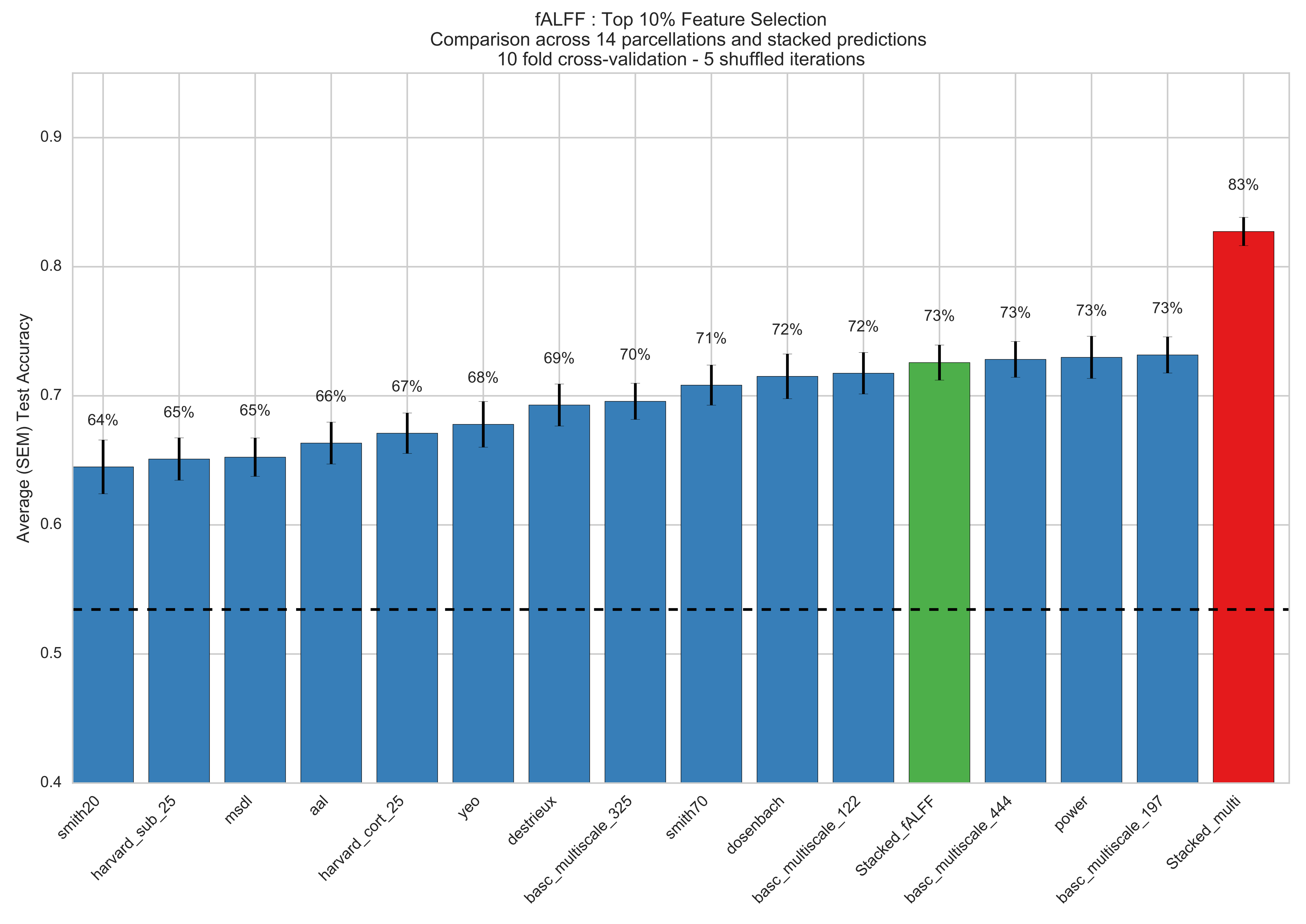

FC_prec : Top 5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
51%
55%
56%
56%
58%
62%
64%
64%
66%
66%
69%
70%
73%
74%
78%
83%
harvard_sub_25
msdl
smith20
dosenbach
yeo
smith70
basc_multiscale_122
power
harvard_cort_25
destrieux
basc_multiscale_197
aal
Stacked_FC_prec
basc_multiscale_444
basc_multiscale_325
Stacked_multi



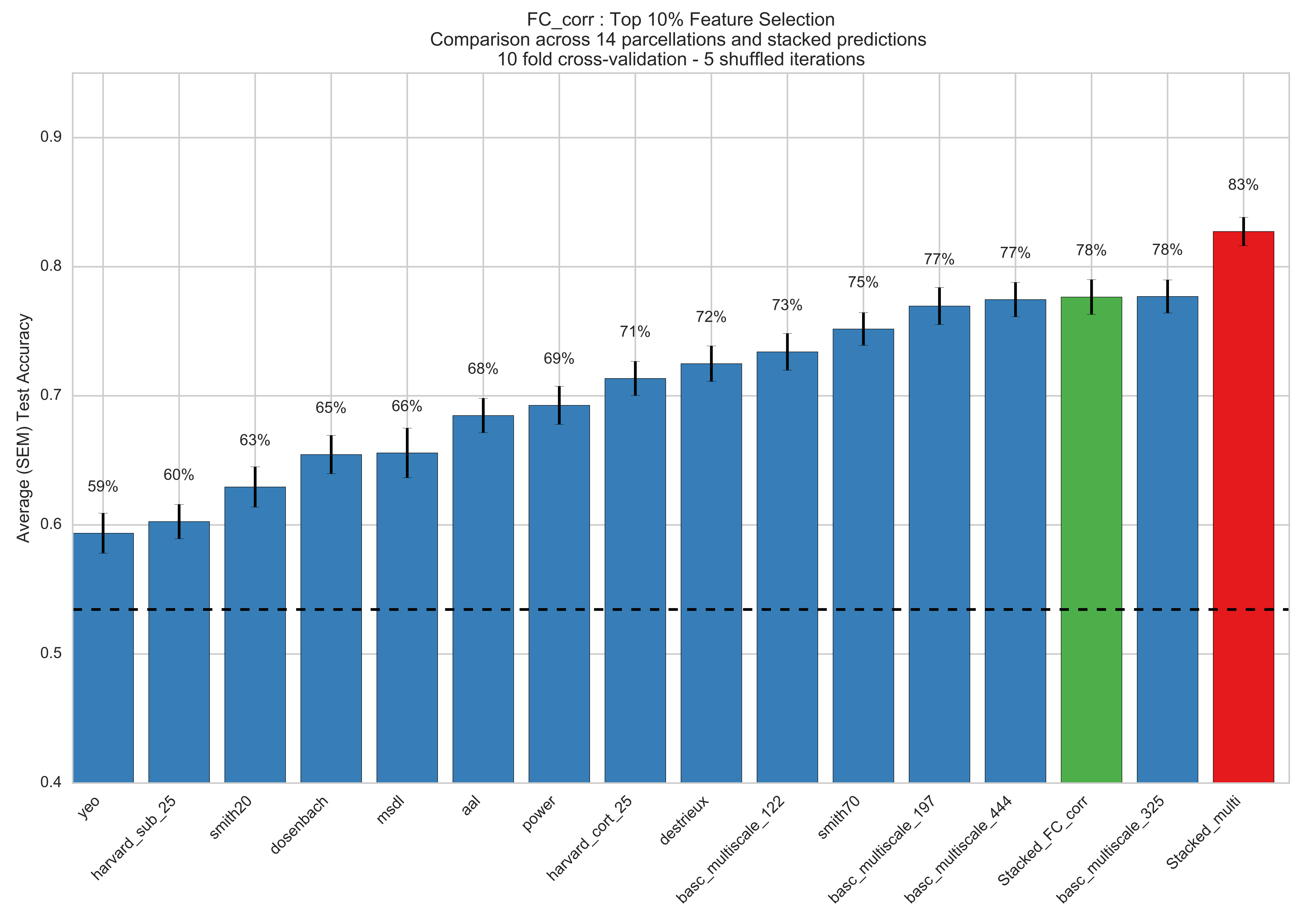
ReHo : Top 5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
58%
58%
63%
65%
65%
65%
65%
66%
66%
69%
69%
72%
72%
72%
73%
83%
yeo
harvard_cort_25
smith70
smith20
destrieux
dosenbach
msdl
harvard_sub_25
basc_multiscale_122
aal
basc_multiscale_325
power
basc_multiscale_197
basc_multiscale_444
Stacked_ReHo
Stacked_multi


ALFF : Top 5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
61%
63%
65%
66%
67%
67%
68%
68%
68%
69%
72%
73%
73%
73%
75%
83%
msdl
smith20
harvard_cort_25
harvard_sub_25
smith70
aal
yeo
destrieux
dosenbach
power
basc_multiscale_444
basc_multiscale_325
basc_multiscale_197
basc_multiscale_122
Stacked_ALFF
Stacked_multi

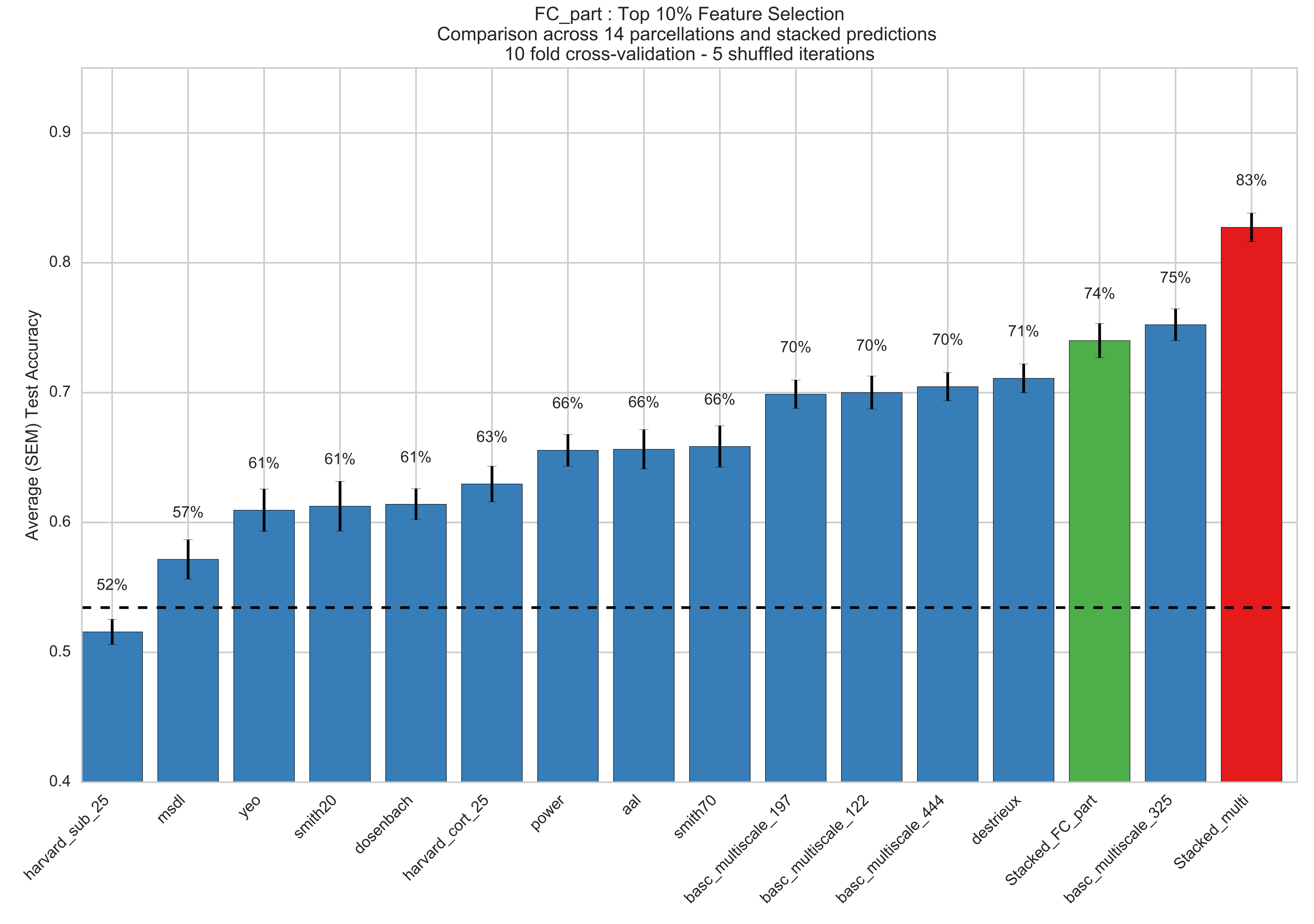
Feature selection / reduction method :Top 10% Feature Selection

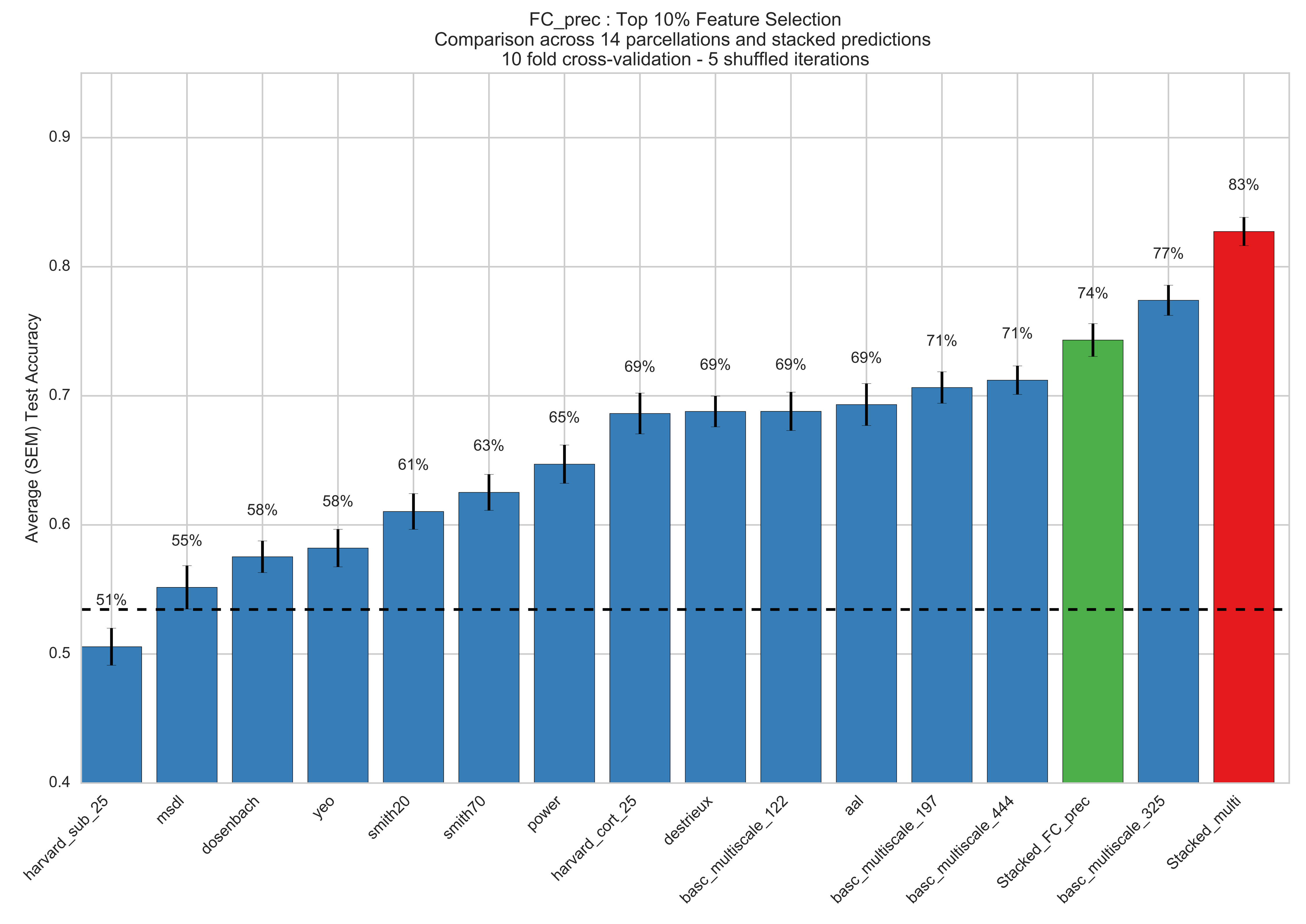


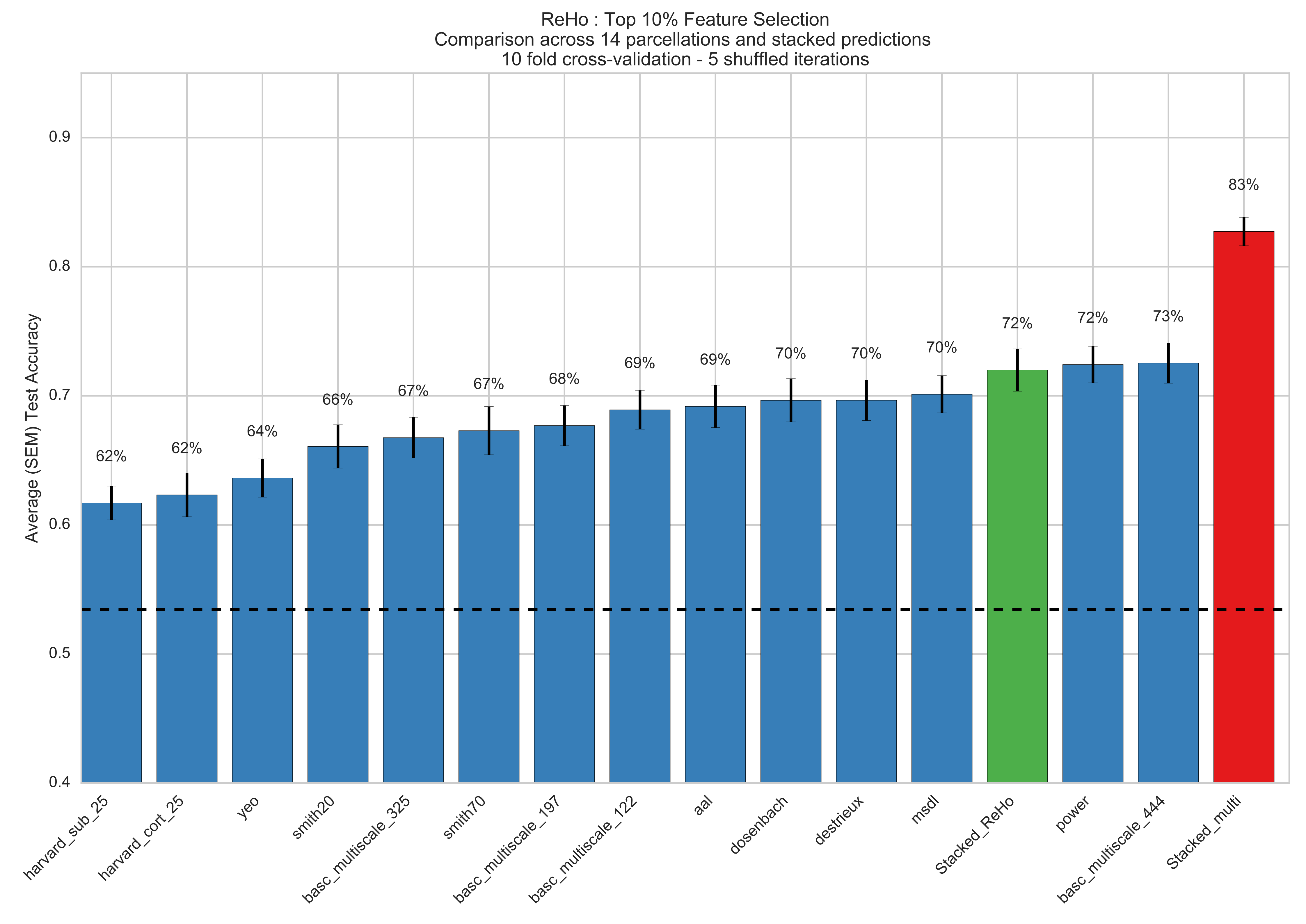
fAALFF : Top 10% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
64%
65%
65%
66%
67%
68%
69%
70%
71%
72%
72%
73%
73%
73%
73%
83%
smith20
harvard_sub_25
msdl
aal
harvard_cort_25
yeo
destrieux
basc_multiscale_325
smith70
dosenbach
basc_multiscale_122
Stacked_fALFF
basc_multiscale_444
power
basc_multiscale_197
Stacked_multi

