

(AQS)

(Alzheimer's Quick Screen)

Assessment of temporo-parietal lobe dysfunction

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Test Procedure

Step 1.

Practice trial to make sure the subject names the stimuli correctly.

Timed Measures

Stimulus

Cut-Off (sec.)

Step 2.

(miniature test plates shown here)

Name the colours as quickly as you can.

35

Step 3.

Name the forms as quickly as you can.

35

Step 4.

Name the colour-form combinations

as quickly as you can.

AQS-CF

70

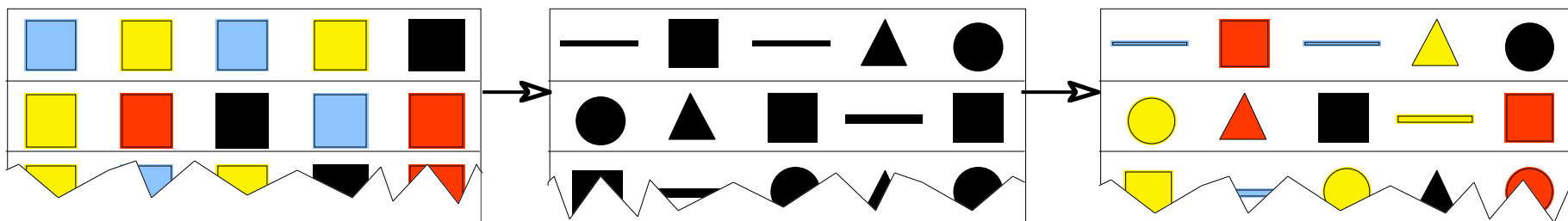
Total: 140 seconds.

The standardized cut-off scores are independent of age, sex, and educational level.