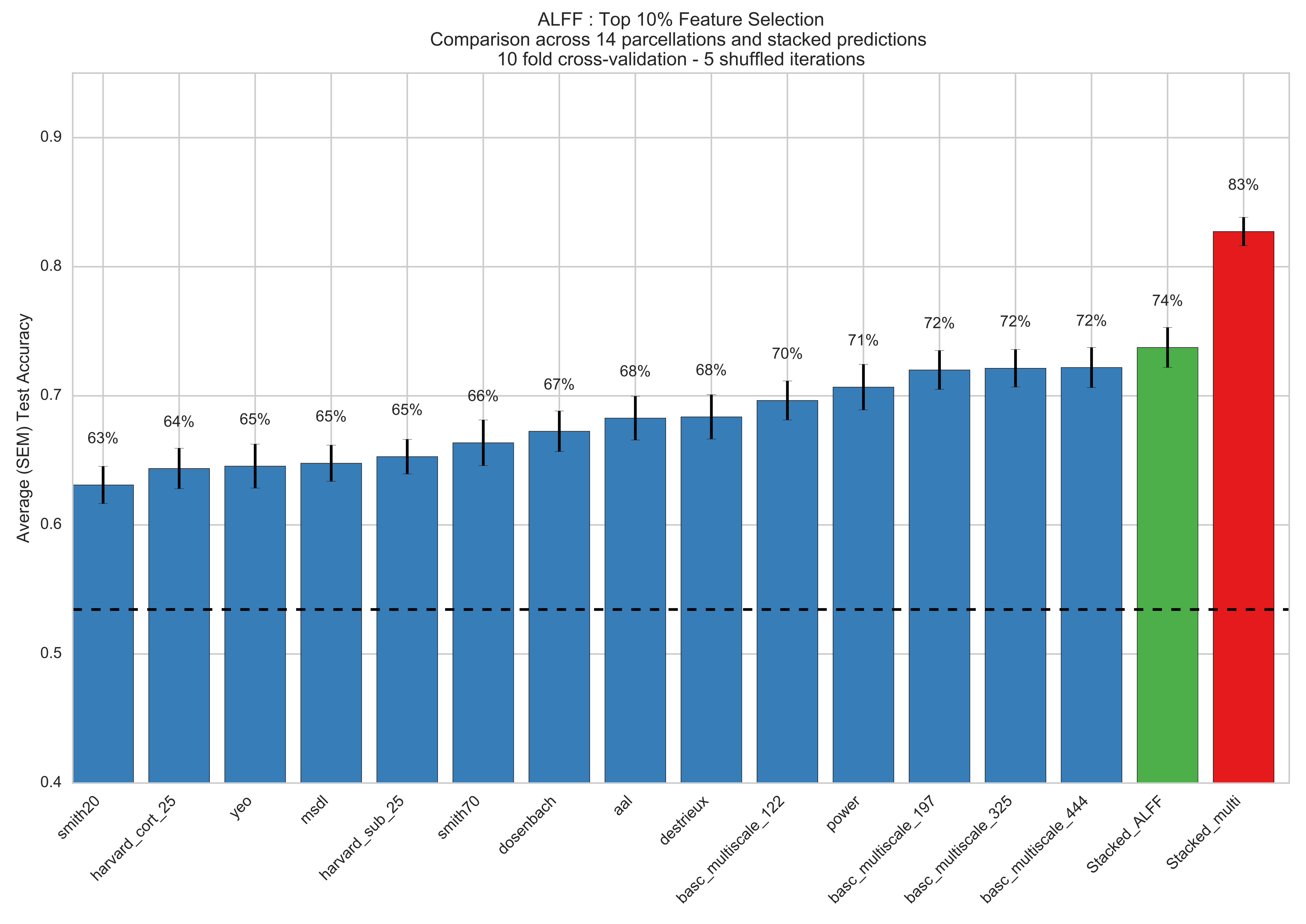


FC_corr : Top 10% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
59%
60%
63%
65%
66%
68%
69%
71%
72%
73%
75%
77%
77%
78%
78%
83%
yeo
harvard_sub_25
smith20
dosenbach
msdl
aal
power
harvard_cort_25
destrieux
basc_multiscale_122
smith70
basc_multiscale_197
basc_multiscale_444
Stacked_FC_corr
basc_multiscale_325
Stacked_multi

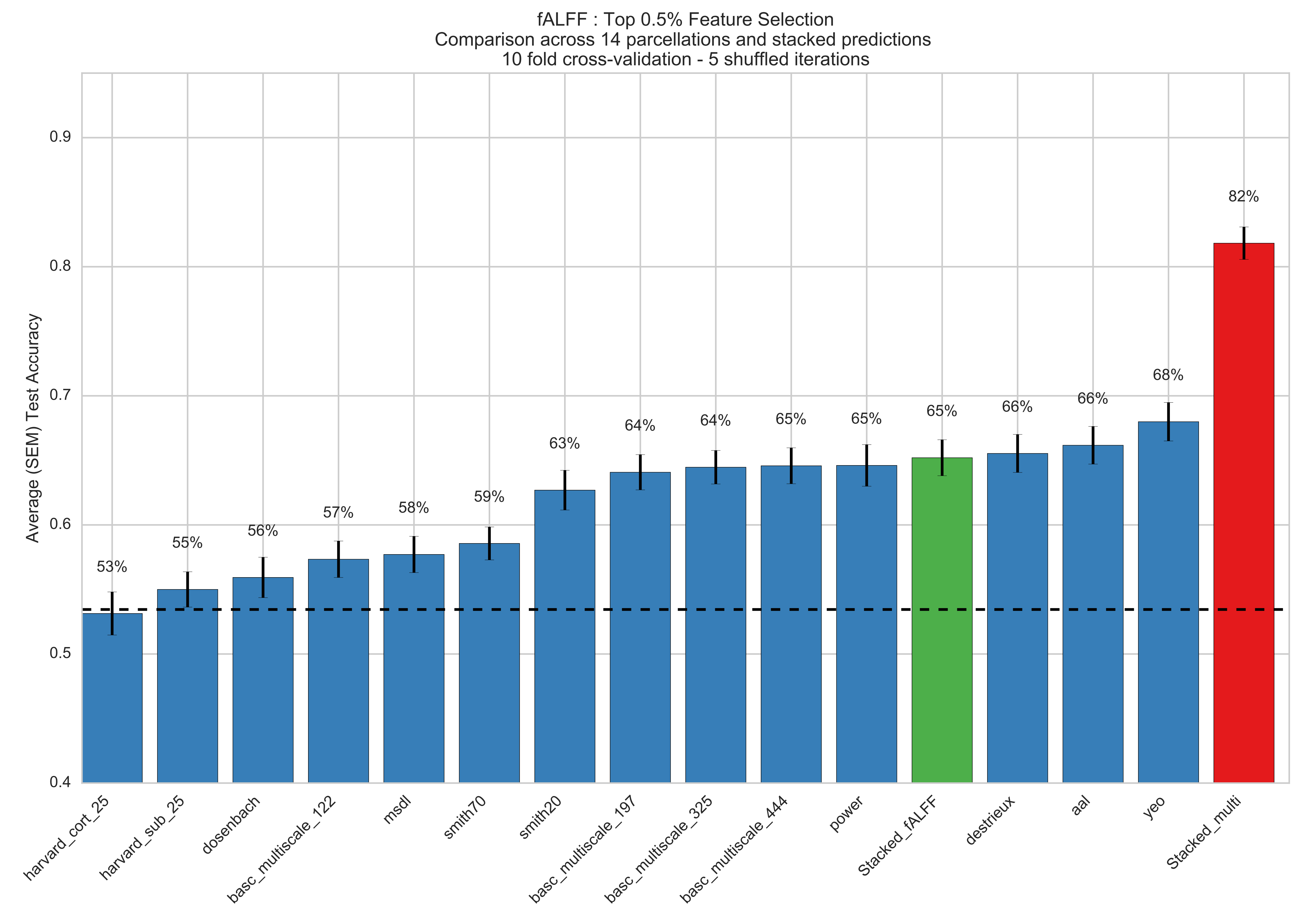

FC_part : Top 10% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
52%
57%
61%
61%
61%
63%
66%
66%
66%
70%
70%
70%
71%
74%
75%
83%
harvard_sub_25
msdl
yeo
smith20
dosenbach
harvard_cort_25
power
aal
smith70
basc_multiscale_197
basc_multiscale_122
basc_multiscale_444
destrieux
Stacked_FC_part
basc_multiscale_325
Stacked_multi

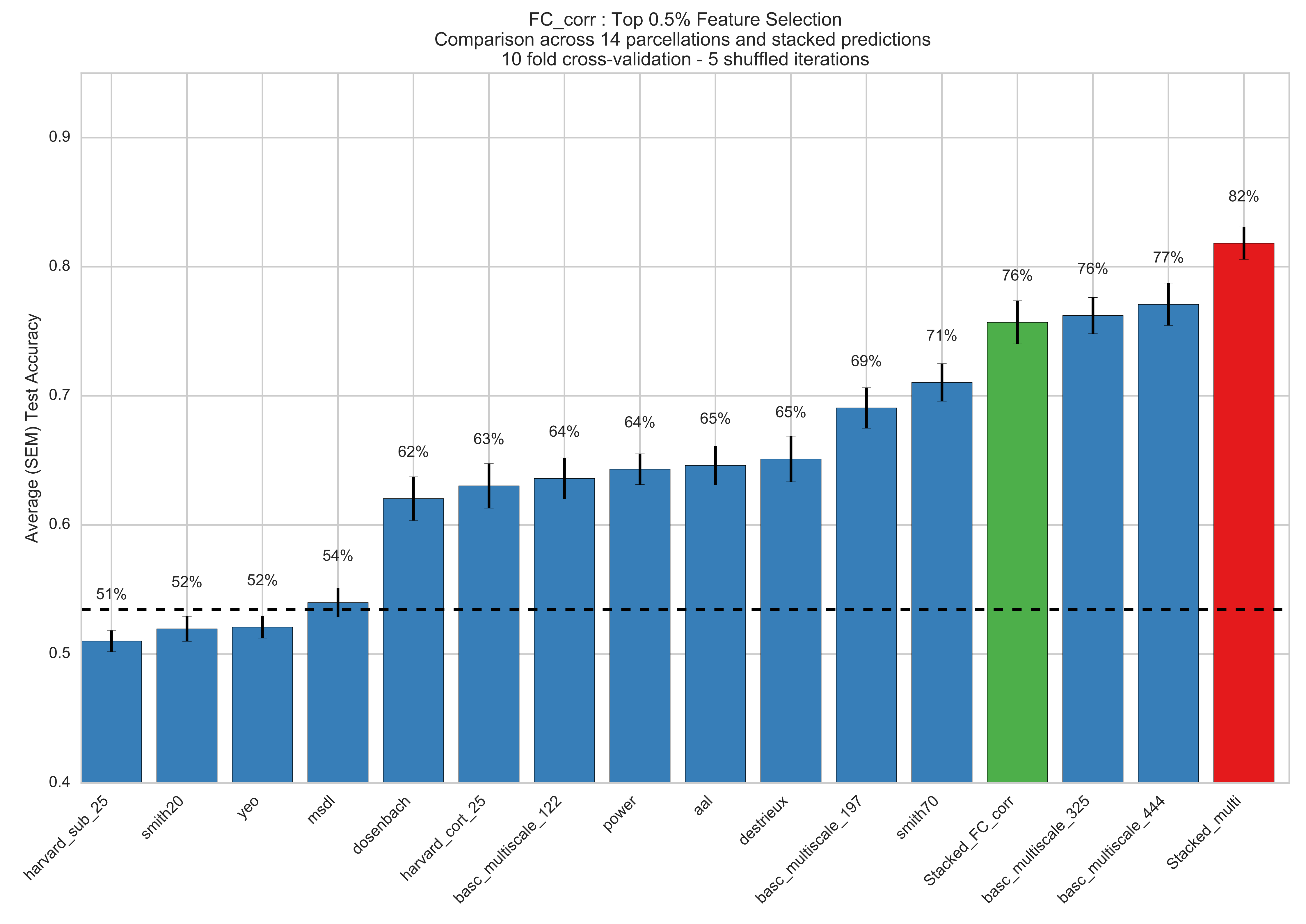

FC_prec : Top 10% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
51%
55%
58%
58%
61%
63%
65%
69%
69%
69%
69%
71%
71%
74%
77%
83%
harvard_sub_25
msdl
dosenbach
yeo
smith20
smith70
power
harvard_cort_25
destrieux
basc_multiscale_122
aal
basc_multiscale_197
basc_multiscale_444
Stacked_FC_prec
basc_multiscale_325
Stacked_multi

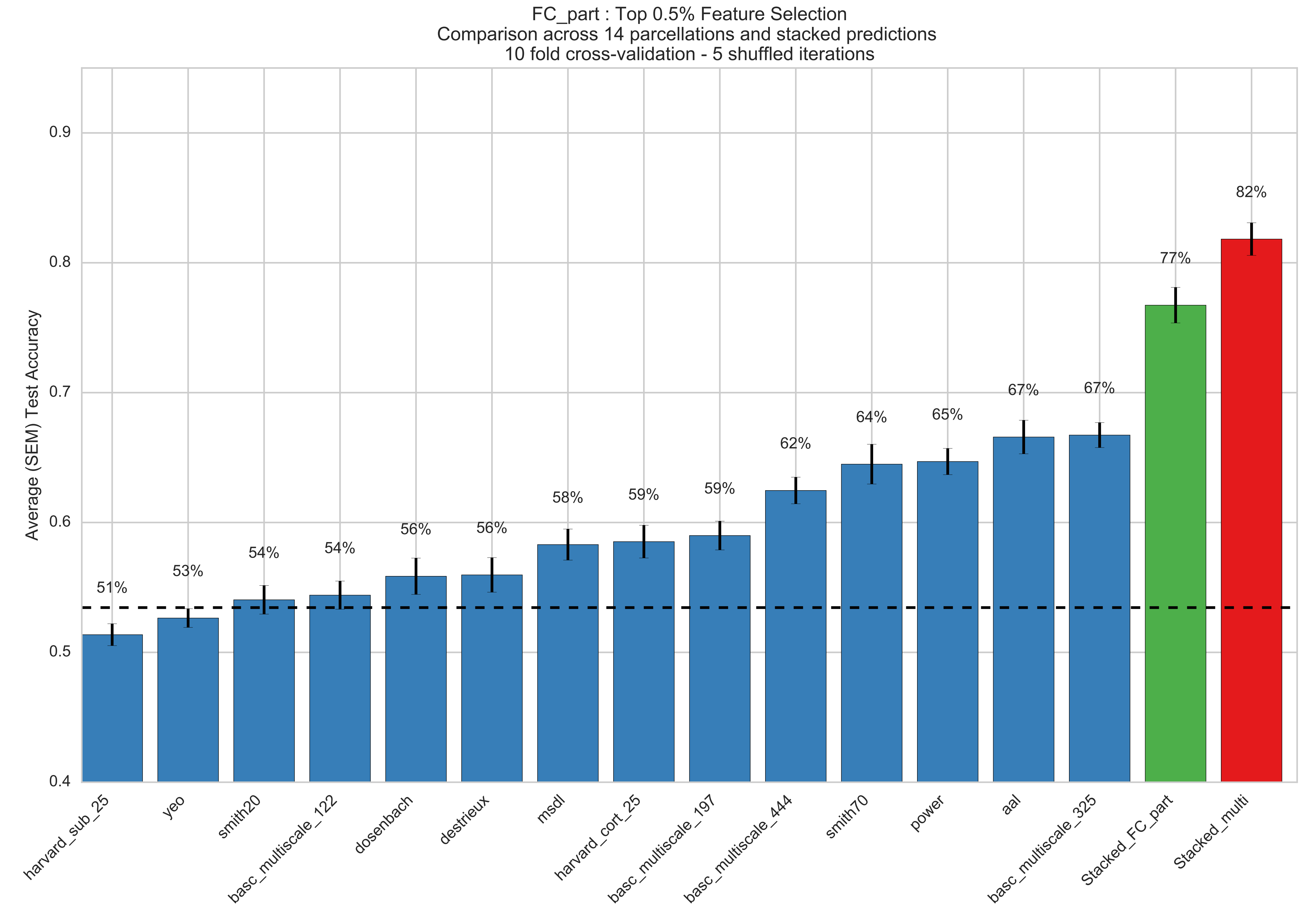

ReHo : Top 10% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
62%
62%
64%
66%
67%
67%
68%
69%
69%
70%
70%
70%
72%
72%
73%
83%
harvard_sub_25
harvard_cort_25
yeo
smith20
basc_multiscale_325
smith70
basc_multiscale_197
basc_multiscale_122
aal
dosenbach
destrieux
msdl
Stacked_ReHo
power
basc_multiscale_444
Stacked_multi

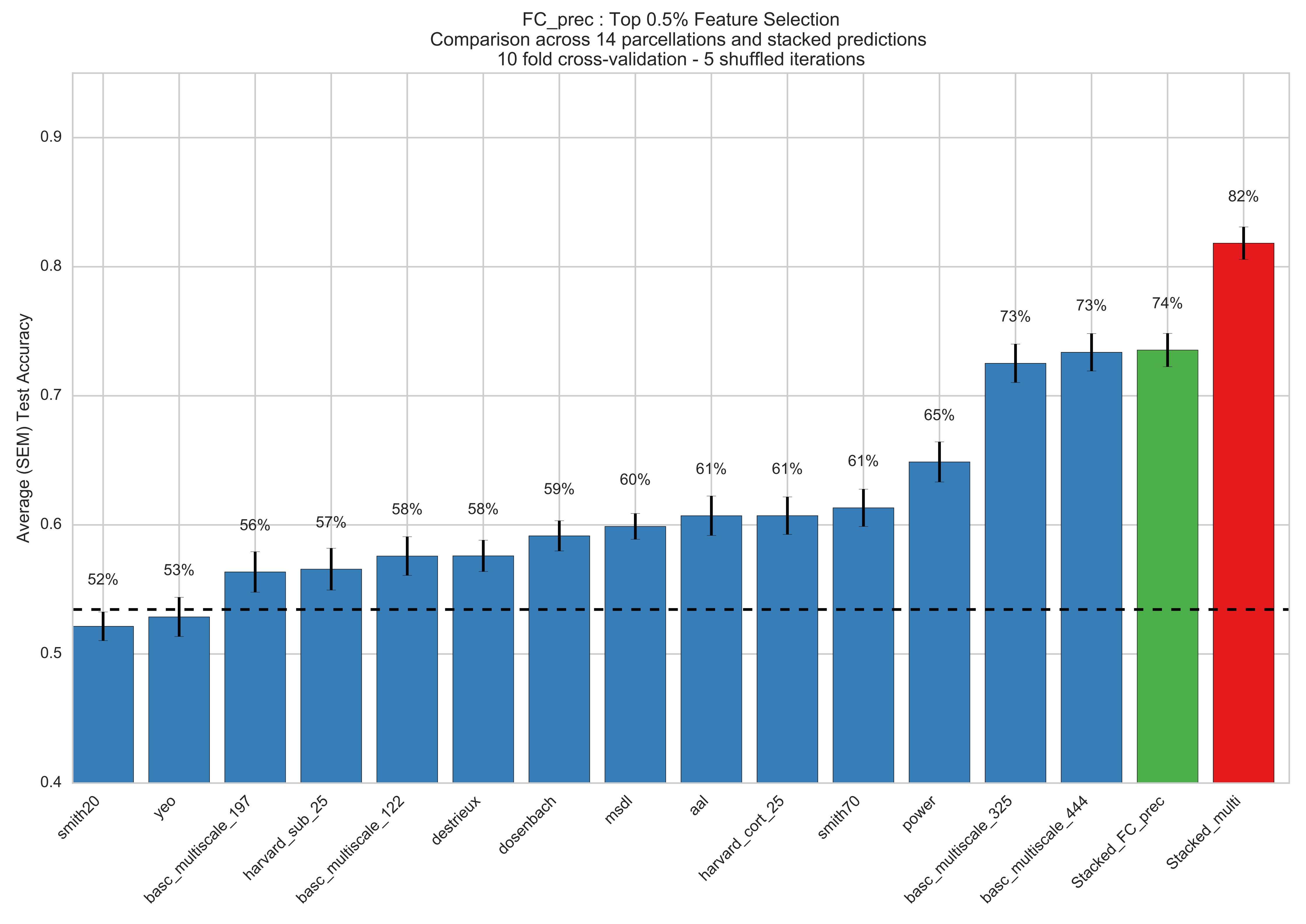

ALFF : Top 10% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
63%
64%
65%
65%
65%
66%
67%
68%
68%
70%
71%
72%
72%
72%
74%
83%
smith20
harvard_cort_25
yeo
msdl
harvard_sub_25
smith70
dosenbach
aal
destrieux
basc_multiscale_122
power
basc_multiscale_197
basc_multiscale_325
basc_multiscale_444
Stacked_ALFF
Stacked_multi

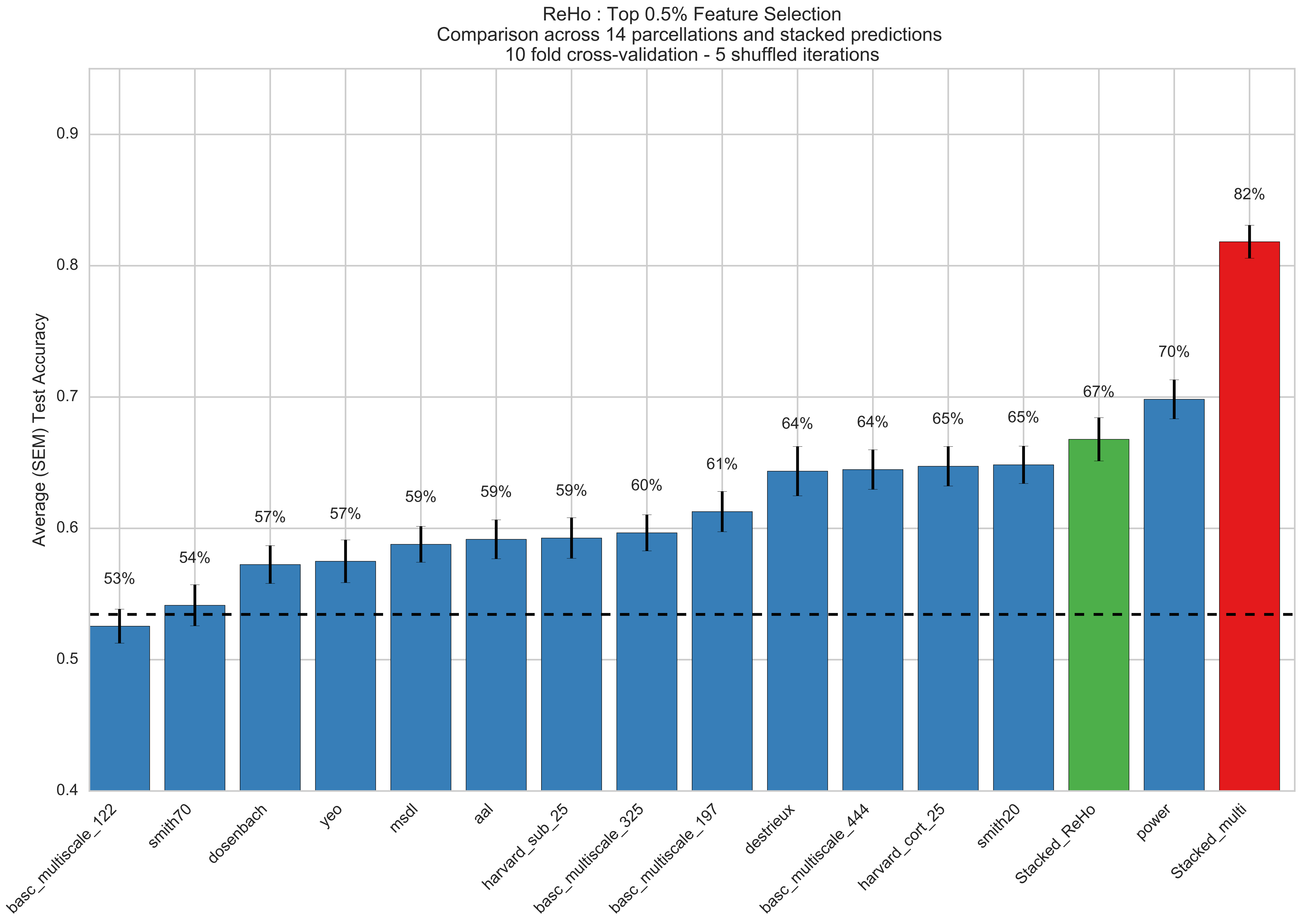
Feature selection / reduction method :Top 0.5% Feature Selection


fALFF : Top 0.5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
53%
55%
56%
57%
58%
59%
63%
64%
64%
65%
65%
65%
66%
66%
68%
82%
harvard_cort_25
harvard_sub_25
dosenbach
basc_multiscale_122
msdl
smith70
smith20
basc_multiscale_197
basc_multiscale_325
basc_multiscale_444
power
Stacked_fALFF
destrieux
aal
yeo
Stacked_multi

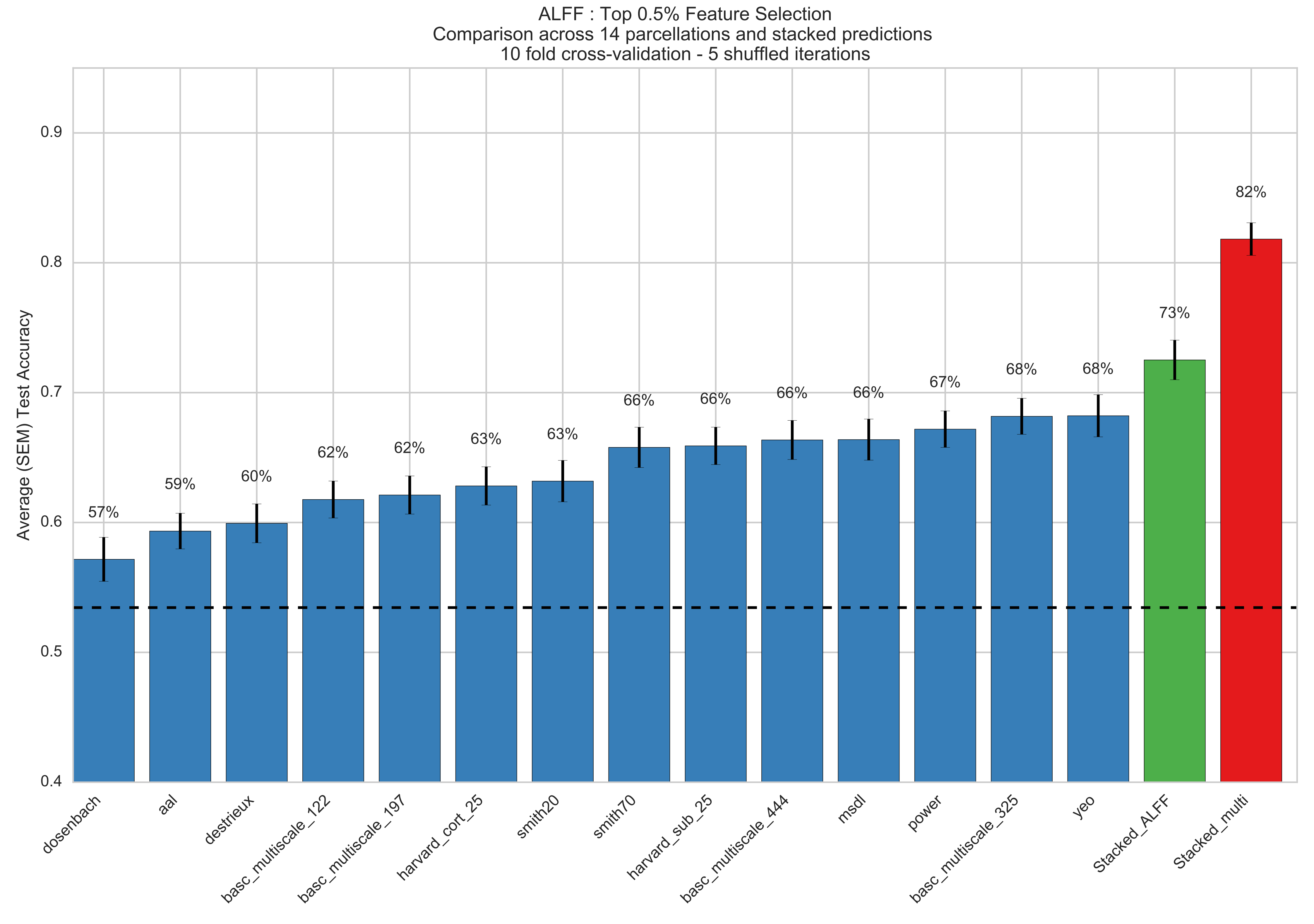

FC_corr : Top 0.5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
51%
52%
52%
54%
62%
63%
64%
64%
65%
65%
69%
71%
76%
76%
77%
82%
harvard_sub_25
smith20
yeo
msdl
dosenbach
harvard_cort_25
basc_multiscale_122
power
aal
destrieux
basc_multiscale_197
smith70
Stacked_FC_corr
basc_multiscale_325
basc_multiscale_444
Stacked_multi


FC_part : Top 0.5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
51%
53%
54%
54%
56%
56%
58%
59%
59%
62%
64%
65%
67%
67%
77%
82%
harvard_sub_25
yeo
smith20
basc_multiscale_122
dosenbach
destrieux
msdl
harvard_cort_25
basc_multiscale_197
basc_multiscale_444
smith70
power
aal
basc_multiscale_325
Stacked_FC_part
Stacked_multi

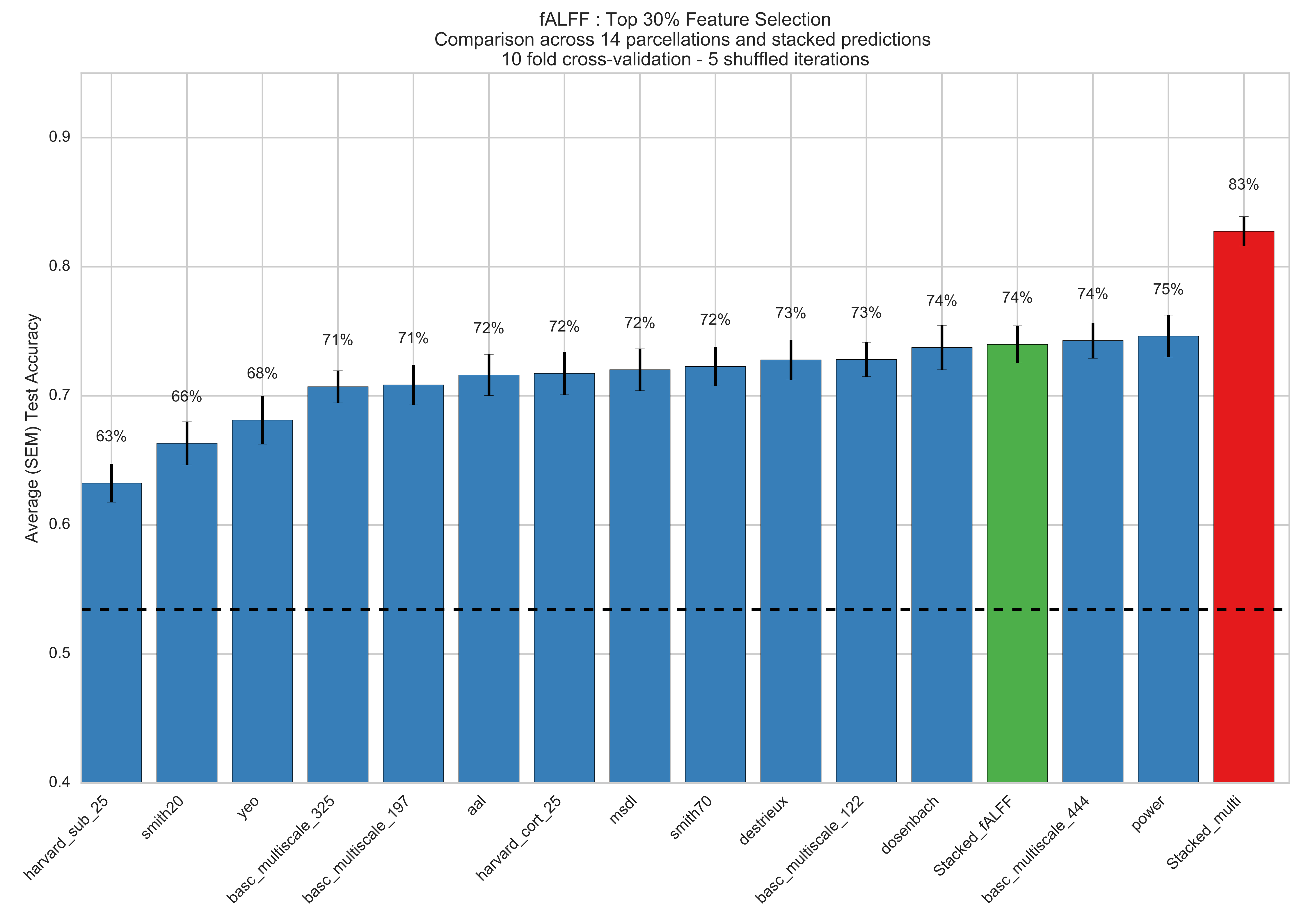

FC_prec : Top 0.5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
52%
53%
56%
57%
58%
58%
59%
60%
61%
61%
61%
65%
73%
73%
74%
82%
smith20
yeo
basc_multiscale_197
harvard_sub_25
basc_multiscale_122
destrieux
dosenbach
msdl
aal
harvard_cort_25
smith70
power
basc_multiscale_325
basc_multiscale_444
Stacked_FC_prec
Stacked_multi

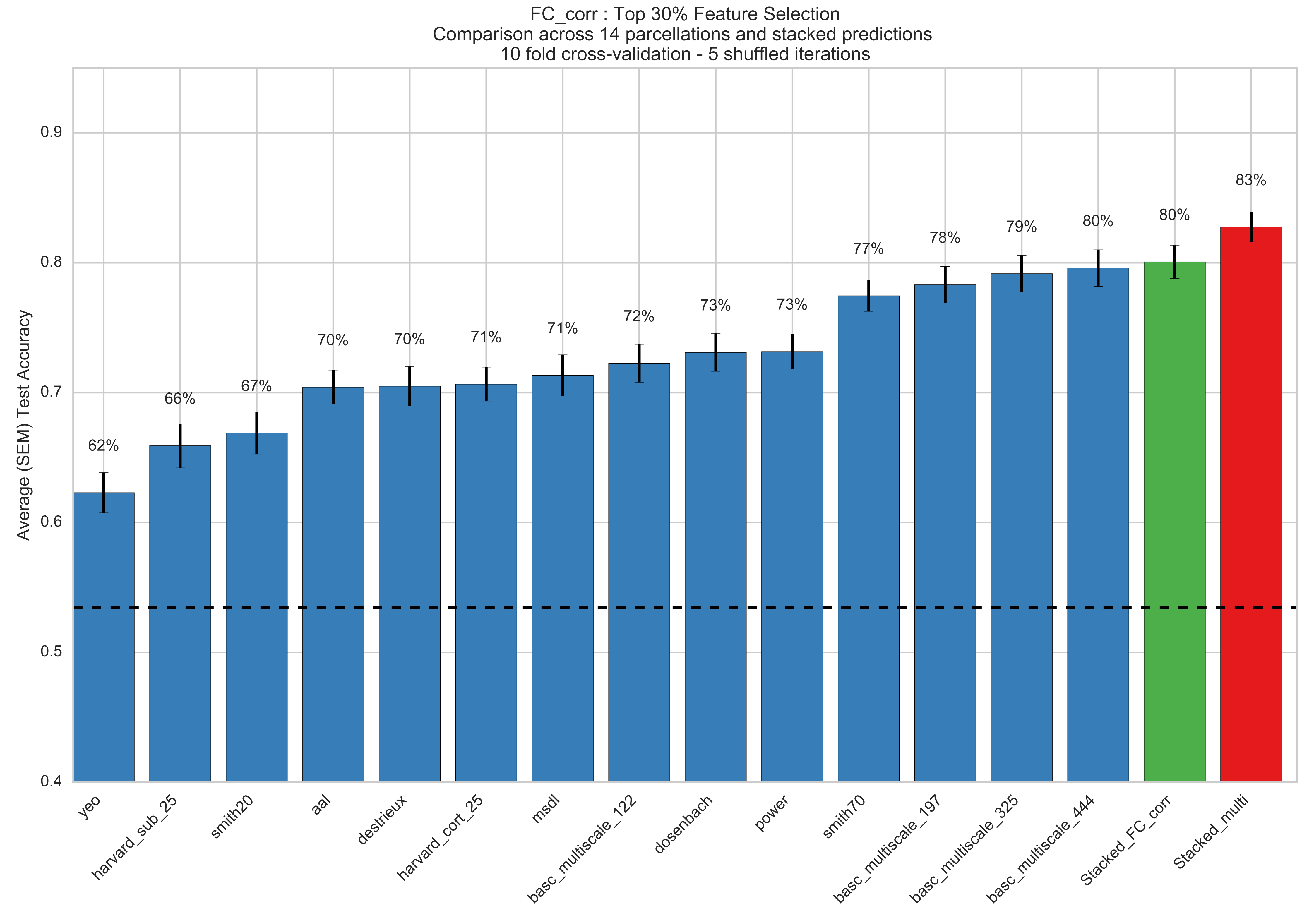


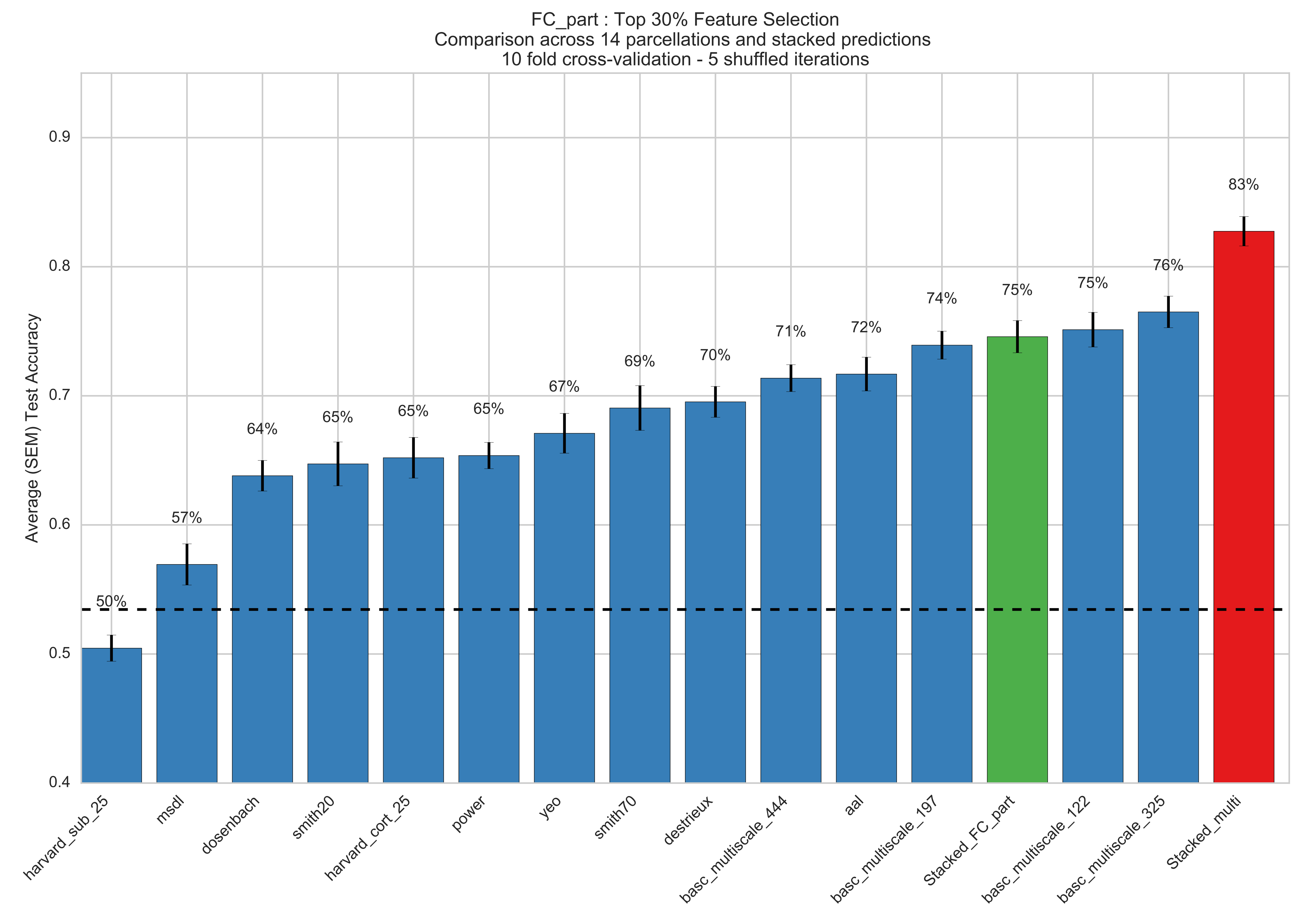
ReHo : Top 0.5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
53%
54%
57%
57%
59%
59%
59%
60%
61%
64%
64%
65%
65%
67%
70%
82%
basc_multiscale_122
smith70
dosenbach
yeo
msdl
aal
harvard_sub_25
basc_multiscale_325
basc_multiscale_197
destrieux
basc_multiscale_444
harvard_cort_25
smith20
Stacked_ReHo
power
Stacked_multi

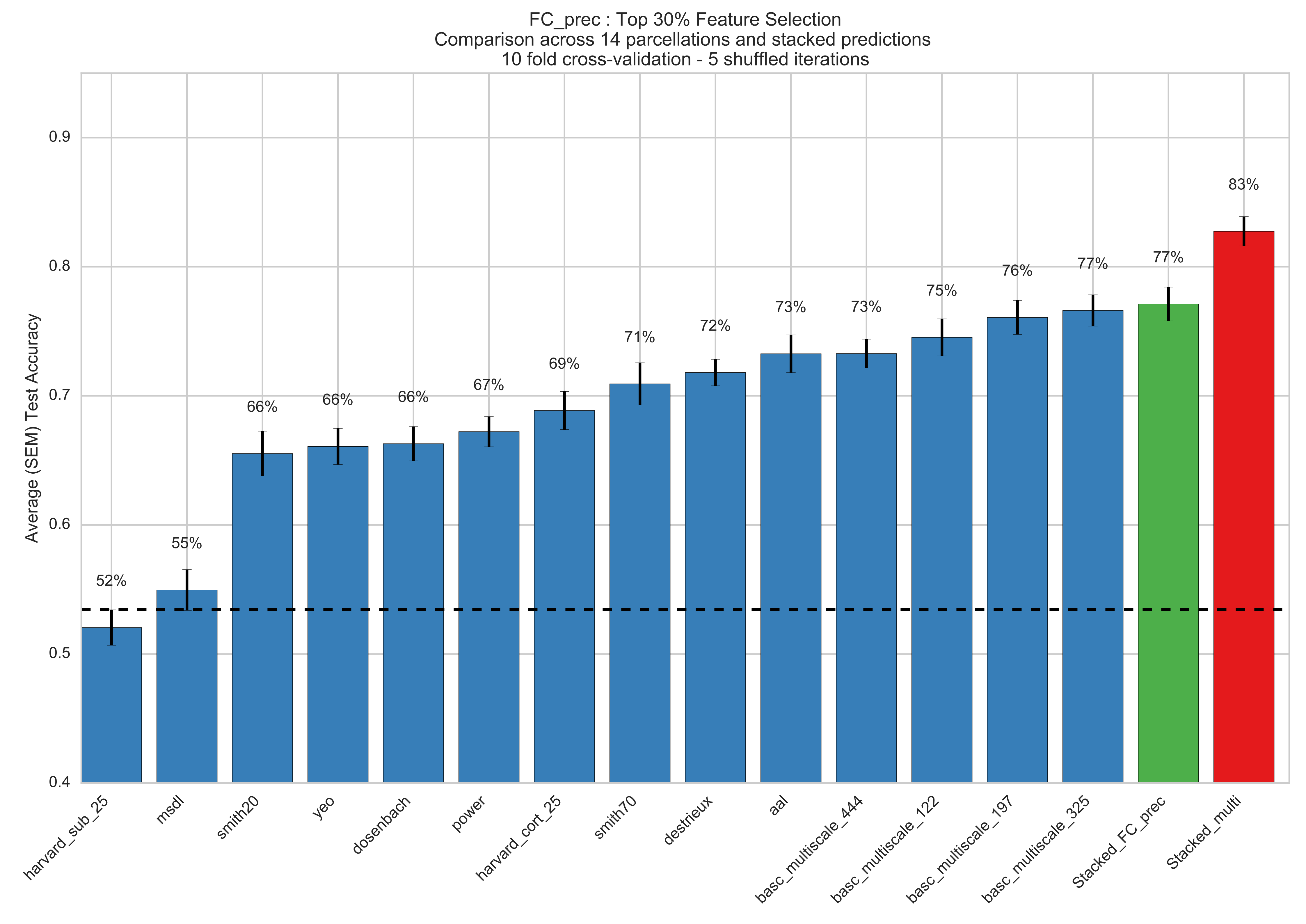

ALFF : Top 0.5% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
57%
59%
60%
62%
62%
63%
63%
66%
66%
66%
66%
67%
68%
68%
73%
82%
dosenbach
aal
destrieux
basc_multiscale_122
basc_multiscale_197
harvard_cort_25
smith20
smith70
harvard_sub_25
basc_multiscale_444
msdl
power
basc_multiscale_325
yeo
Stacked_ALFF
Stacked_multi