AQT Screener

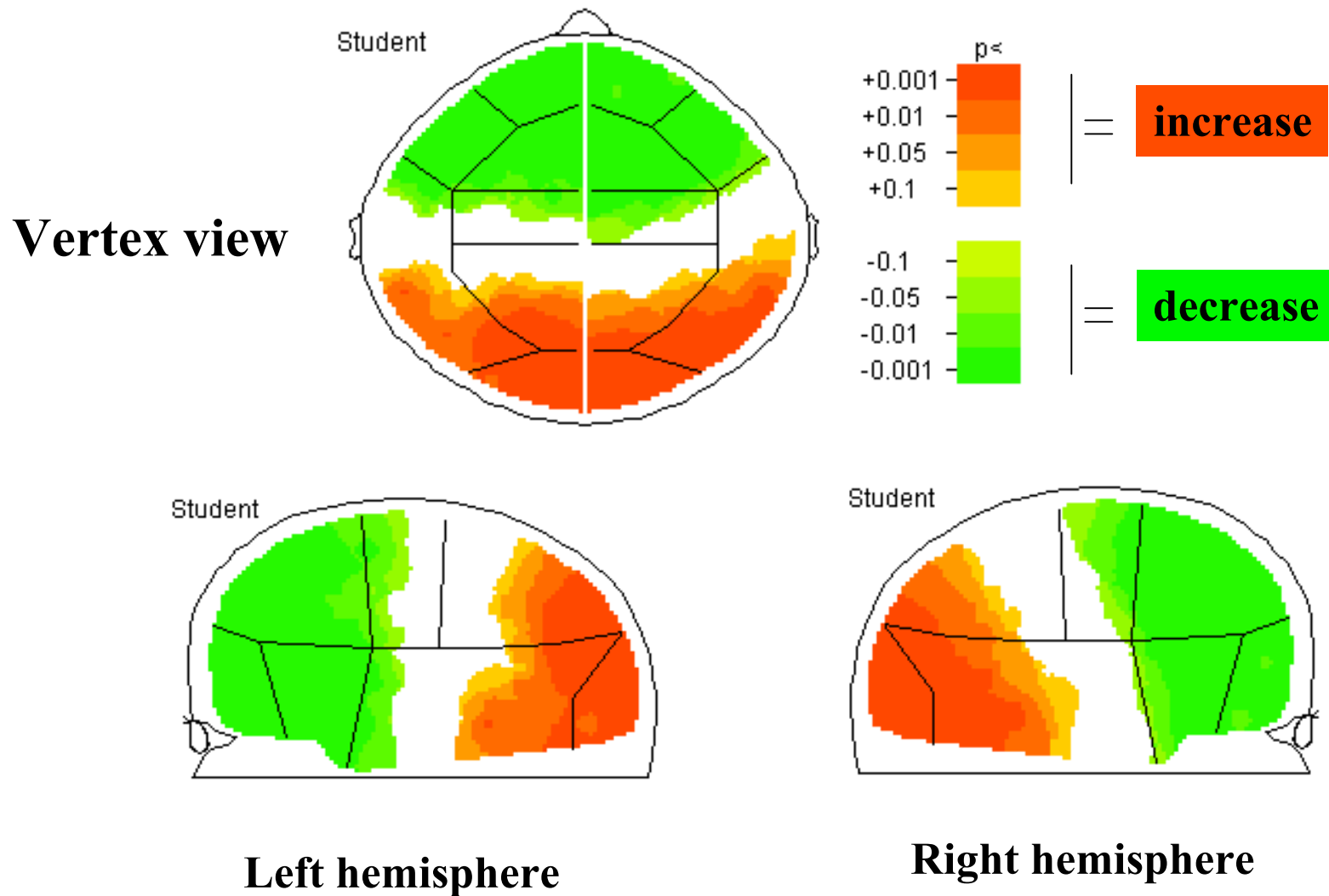
Color-Form Naming Tests

(Test plates with 40 items each)



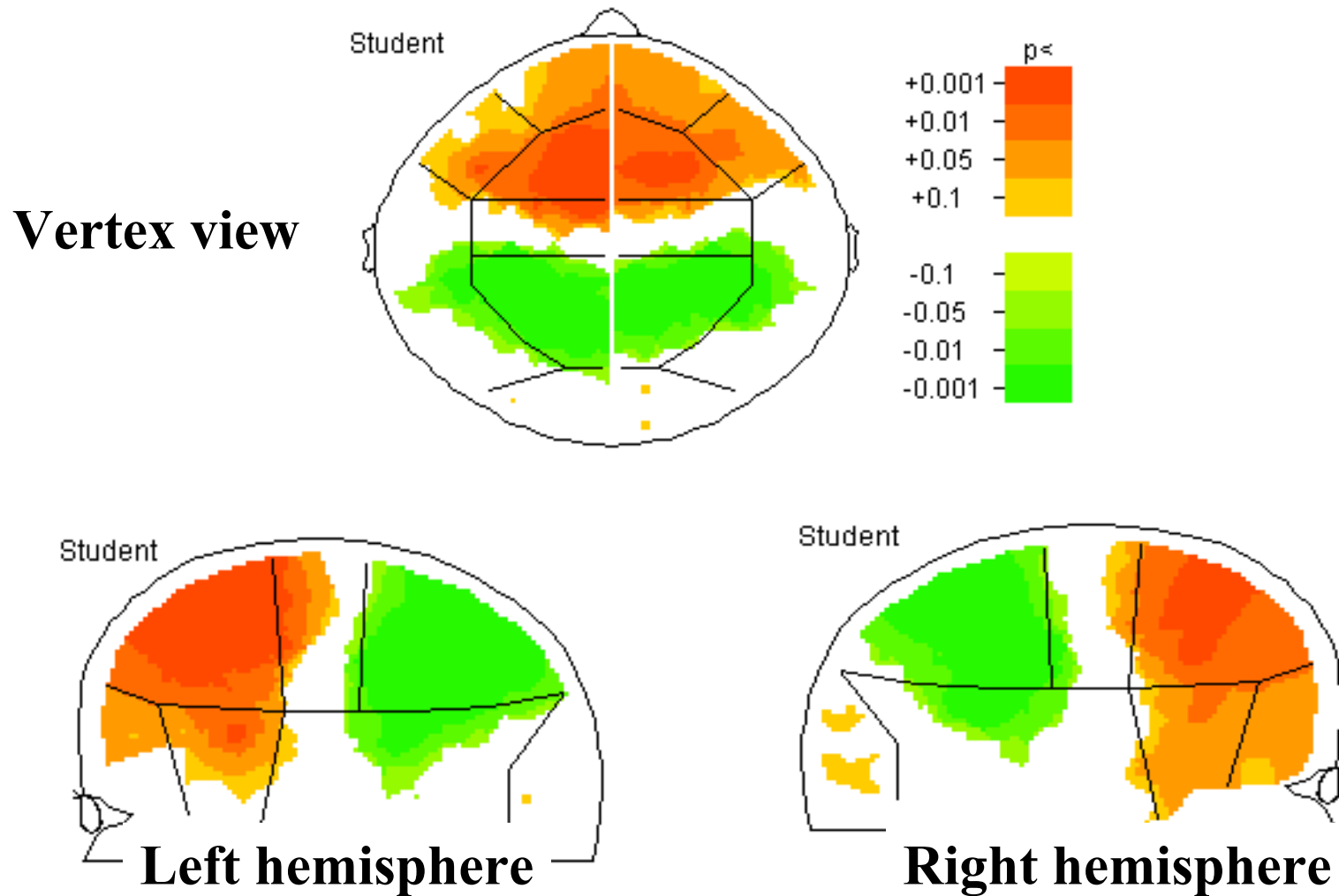
Cortical areas engaged during color-form naming