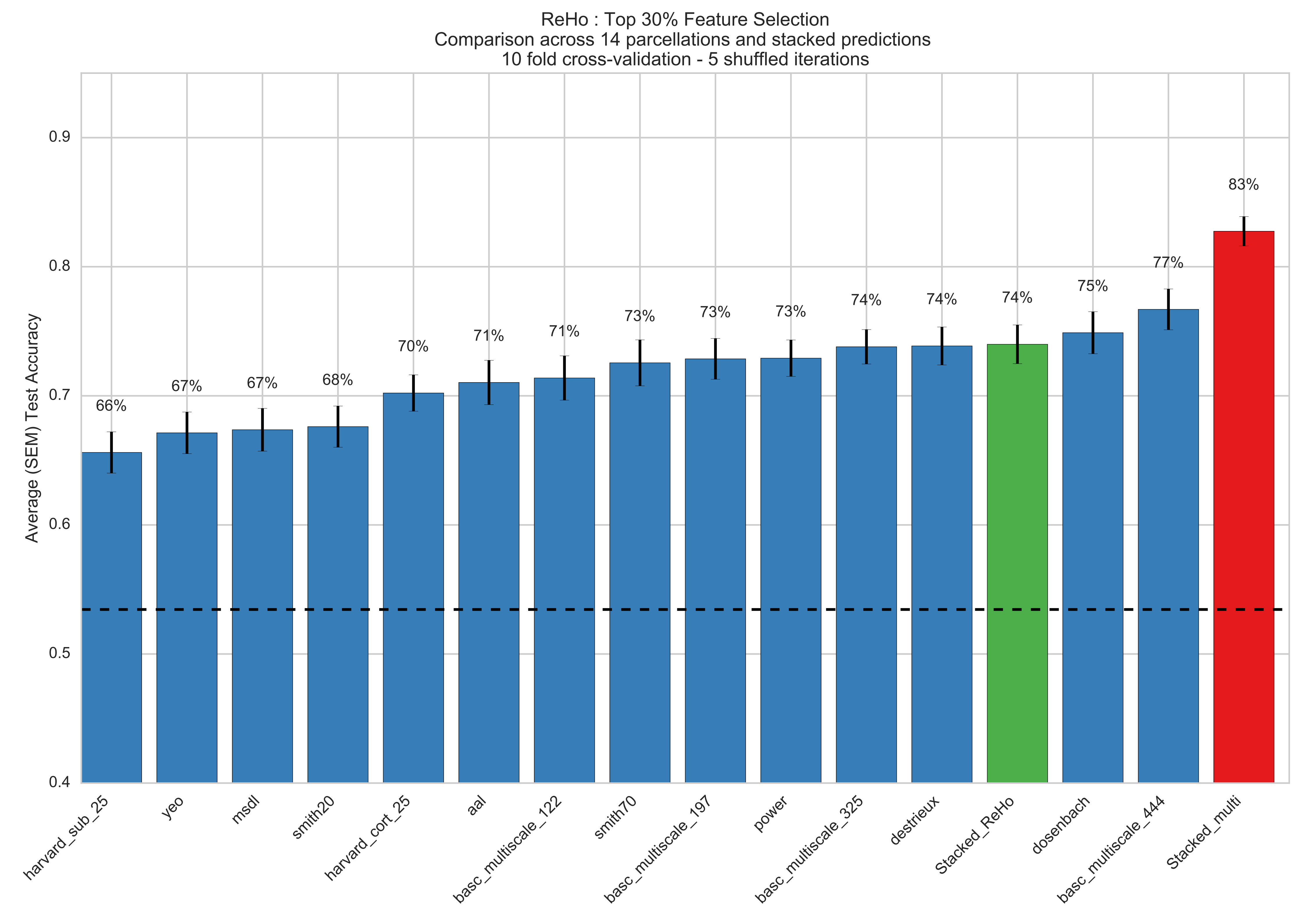
Feature selection / reduction method :Top 30% Feature Selection

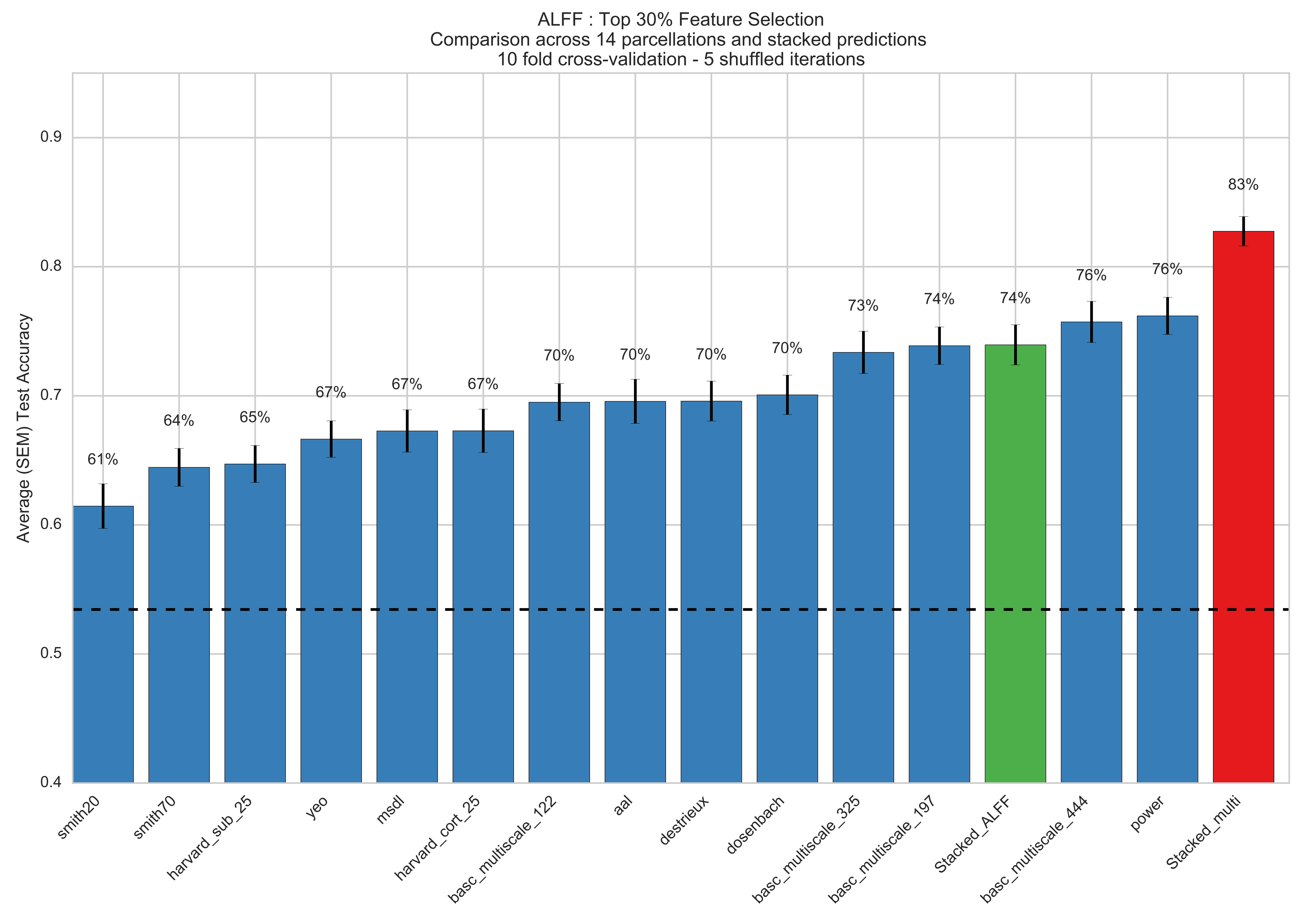

fALFF : Top 30% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
63%
66%
68%
71%
71%
72%
72%
72%
72%
73%
73%
74%
74%
74%
75%
83%
harvard_sub_25
smith20
yeo
basc_multiscale_325
basc_multiscale_197
aal
harvard_cort_25
msdl
smith70
destrieux
basc_multiscale_122
dosenbach
Stacked_fALFF
basc_multiscale_444
power
Stacked_multi


FC_corr : Top 30% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
62%
66%
67%
70%
70%
71%
71%
72%
73%
73%
77%
78%
79%
80%
80%
83%
yeo
harvard_sub_25
smith20
aal
destrieux
harvard_cort_25
msdl
basc_multiscale_122
dosenbach
power
smith70
basc_multiscale_197
basc_multiscale_325
basc_multiscale_444
Stacked_FC_corr
Stacked_multi


FC_part : Top 30% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
50%
57%
64%
65%
65%
65%
67%
69%
70%
71%
72%
74%
75%
75%
76%
83%
harvard_sub_25
msdl
dosenbach
smith20
harvard_cort_25
power
yeo
smith70
destrieux
basc_multiscale_444
aal
basc_multiscale_197
Stacked_FC_part
basc_multiscale_122
basc_multiscale_325
Stacked_multi

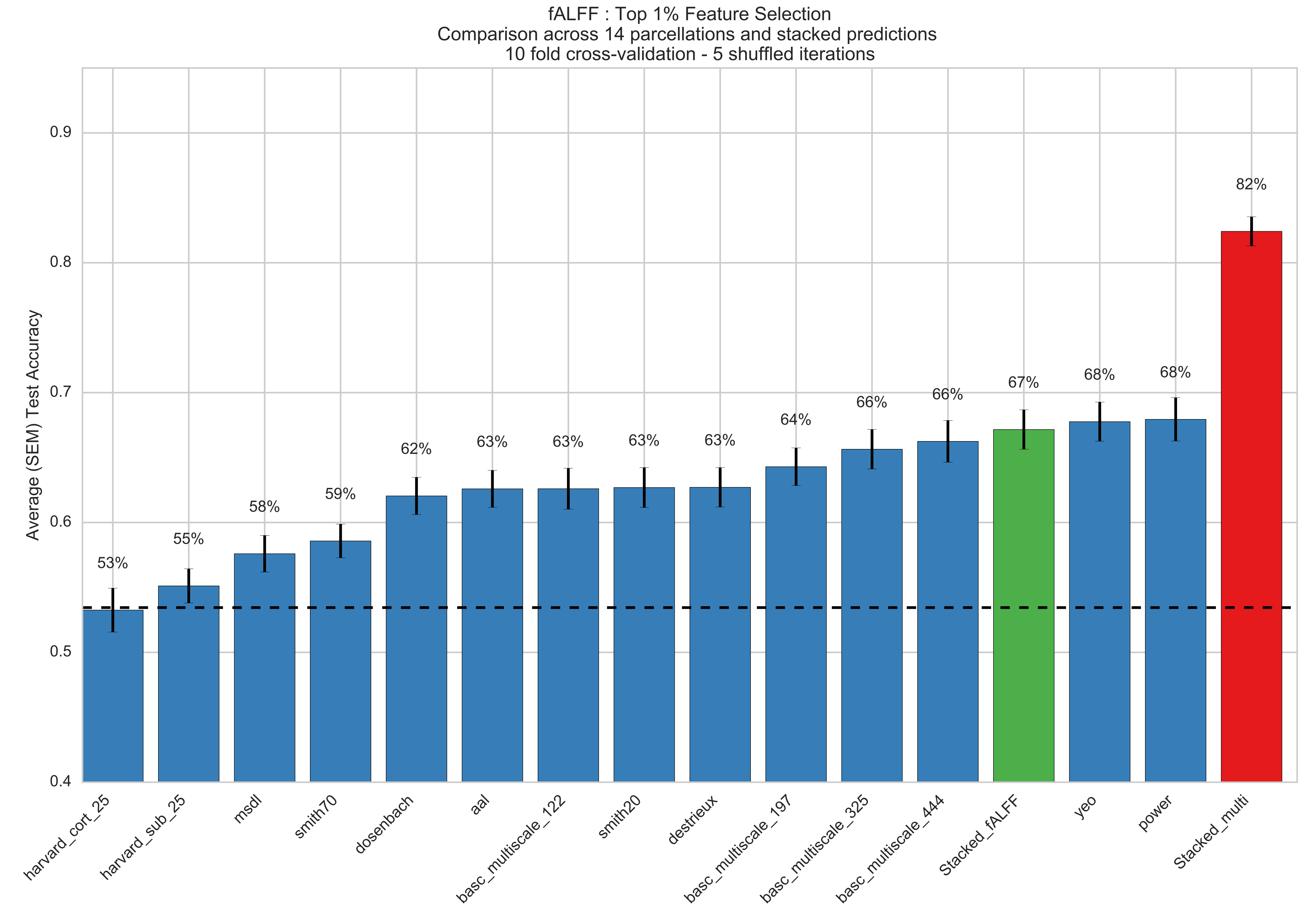

FC_prec : Top 30% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
52%
55%
66%
66%
66%
67%
69%
71%
72%
73%
73%
75%
76%
77%
77%
83%
harvard_sub_25
msdl
smith20
yeo
dosenbach
power
harvard_cort_25
smith70
destrieux
aal
basc_multiscale_444
basc_multiscale_122
basc_multiscale_197
basc_multiscale_325
Stacked_FC_prec
Stacked_multi


ReHo : Top 30% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
66%
67%
67%
68%
70%
71%
71%
73%
73%
73%
74%
74%
74%
75%
77%
83%
harvard_sub_25
yeo
msdl
smith20
harvard_cort_25
aal
basc_multiscale_122
smith70
basc_multiscale_197
power
basc_multiscale_325
destrieux
Stacked_ReHo
dosenbach
basc_multiscale_444
Stacked_multi

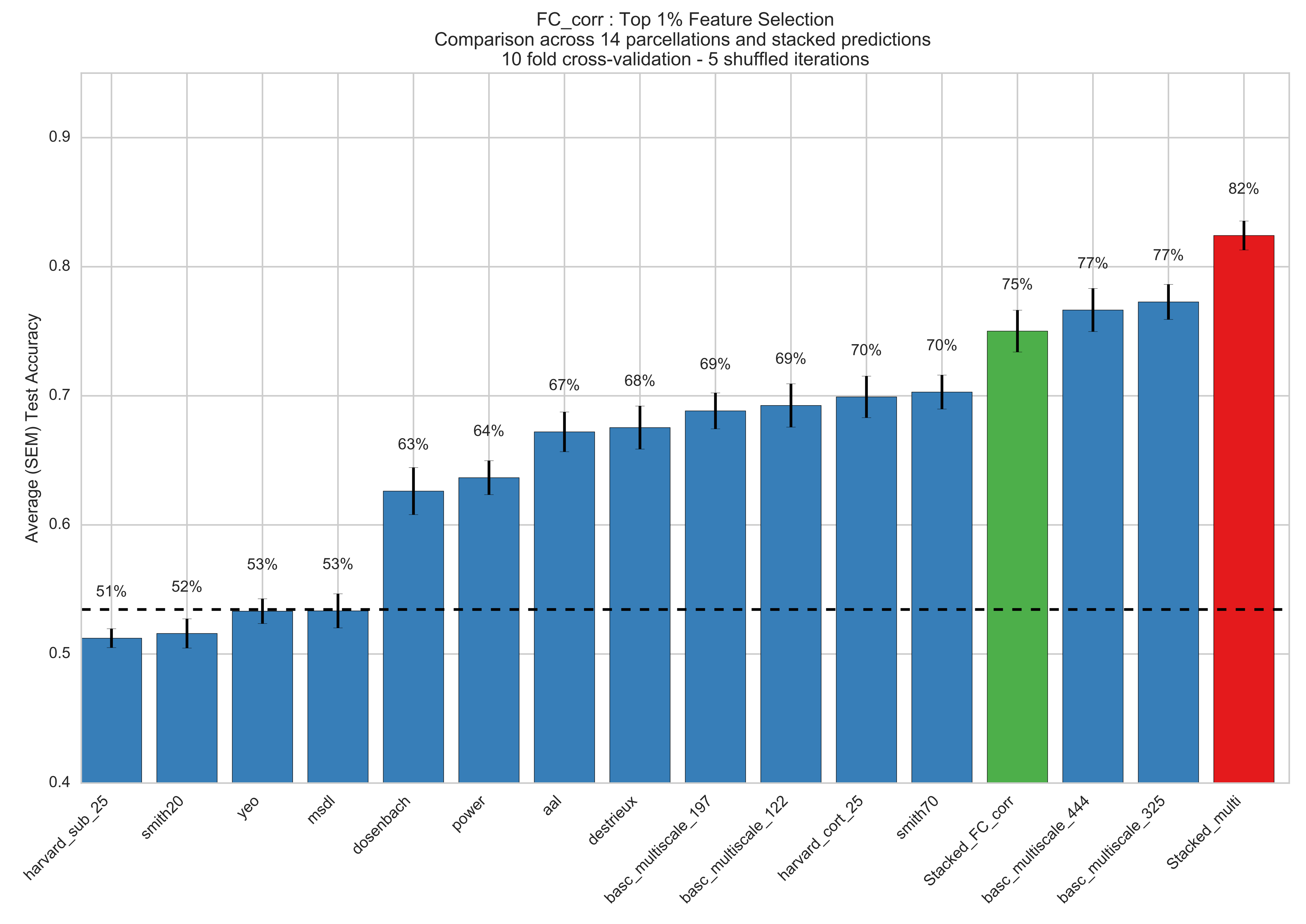


ALFF : Top 30% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
61%
64%
65%
67%
67%
67%
70%
70%
70%
70%
73%
74%
74%
76%
76%
83%
smith20
smith70
harvard_sub_25
yeo
msdl
harvard_cort_25
basc_multiscale_122
aal
destrieux
dosenbach
basc_multiscale_325
basc_multiscale_197
Stacked_ALFF
basc_multiscale_444
power
Stacked_multi

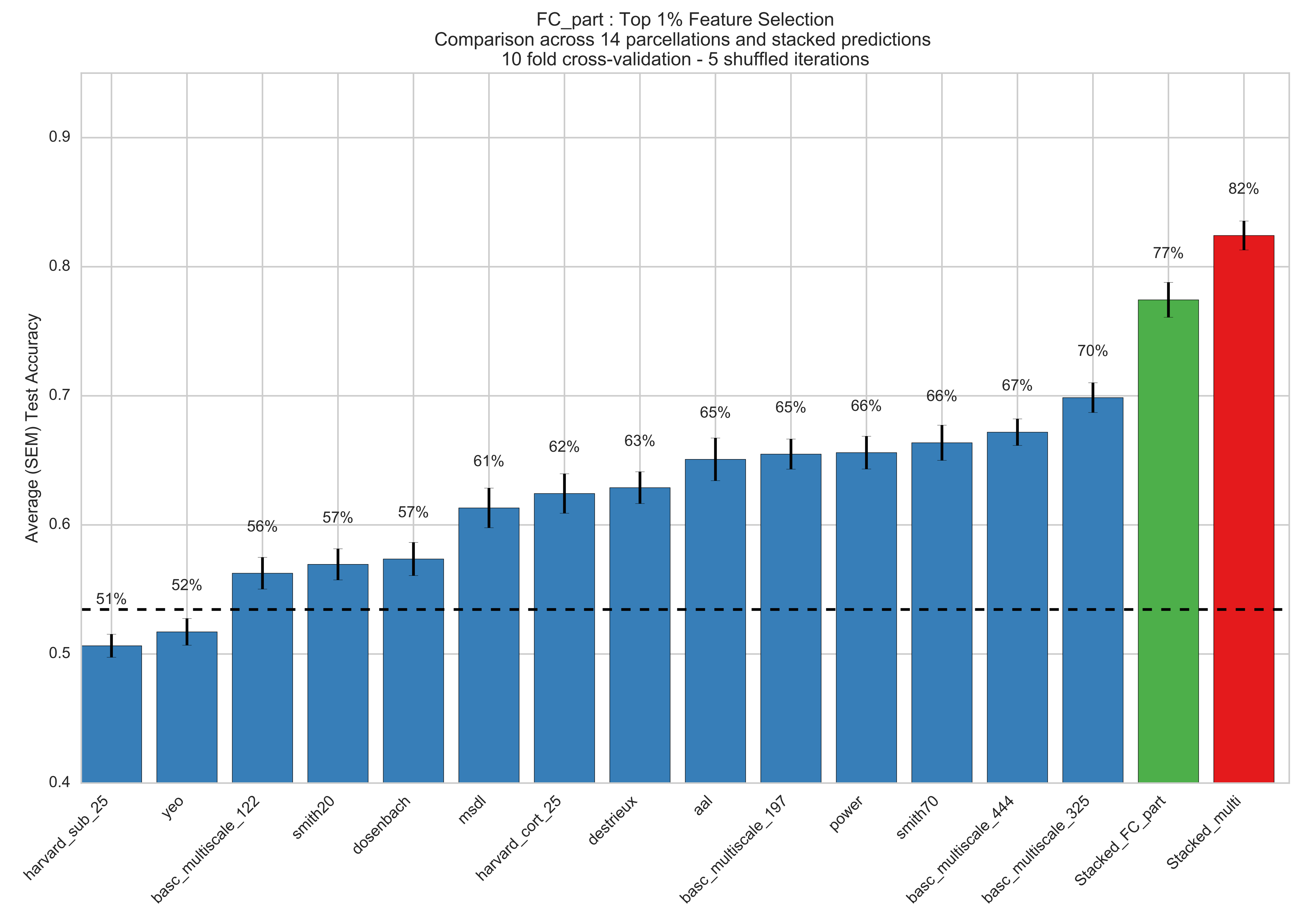
Feature selection / reduction method :Top 1% Feature Selection

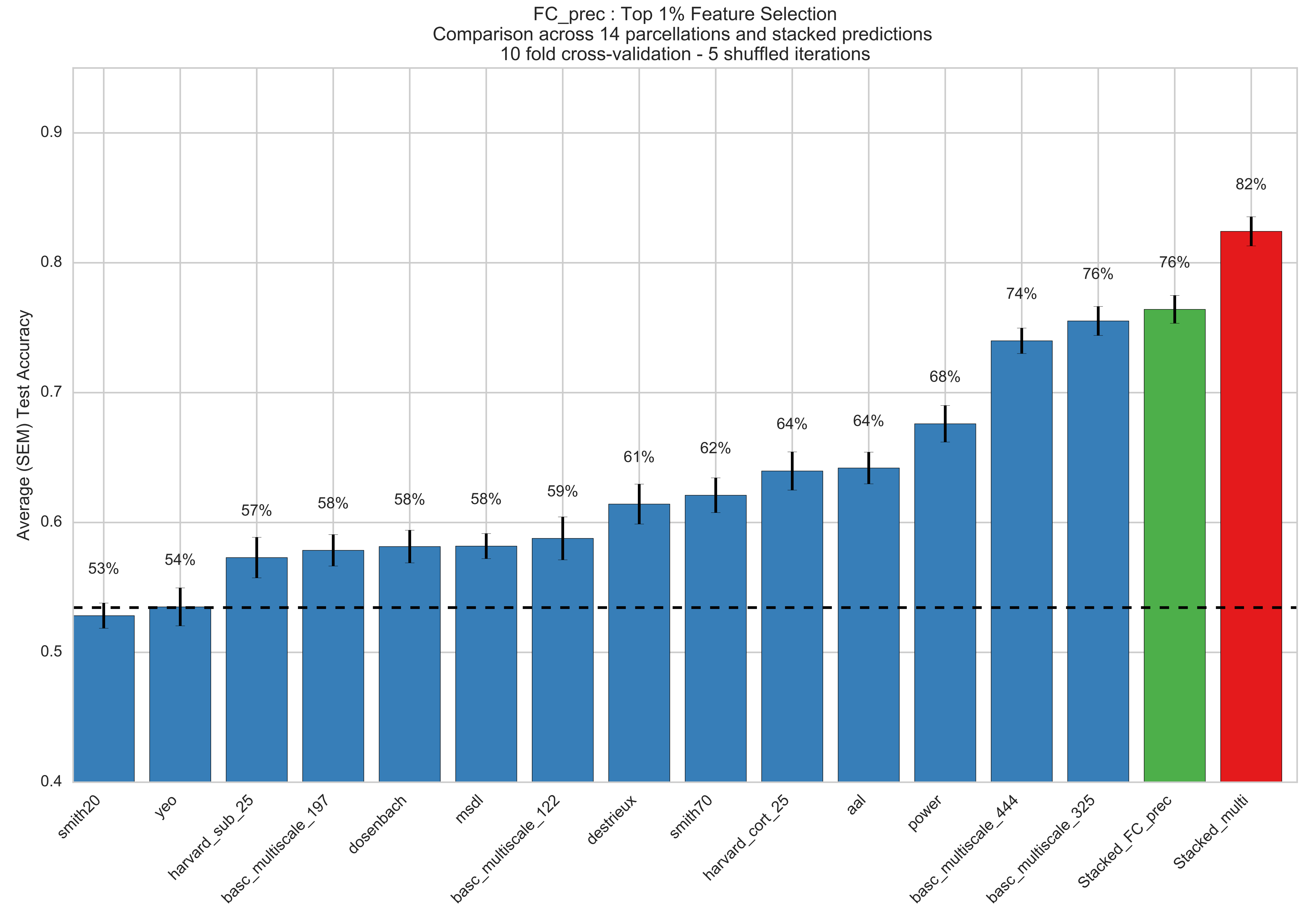


fALFF : Top 1% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
53%
55%
58%
59%
62%
63%
63%
63%
63%
64%
66%
66%
67%
68%
68%
82%
harvard_cort_25
harvard_sub_25
msdl
smith70
dosenbach
aal
basc_multiscale_122
smith20
destrieux
basc_multiscale_197
basc_multiscale_325
basc_multiscale_444
Stacked_fALFF
yeo
power
Stacked_multi

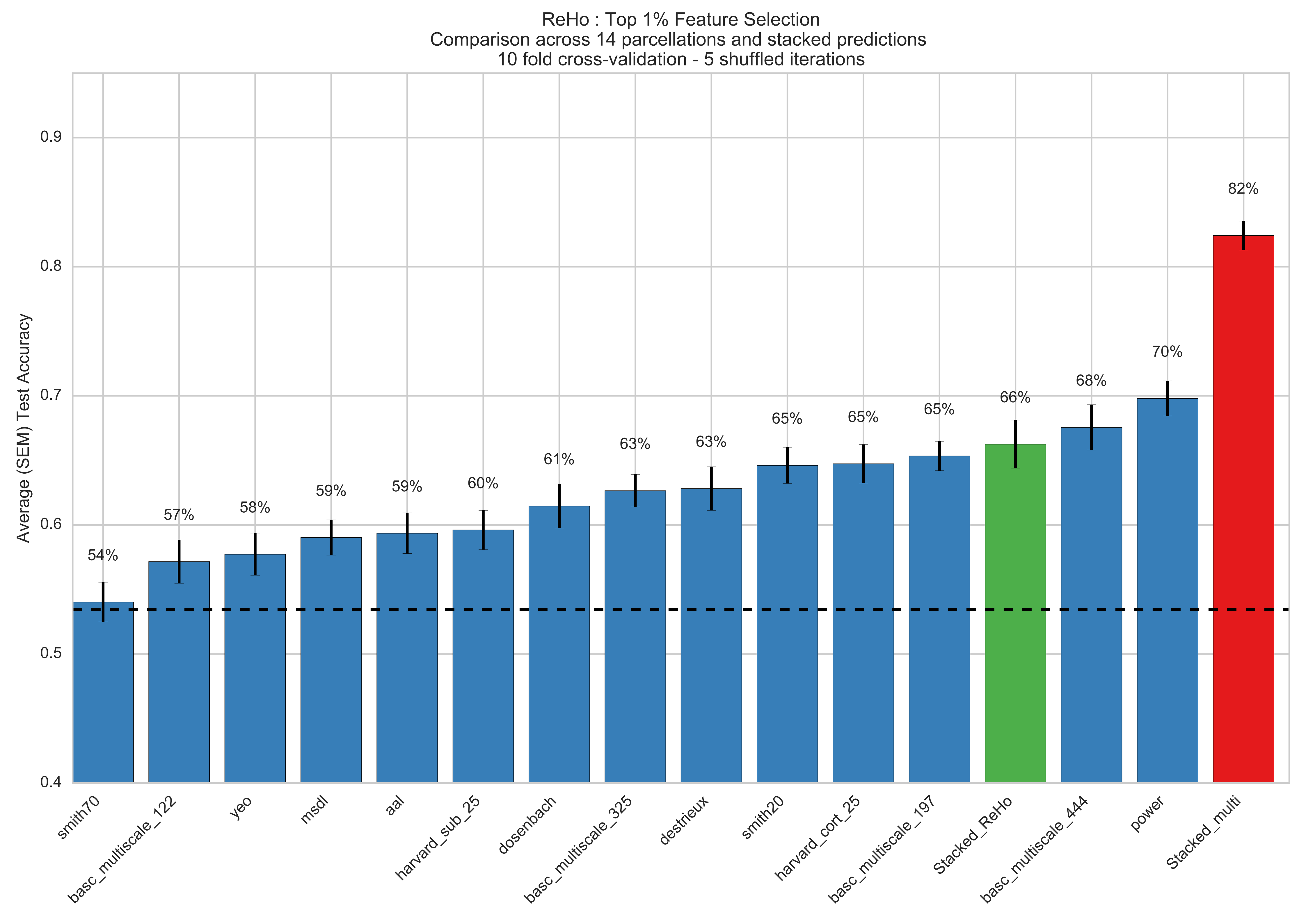


FC_corr : Top 1% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
51%
52%
53%
53%
63%
64%
67%
68%
69%
69%
70%
70%
75%
77%
77%
82%
harvard_sub_25
smith20
yeo
msdl
dosenbach
power
aal
destrieux
basc_multiscale_197
basc_multiscale_122
harvard_cort_25
smith70
Stacked_FC_corr
basc_multiscale_444
basc_multiscale_325
Stacked_multi

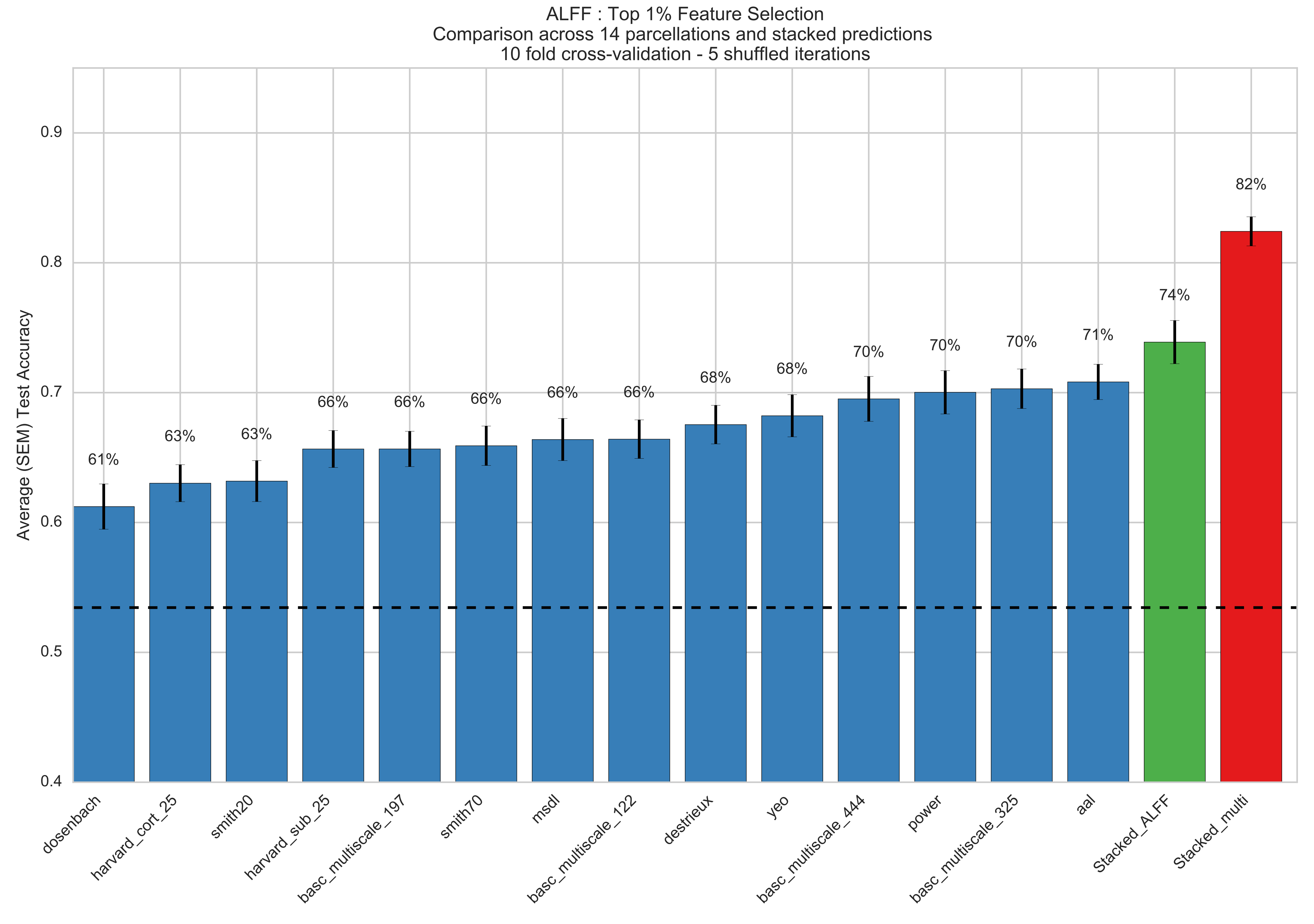

FC_part : Top 1% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
51%
52%
56%
57%
57%
61%
62%
63%
65%
65%
66%
66%
67%
70%
77%
82%
harvard_sub_25
yeo
basc_multiscale_122
smith20
dosenbach
msdl
harvard_cort_25
destrieux
aal
basc_multiscale_197
power
smith70
basc_multiscale_444
basc_multiscale_325
Stacked_FC_part
Stacked_multi



FC_prec : Top 1% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
53%
54%
57%
58%
58%
58%
59%
61%
62%
64%
64%
68%
74%
76%
76%
82%
smith20
yeo
harvard_sub_25
basc_multiscale_197
dosenbach
msdl
basc_multiscale_122
destrieux
smith70
harvard_cort_25
aal
power
basc_multiscale_444
basc_multiscale_325
Stacked_FC_prec
Stacked_multi

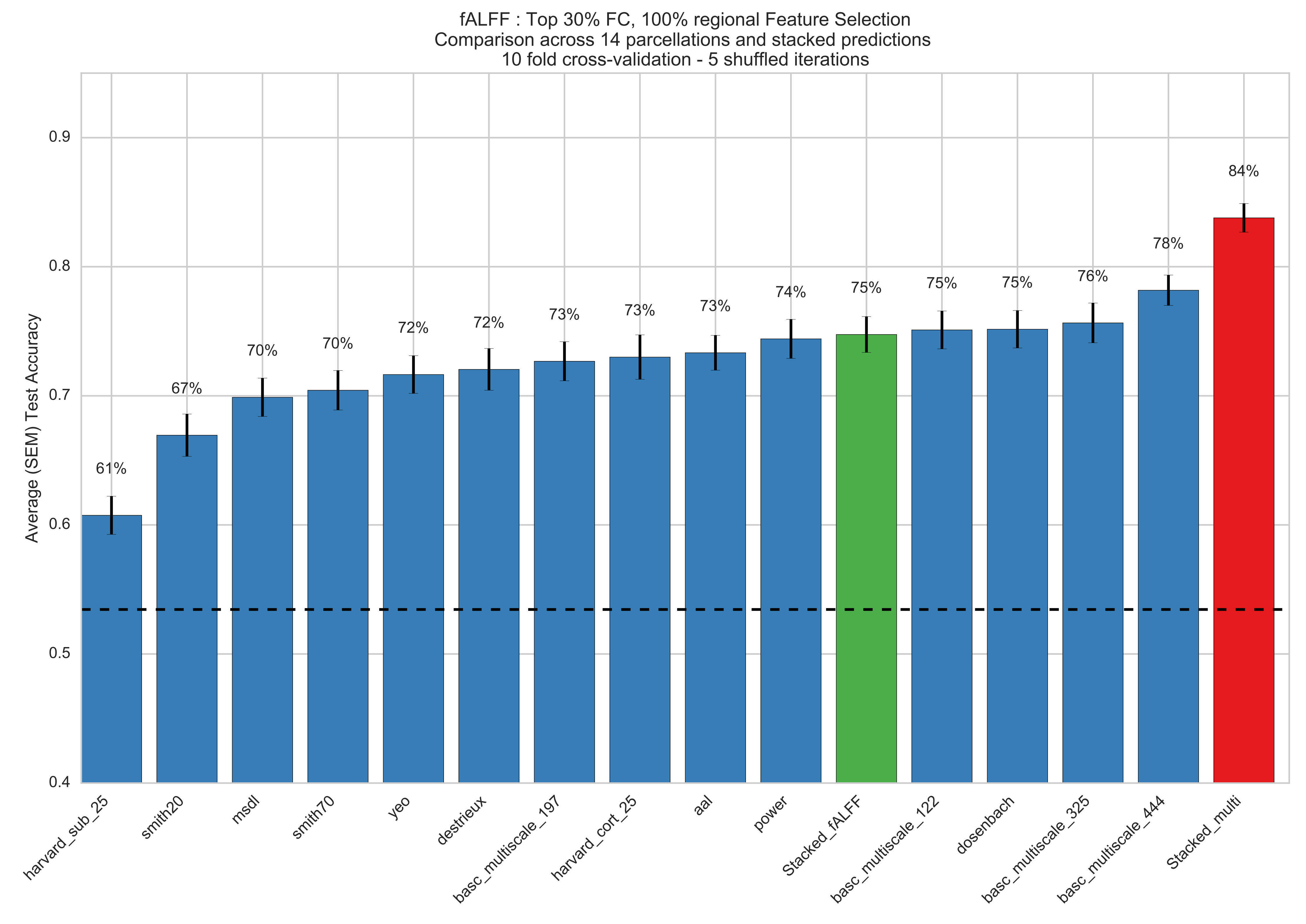


ReHo : Top 1% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
54%
57%
58%
59%
59%
60%
61%
63%
63%
65%
65%
65%
66%
68%
70%
82%
smith70
basc_multiscale_122
yeo
msdl
aal
harvard_sub_25
dosenbach
basc_multiscale_325
destrieux
smith20
harvard_cort_25
basc_multiscale_197
Stacked_ReHo
basc_multiscale_444
power
Stacked_multi

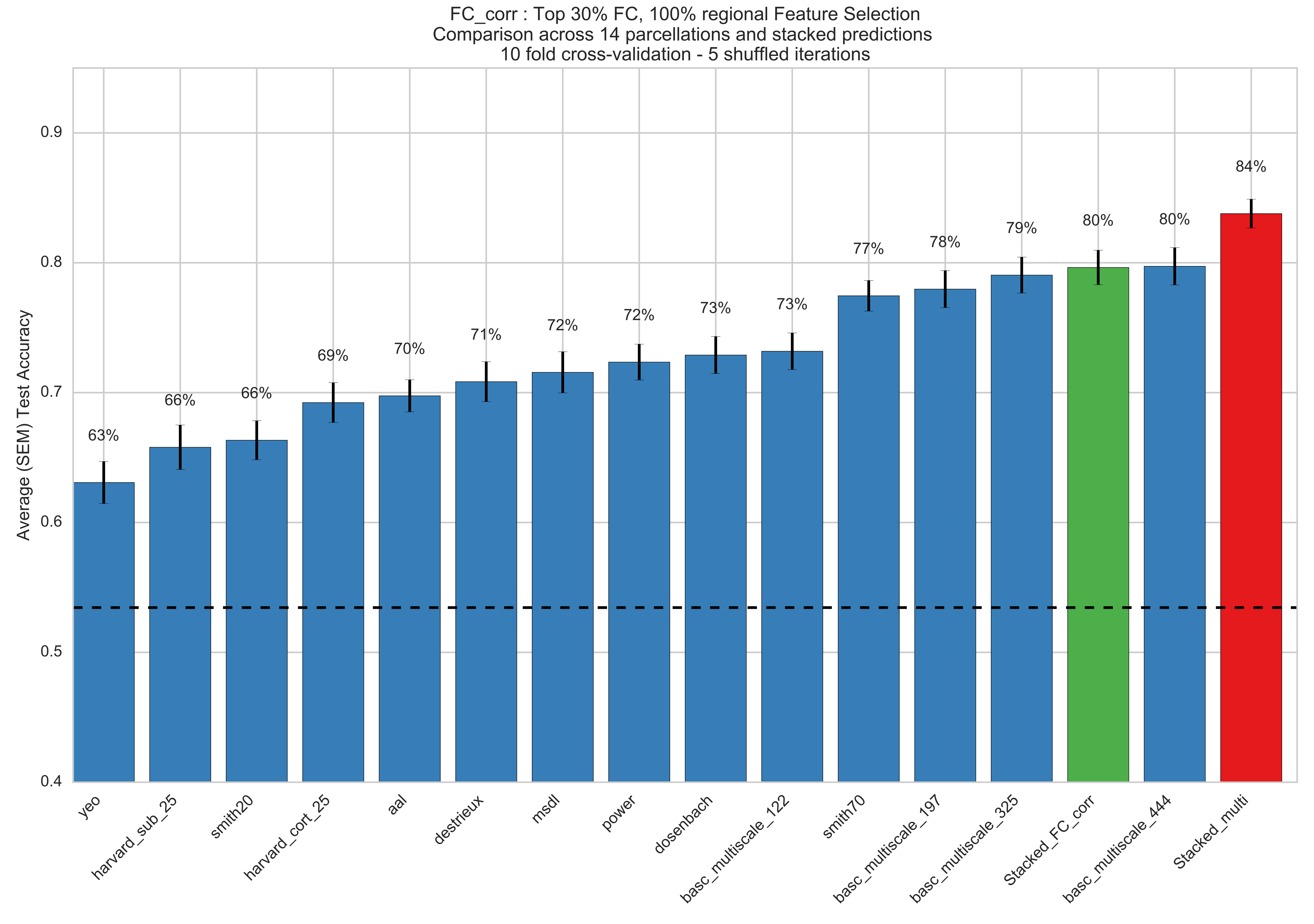


ALFF : Top 1% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
61%
63%
63%
66%
66%
66%
66%
66%
68%
68%
70%
70%
70%
71%
74%
82%
dosenbach
harvard_cort_25
smith20
harvard_sub_25
basc_multiscale_197
smith70
msdl
basc_multiscale_122
destrieux
yeo
basc_multiscale_444
power
basc_multiscale_325
aal
Stacked_ALFF
Stacked_multi

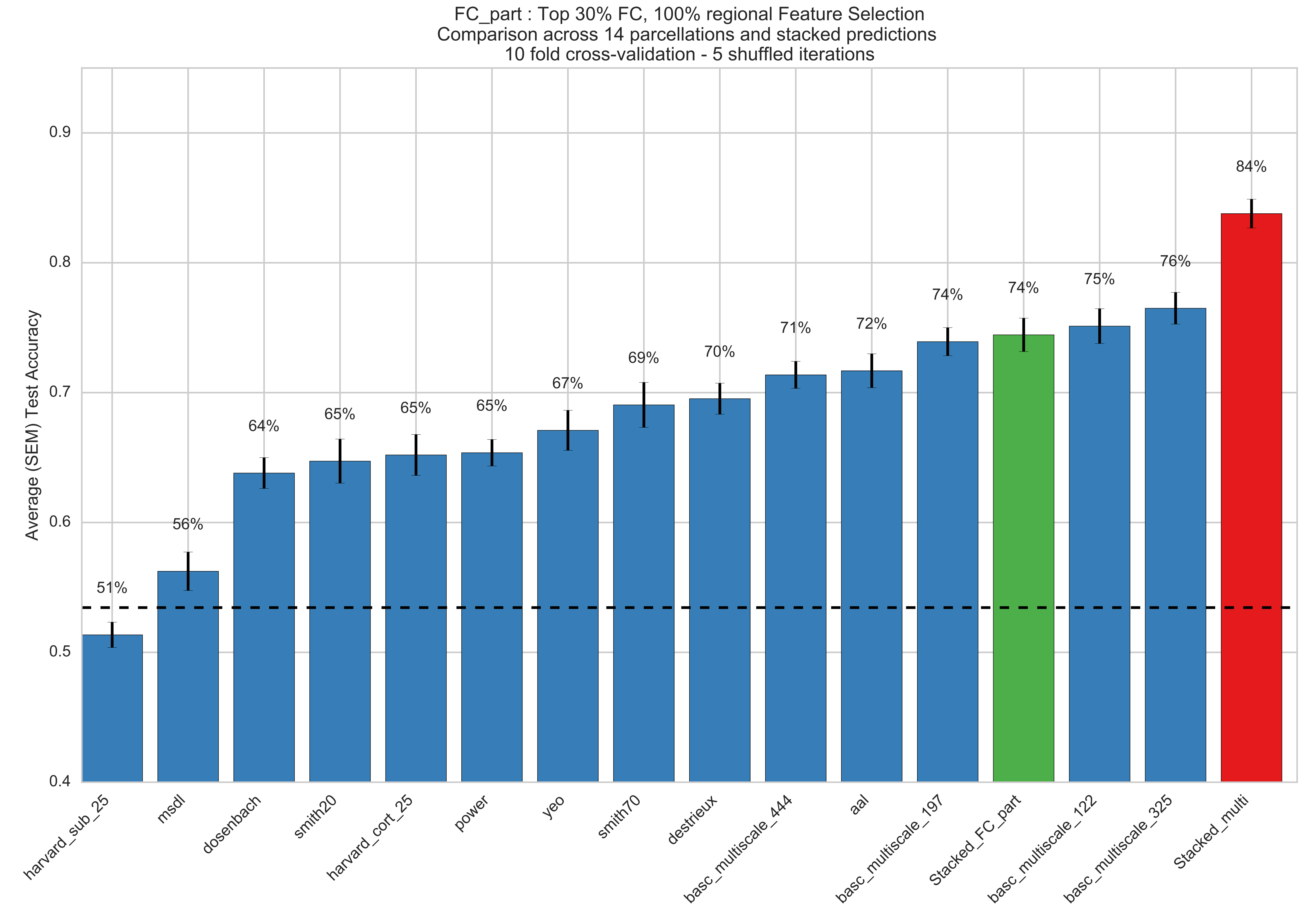
Feature selection / reduction method :Top 30% FC, 100% regional Feature Selection

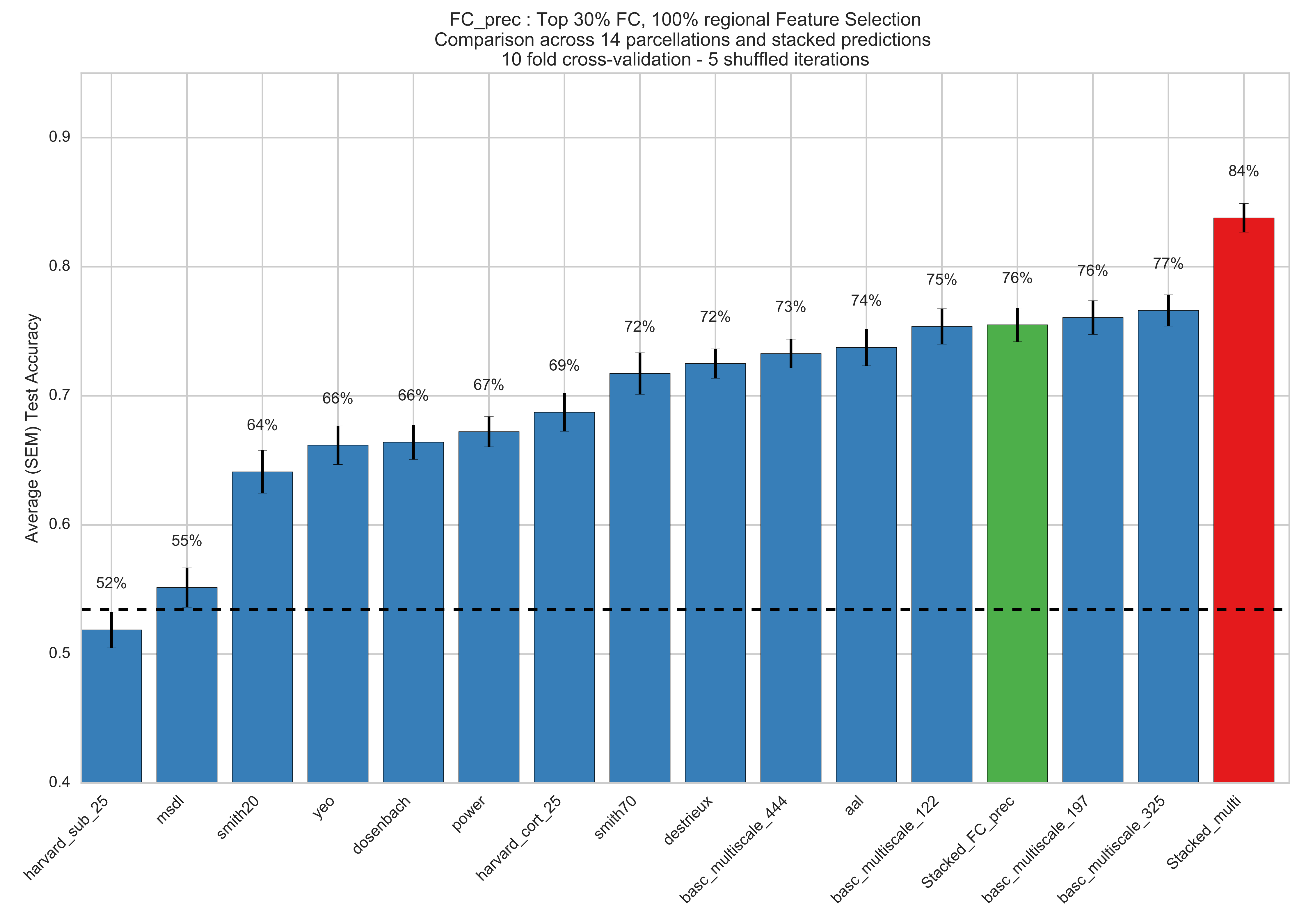


fALFF : Top 30% FC, 100% regional Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
61%
67%
70%
70%
72%
72%
73%
73%
73%
74%
75%
75%
75%
76%
78%
84%
harvard_sub_25
smith20
msdl
smith70
yeo
destrieux
basc_multiscale_197
harvard_cort_25
aal
power
Stacked_fALFF
basc_multiscale_122
dosenbach
basc_multiscale_325
basc_multiscale_444
Stacked_multi

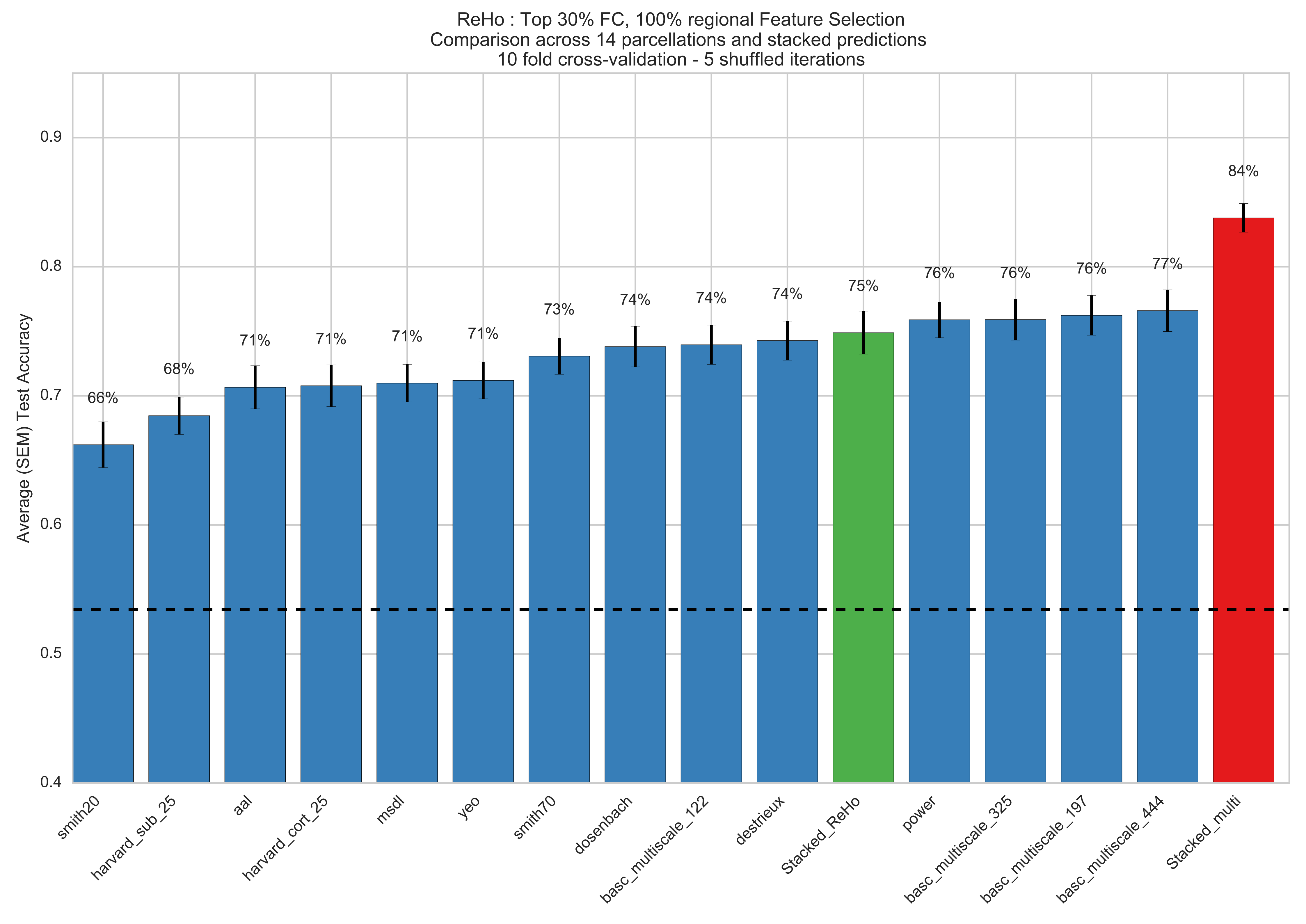


FC_corr : Top 30% FC, 100% regional Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
63%
66%
66%
69%
70%
71%
72%
72%
73%
73%
77%
78%
79%
80%
80%
84%
yeo
harvard_sub_25
smith20
harvard_cort_25
aal
destrieux
msdl
power
dosenbach
basc_multiscale_122
smith70
basc_multiscale_197
basc_multiscale_325
Stacked_FC_corr
basc_multiscale_444
Stacked_multi

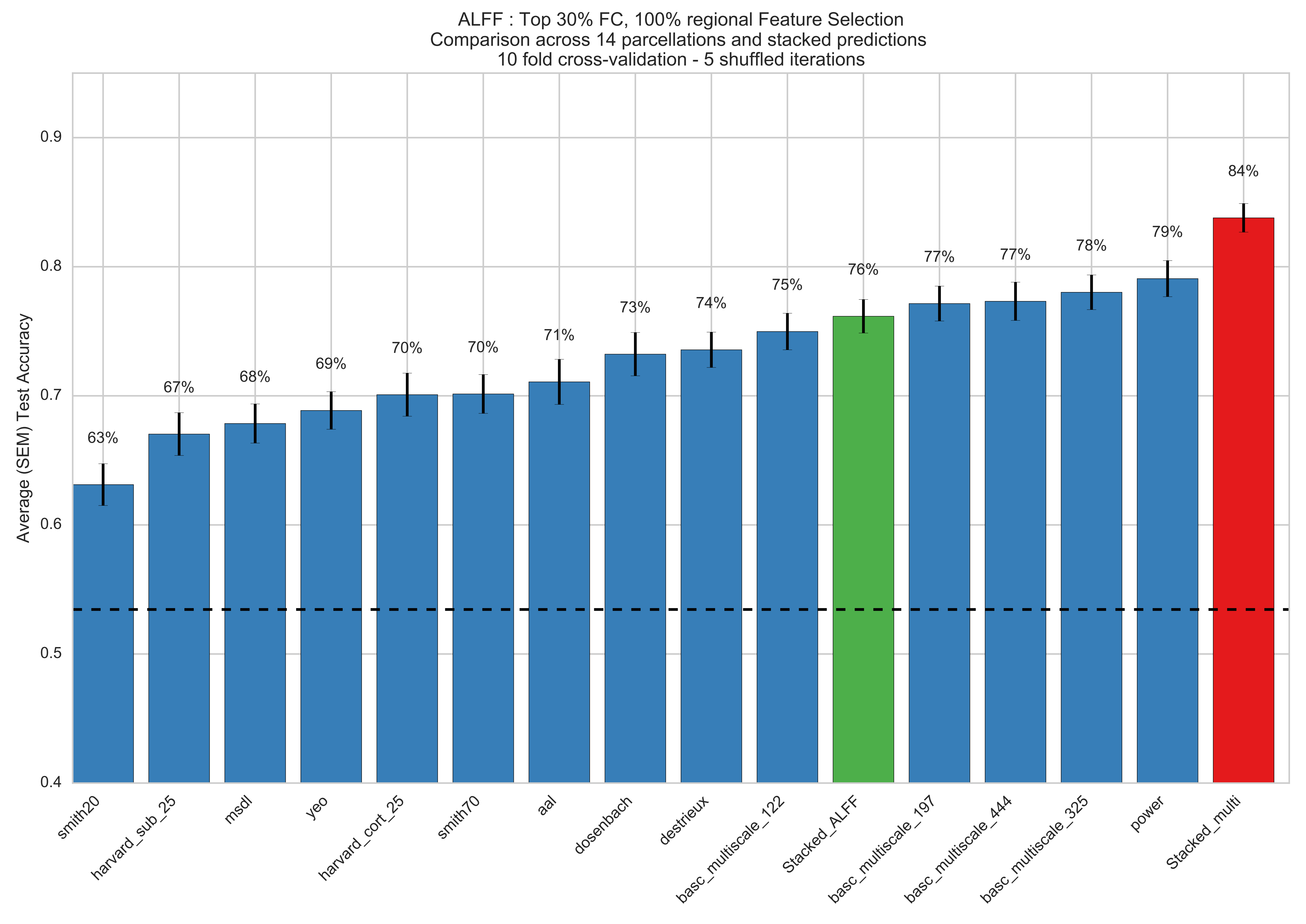

FC_part : Top 30% FC, 100% regional Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
51%
56%
64%
65%
65%
65%
67%
69%
70%
71%
72%
74%
74%
75%
76%
84%
harvard_sub_25
msdl
dosenbach
smith20
harvard_cort_25
power
yeo
smith70
destrieux
basc_multiscale_444
aal
basc_multiscale_197
Stacked_FC_part
basc_multiscale_122
basc_multiscale_325
Stacked_multi



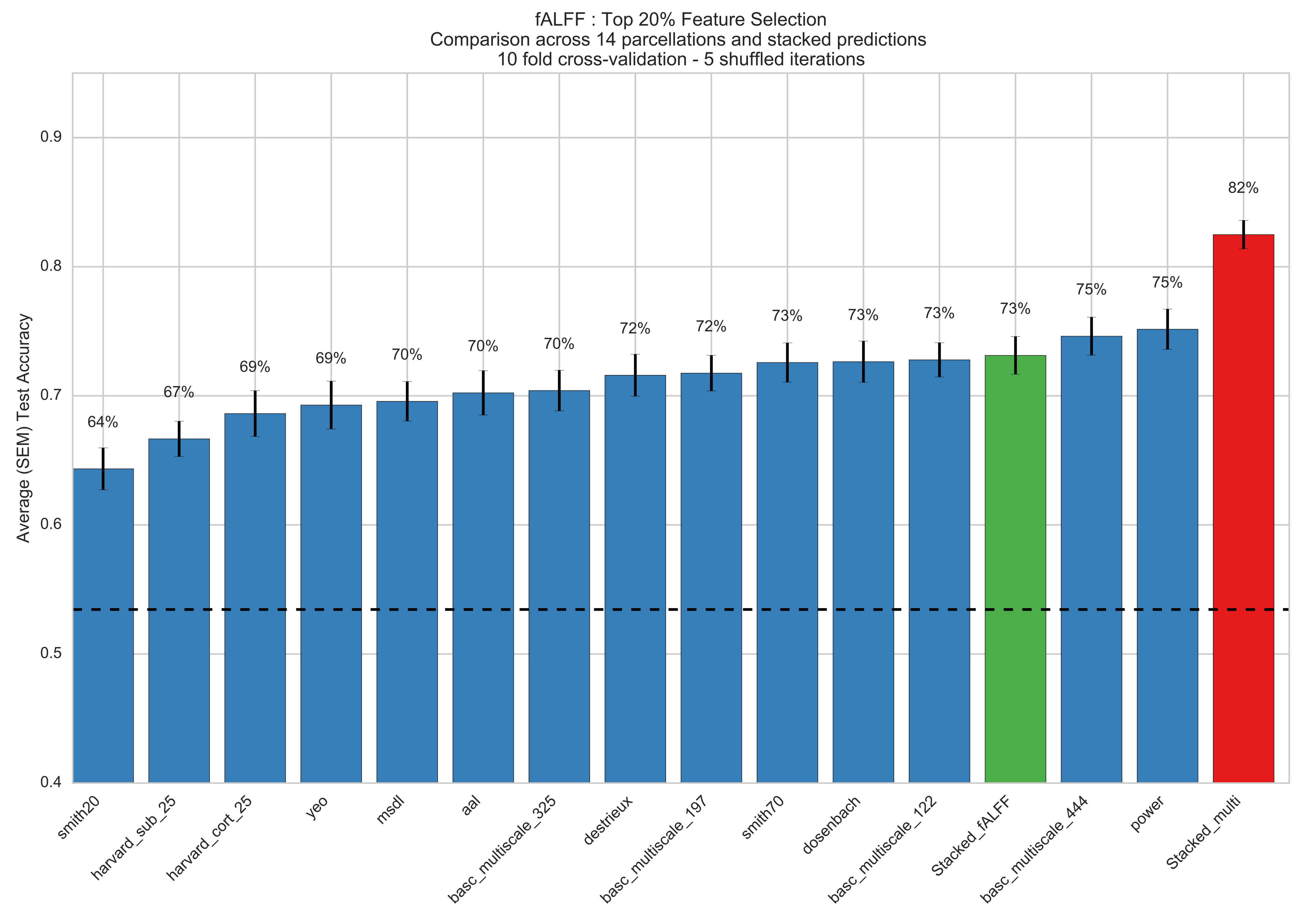
FC_prec : Top 30% FC, 100% regional Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
52%
55%
64%
66%
66%
67%
69%
72%
72%
73%
74%
75%
76%
76%
77%
84%
harvard_sub_25
msdl
smith20
yeo
dosenbach
power
harvard_cort_25
smith70
destrieux
basc_multiscale_444
aal
basc_multiscale_122
Stacked_FC_prec
basc_multiscale_197
basc_multiscale_325
Stacked_multi



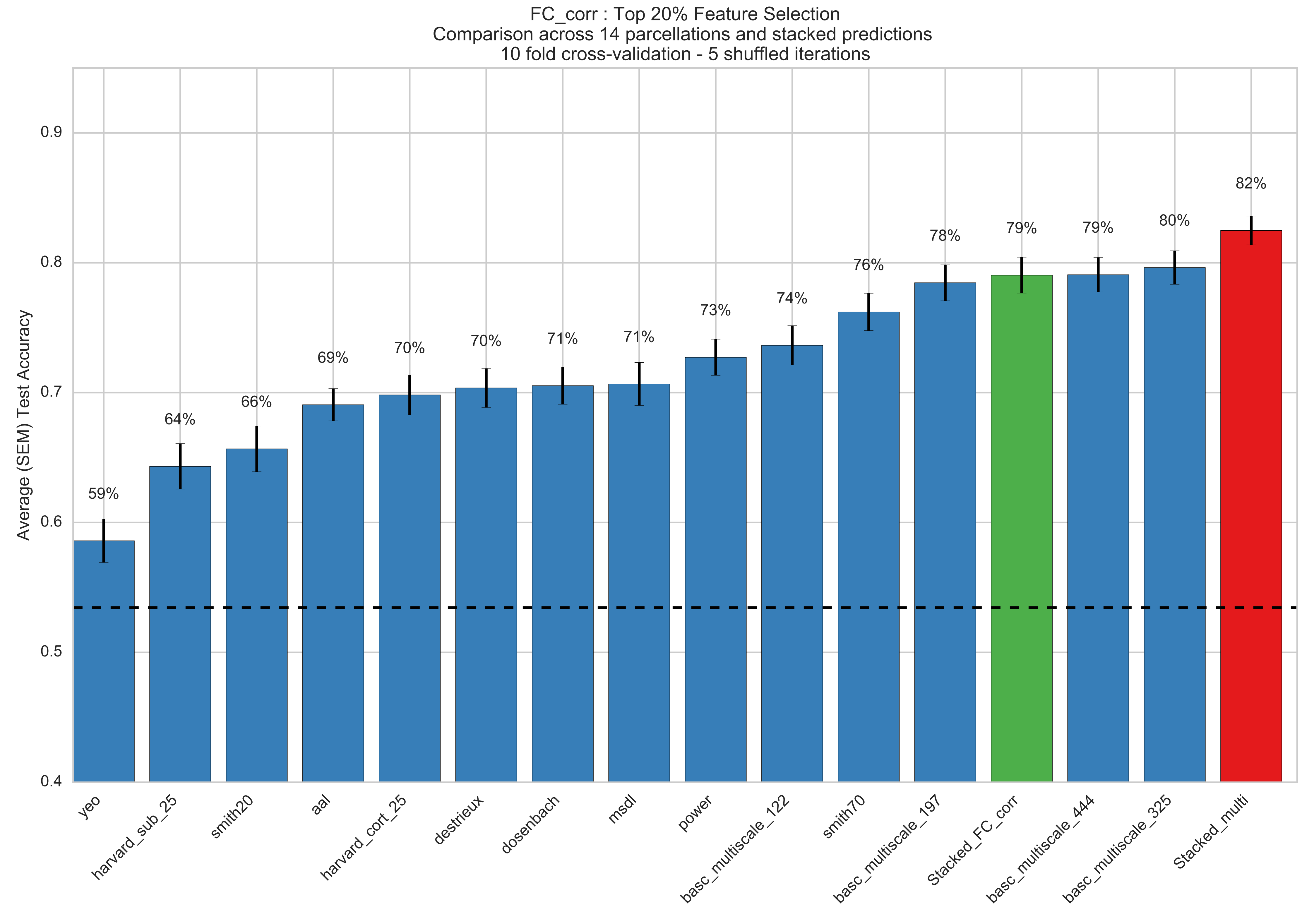
ReHo : Top 30% FC, 100% regional Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
66%
68%
71%
71%
71%
71%
73%
74%
74%
74%
75%
76%
76%
76%
77%
84%
smith20
harvard_sub_25
aal
harvard_cort_25
msdl
yeo
smith70
dosenbach
basc_multiscale_122
destrieux
Stacked_ReHo
power
basc_multiscale_325
basc_multiscale_197
basc_multiscale_444
Stacked_multi

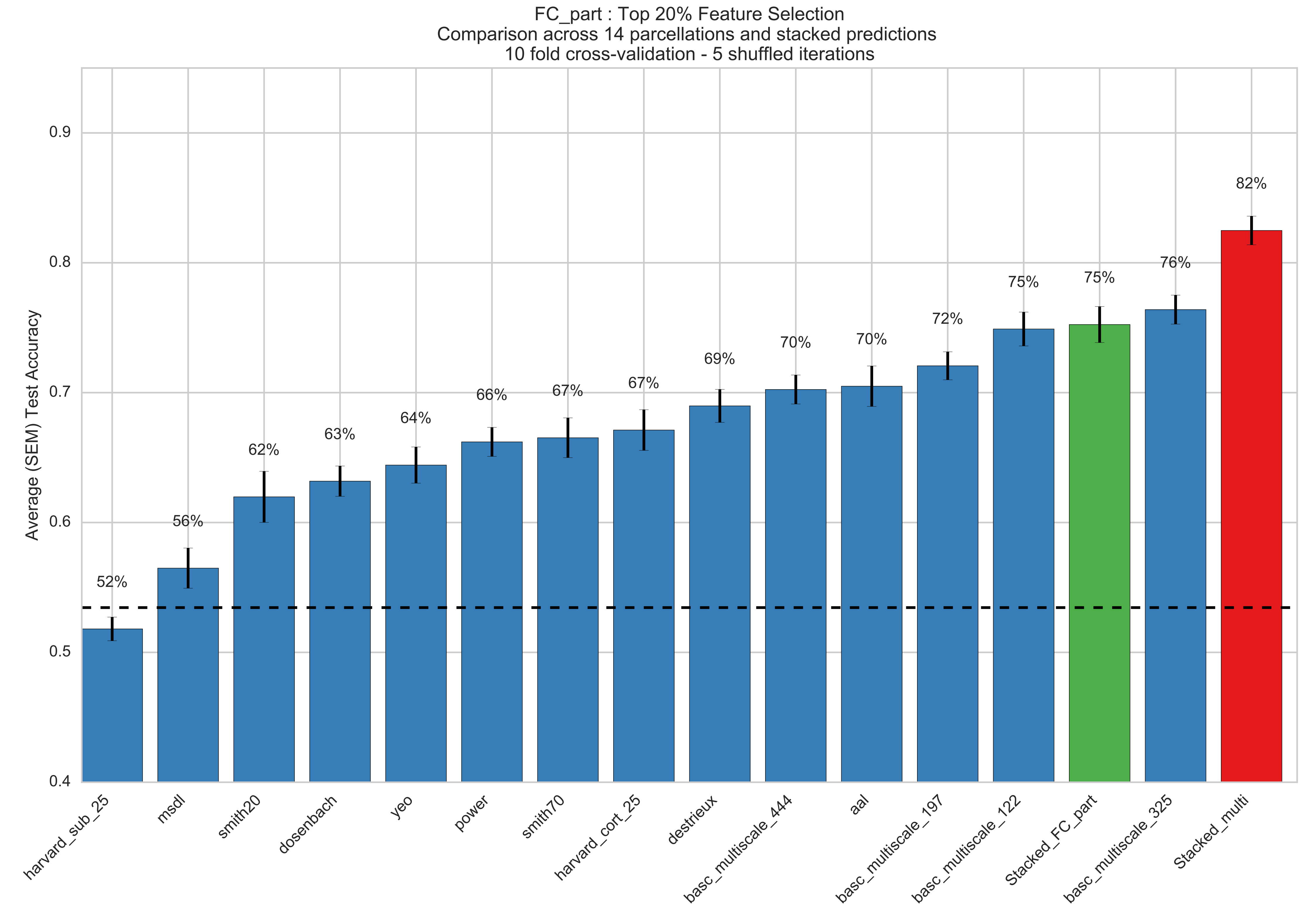

ALFF : Top 30% FC, 100% regional Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
63%
67%
68%
69%
70%
70%
71%
73%
74%
75%
76%
77%
77%
78%
79%
84%
smith20
harvard_sub_25
msdl
yeo
harvard_cort_25
smith70
aal
dosenbach
destrieux
basc_multiscale_122
Stacked_ALFF
basc_multiscale_197
basc_multiscale_444
basc_multiscale_325
power
Stacked_multi

Feature selection / reduction method :Top 20% Feature Selection

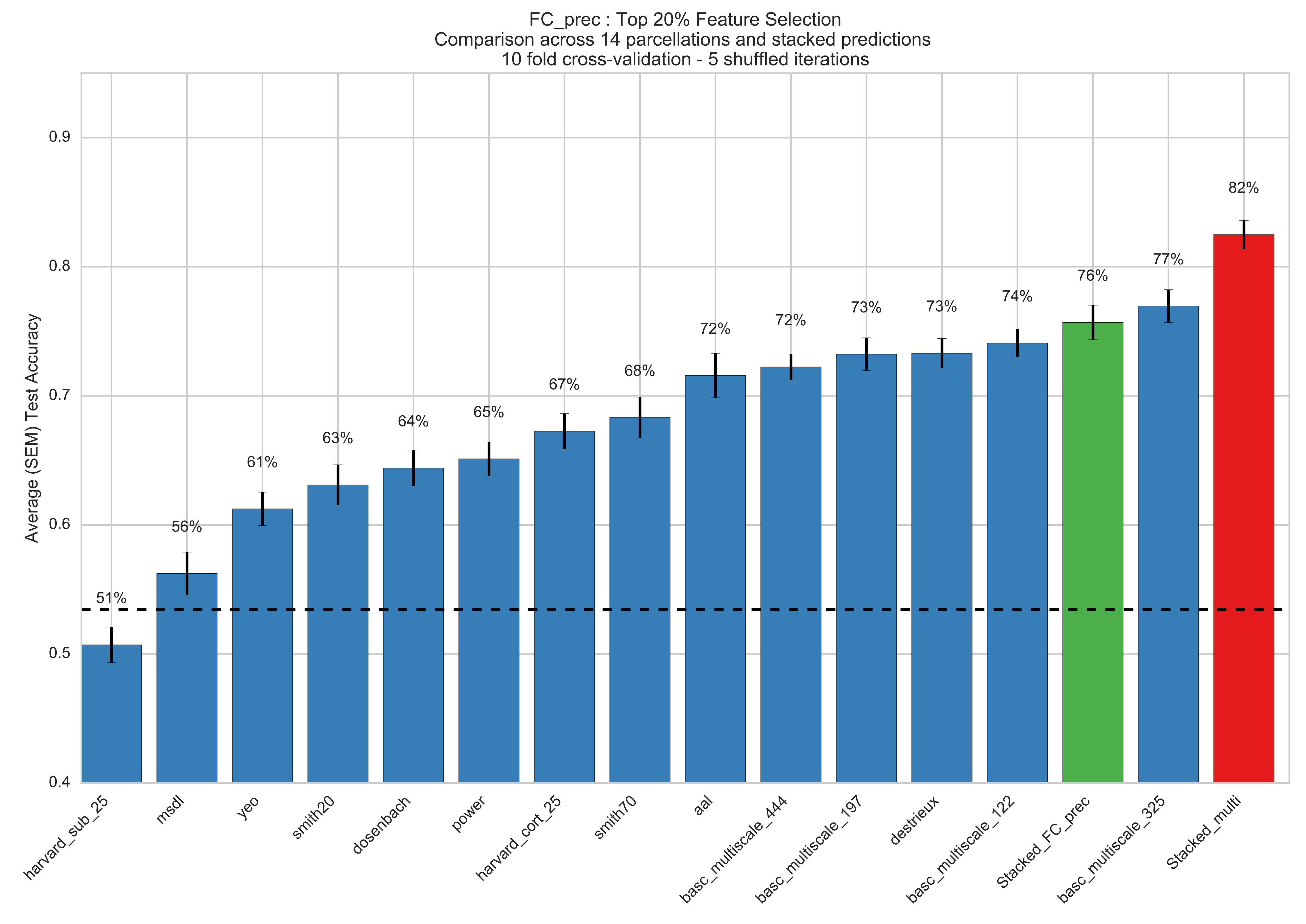


fALFF : Top 20% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
64%
67%
69%
69%
70%
70%
70%
72%
72%
73%
73%
73%
73%
75%
75%
82%
smith20
harvard_sub_25
harvard_cort_25
yeo
msdl
aal
basc_multiscale_325
destrieux
basc_multiscale_197
smith70
dosenbach
basc_multiscale_122
Stacked_fALFF
basc_multiscale_444
power
Stacked_multi

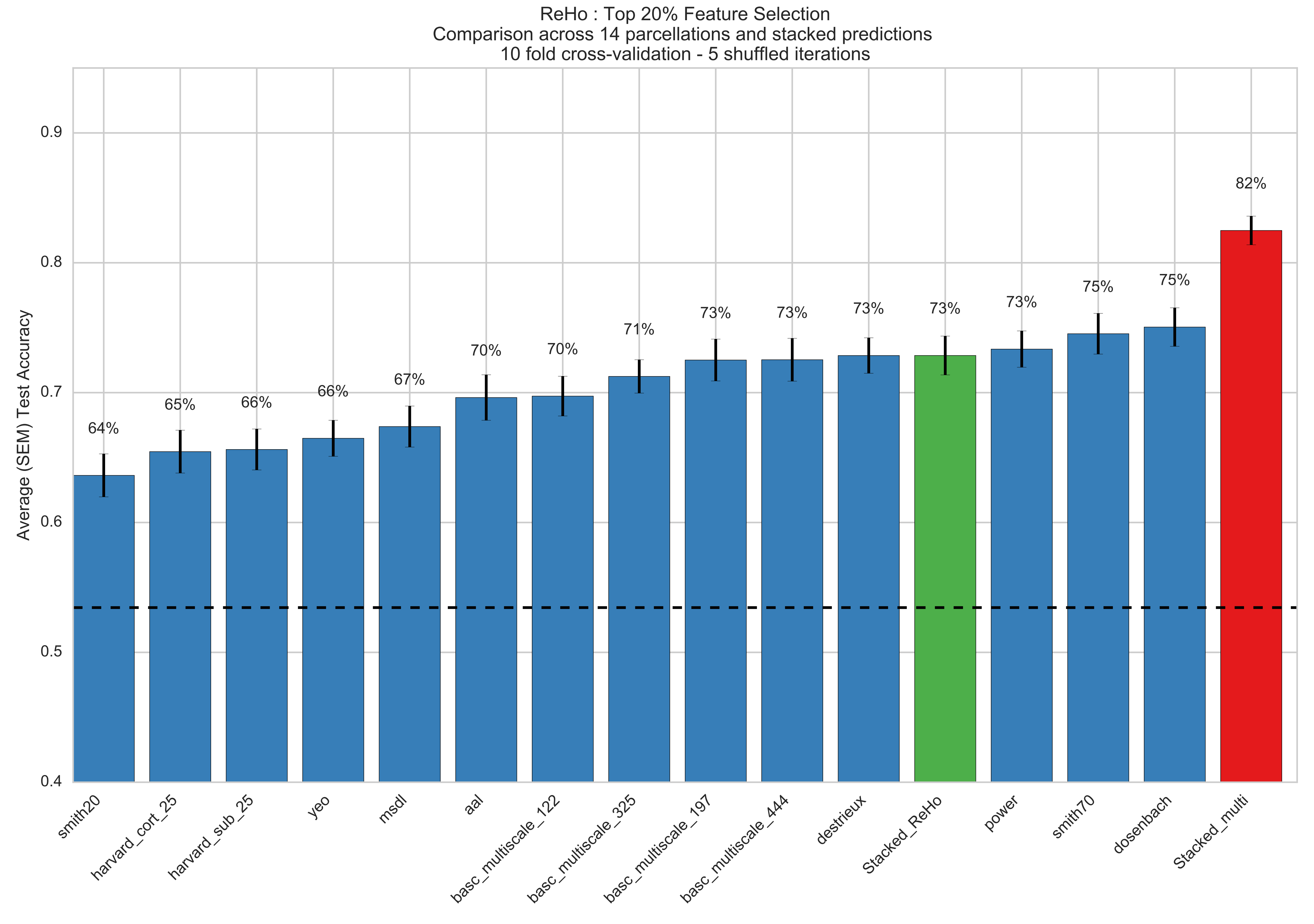

FC_corr : Top 20% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
59%
64%
66%
69%
70%
70%
71%
71%
73%
74%
76%
78%
79%
79%
80%
82%
yeo
harvard_sub_25
smith20
aal
harvard_cort_25
destrieux
dosenbach
msdl
power
basc_multiscale_122
smith70
basc_multiscale_197
Stacked_FC_corr
basc_multiscale_444
basc_multiscale_325
Stacked_multi



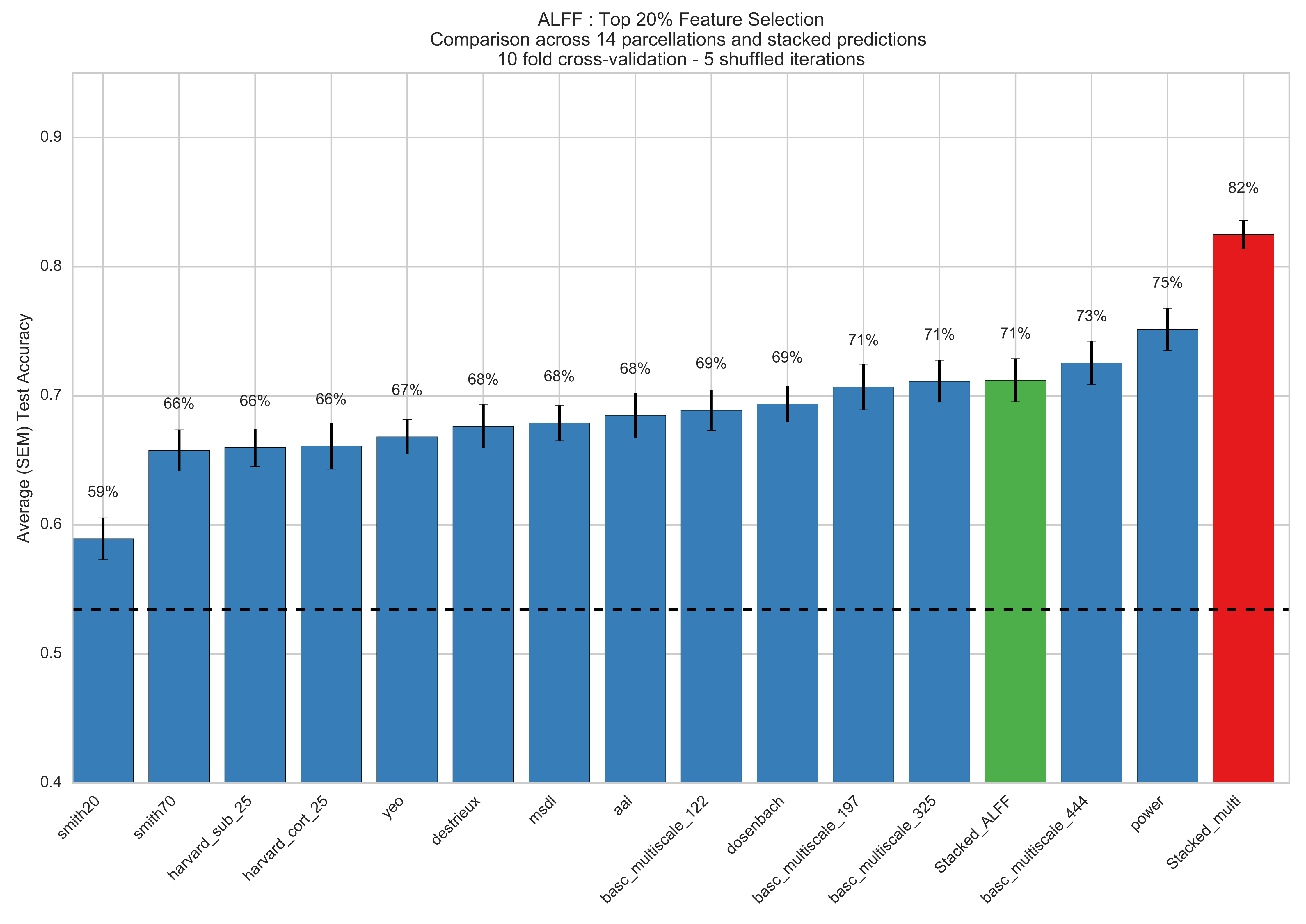
FC_part : Top 20% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
52%
56%
62%
63%
64%
66%
67%
67%
69%
70%
70%
72%
75%
75%
76%
82%
harvard_sub_25
msdl
smith20
dosenbach
yeo
power
smith70
harvard_cort_25
destrieux
basc_multiscale_444
aal
basc_multiscale_197
basc_multiscale_122
Stacked_FC_part
basc_multiscale_325
Stacked_multi



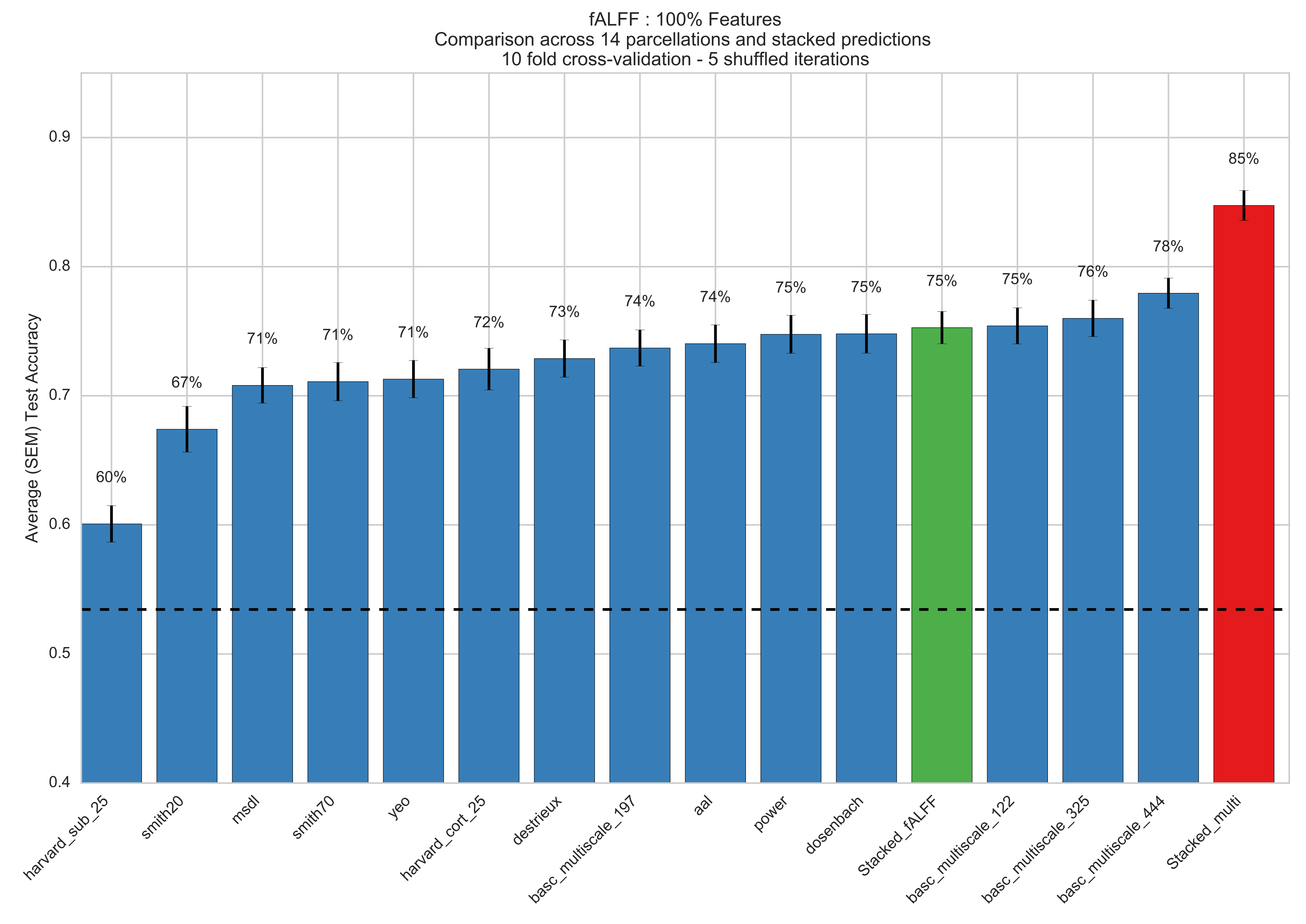
FC_prec : Top 20% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
51%
56%
61%
63%
64%
65%
67%
68%
72%
72%
73%
73%
74%
76%
77%
82%
harvard_sub_25
msdl
yeo
smith20
dosenbach
power
harvard_cort_25
smith70
aal
basc_multiscale_444
basc_multiscale_197
destrieux
basc_multiscale_122
Stacked_FC_prec
basc_multiscale_325
Stacked_multi

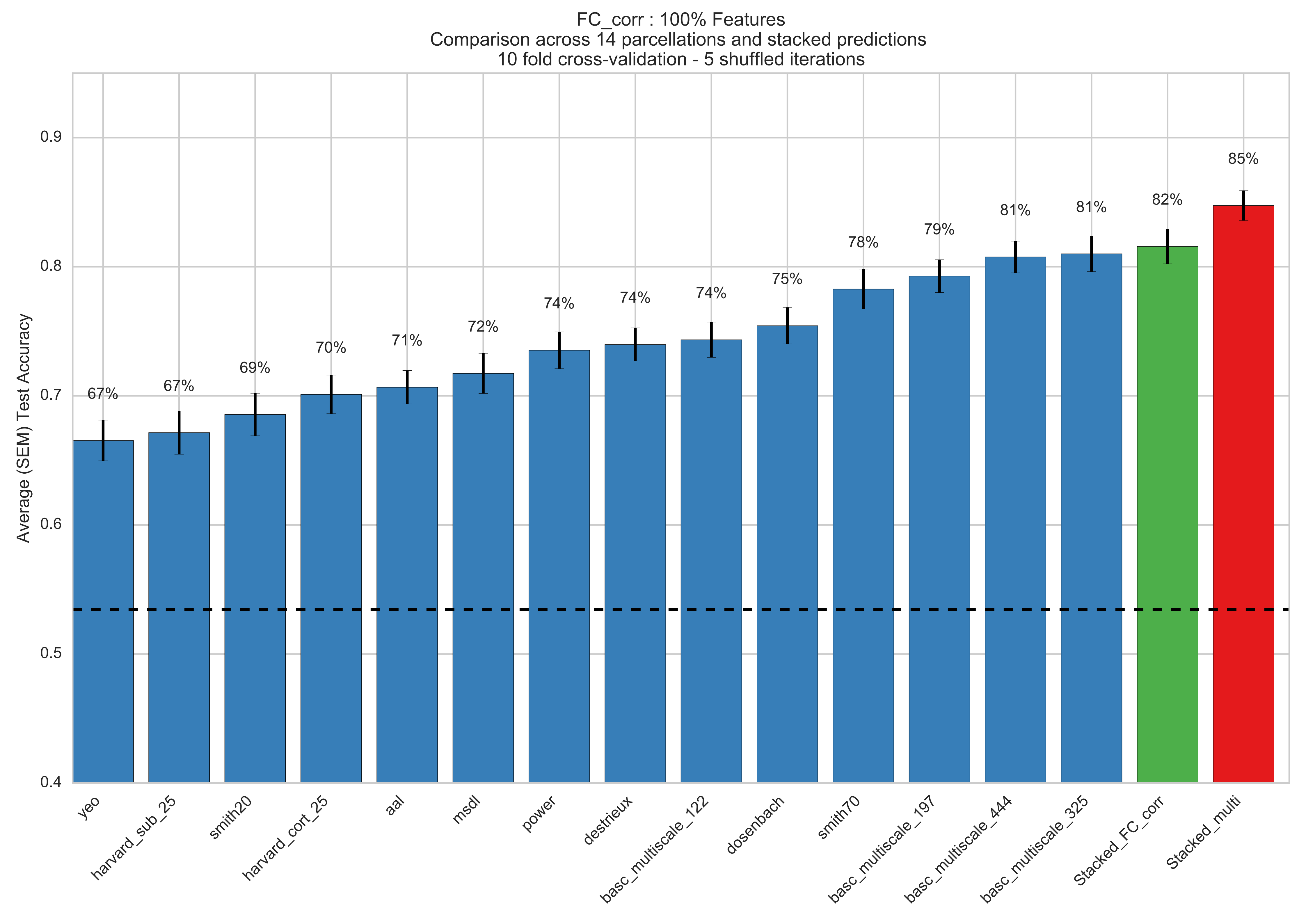


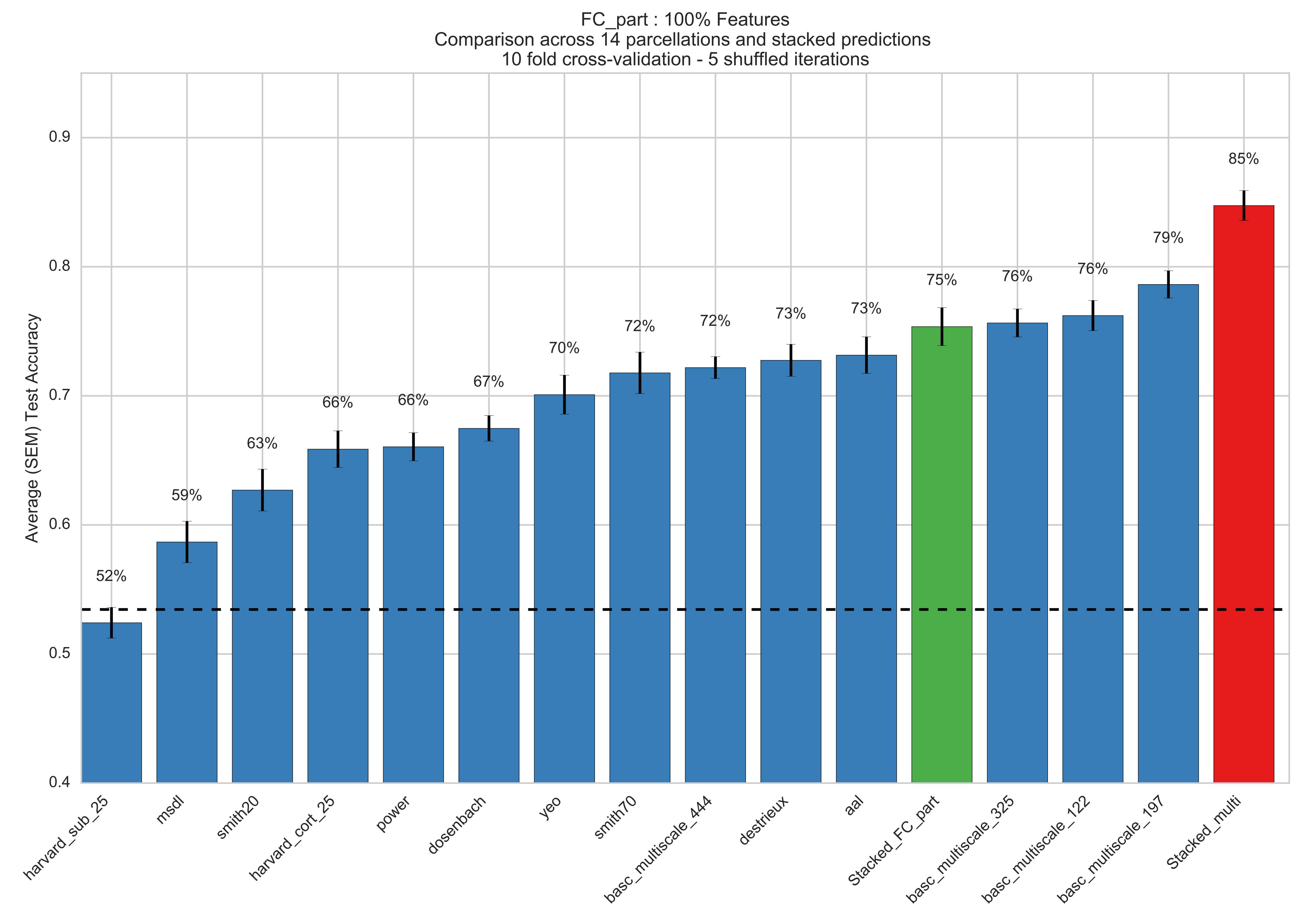
ReHo : Top 20% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
64%
65%
66%
66%
67%
70%
70%
71%
73%
73%
73%
73%
73%
75%
75%
82%
smith20
harvard_cort_25
harvard_sub_25
yeo
msdl
aal
basc_multiscale_122
basc_multiscale_325
basc_multiscale_197
basc_multiscale_444
destrieux
Stacked_ReHo
power
smith70
dosenbach
Stacked_multi

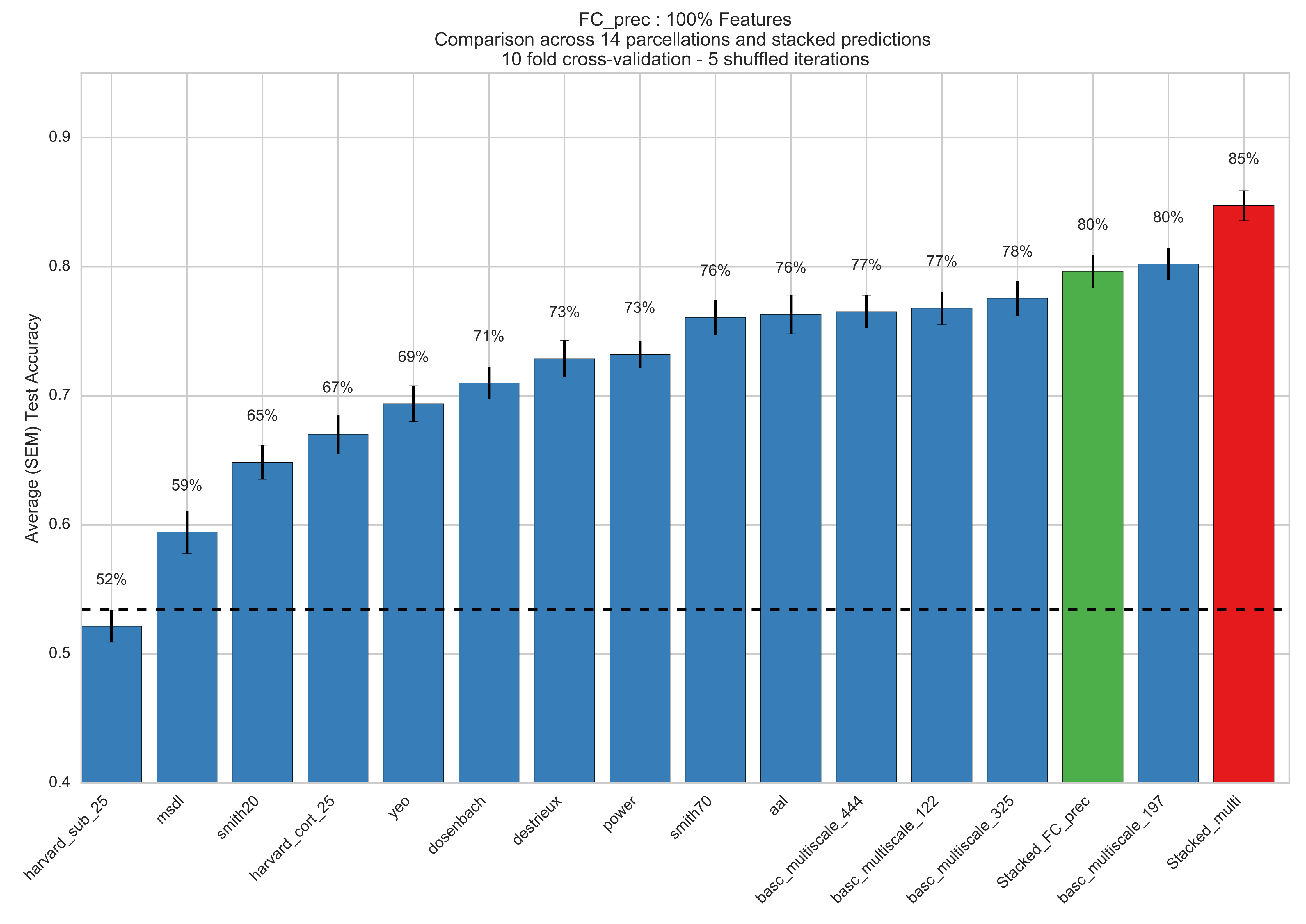

ALFF : Top 20% Feature Selection
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
59%
66%
66%
66%
67%
68%
68%
68%
69%
69%
71%
71%
71%
73%
75%
82%
smith20
smith70
harvard_sub_25
harvard_cort_25
yeo
destrieux
msdl
aal
basc_multiscale_122
dosenbach
basc_multiscale_197
basc_multiscale_325
Stacked_ALFF
basc_multiscale_444
power
Stacked_multi

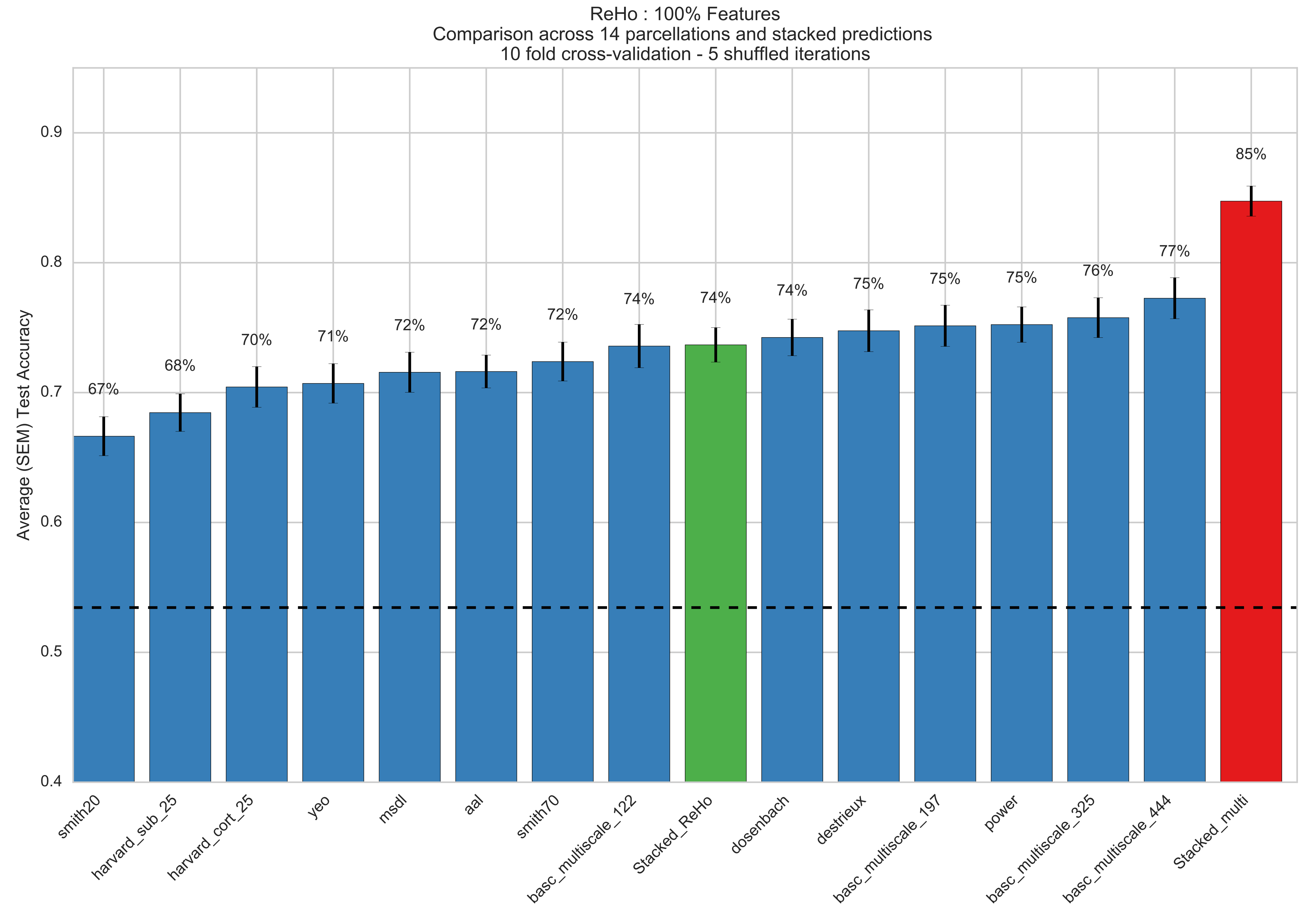
Feature selection / reduction method :100% Features

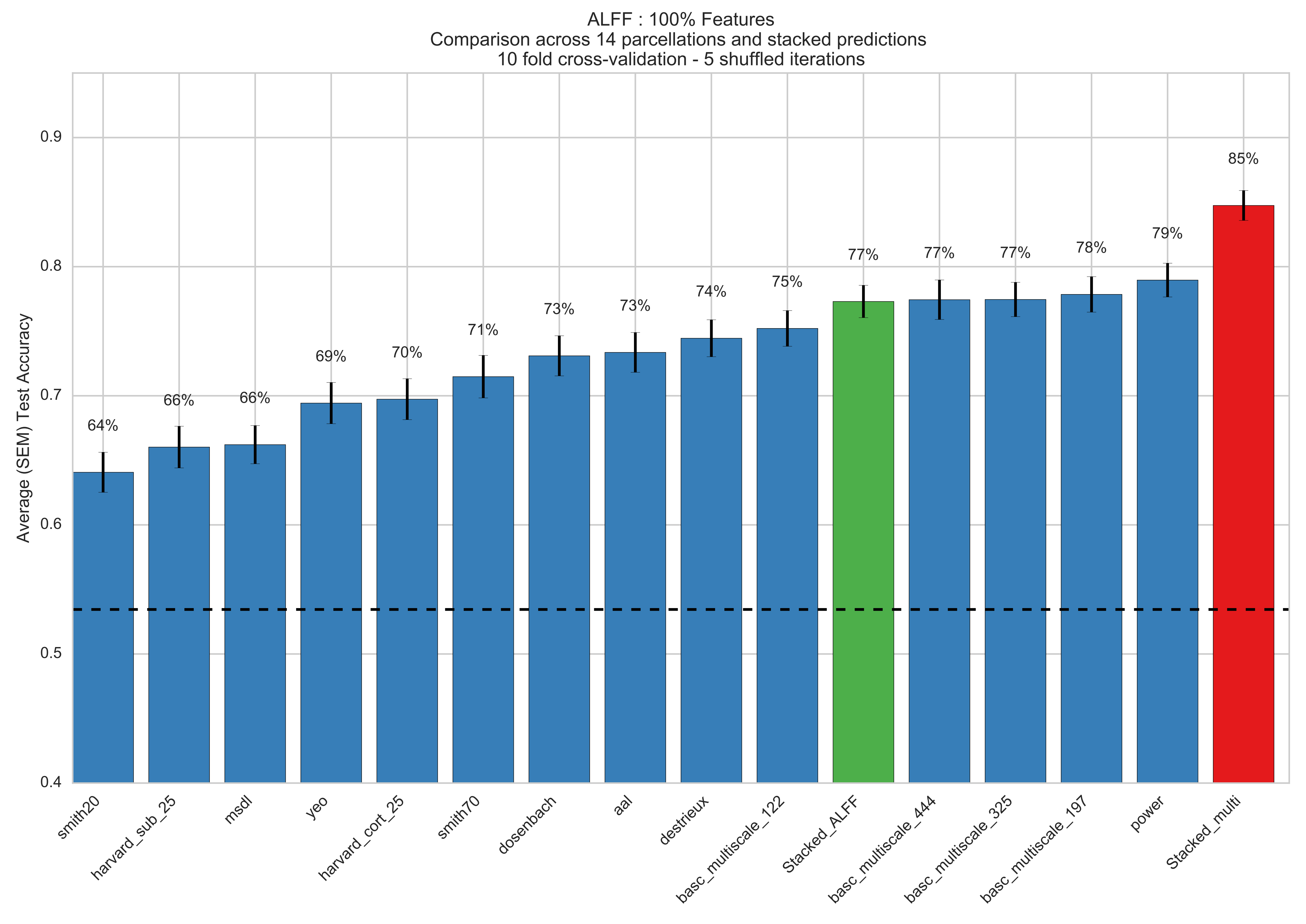

fALFF : 100% Features
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
60%
67%
71%
71%
71%
72%
73%
74%
74%
75%
75%
75%
75%
76%
78%
85%
harvard_sub_25
smith20
msdl
smith70
yeo
harvard_cort_25
destrieux
basc_multiscale_197
aal
power
dosenbach
Stacked_fALFF
basc_multiscale_122
basc_multiscale_325
basc_multiscale_444
Stacked_multi


FC_corr : 100% Features
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
67%
67%
69%
70%
71%
72%
74%
74%
74%
75%
78%
79%
81%
81%
82%
85%
yeo
harvard_sub_25
smith20
harvard_cort_25
aal
msdl
power
destrieux
basc_multiscale_122
dosenbach
smith70
basc_multiscale_197
basc_multiscale_444
basc_multiscale_325
Stacked_FC_corr
Stacked_multi


FC_part : 100% Features
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
52%
59%
63%
66%
66%
67%
70%
72%
72%
73%
73%
75%
76%
76%
79%
85%
harvard_sub_25
msdl
smith20
harvard_cort_25
power
dosenbach
yeo
smith70
basc_multiscale_444
destrieux
aal
Stacked_FC_part
basc_multiscale_325
basc_multiscale_122
basc_multiscale_197
Stacked_multi


FC_prec : 100% Features
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
52%
59%
65%
67%
69%
71%
73%
73%
76%
76%
77%
77%
78%
80%
80%
85%
harvard_sub_25
msdl
smith20
harvard_cort_25
yeo
dosenbach
destrieux
power
smith70
aal
basc_multiscale_444
basc_multiscale_122
basc_multiscale_325
Stacked_FC_prec
basc_multiscale_197
Stacked_multi


ReHo : 100% Features
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.9
0.8
0.7
0.6
0.5
0.4
67%
68%
70%
71%
72%
72%
72%
74%
74%
74%
75%
75%
75%
76%
77%
85%
smith20
harvard_sub_25
harvard_cort_25
yeo
msdl
aal
smith70
basc_multiscale_122
Stacked_ReHo
dosenbach
destrieux
basc_multiscale_197
power
basc_multiscale_325
basc_multiscale_444
Stacked_multi


ALFF : 100% Features
Comparison across 14 parcellations and stacked predictions
10 fold cross-validation - 5 shuffled iterations
Average (SEM) Test Accuracy
0.4
0.5
0.6
0.7
0.8
0.9
64%
66%
66%
69%
70%
71%
73%
73%
74%
75%
77%
77%
77%
78%
79%
85%
smith20
harvard_sub_25
msdl
yeo
harvard_cort_25
smith70
dosenbach
aal
destrieux
basc_multiscale_122
Stacked_ALFF
basc_multiscale_444
basc_multiscale_325
basc_multiscale_197
power
Stacked_multi