Statistical comparison between rest and color-form rCBF in normal adults
(n=52)

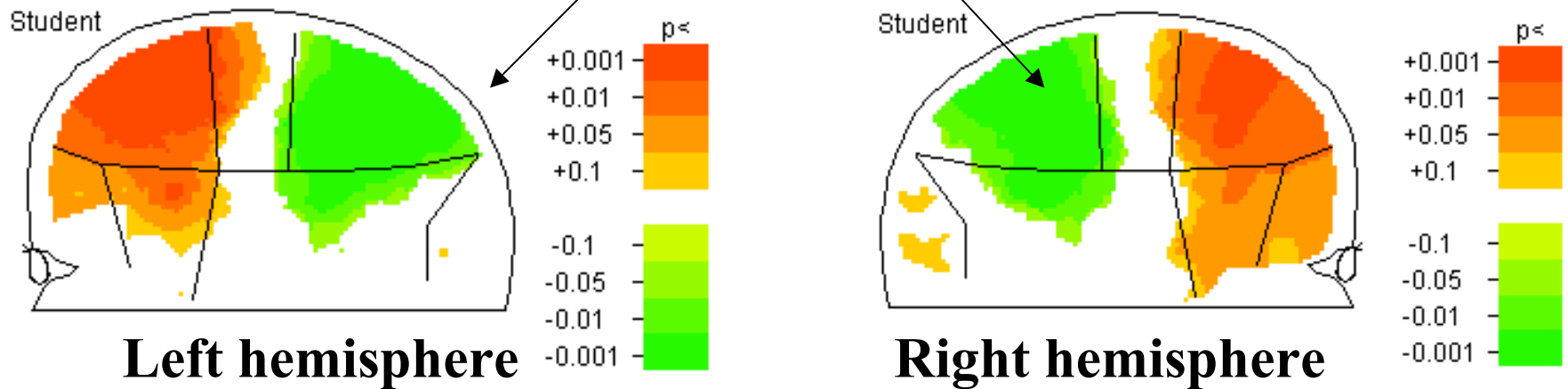


Alzheimer-pathology during color-form naming

Significant deviations from normal color-form rCBF in AD adults (n=32)



Correlation between AD-pathology and cognitive measures



	r	$p <$	r	$p <$
AQT	0.50	0.0001	0.37	0.005
MMSE	0.37	0.004	0.23	n.s.
ADAS-cog	0.47	0.005	0.17	n.s.

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Sample Characteristics

Healthy Controls (n=52) Alzheimer patients (n=32) p-value

AQT (secs)	52.7 (10.5)*	90.0 (18.8)	< 0.0001
MMSE	28.9 (1.2)	23.3 (3.8)	< 0.0001
ADAS-cog	9.3 (4.9)	30.4 (9.1)	< 0.0001
Age	66.4 (13.4)	74.2 (6.5)	< 0.01

* Mean and standard deviation

Diagnostic Characteristics

	Sensitivity	Specificity	Predictive Value (%)	
	(%)	(%)	Positive	Negative
AQT-CF Screenener	95	99	99.9	97.8
MMSE	91	91	82.6	95.4
ADAS-cog	95	98	95.3	97.8

Conclusion

Our rCBF-findings are consistent with the body of brain imaging research showing that temporal and parietal cortices are engaged in processing simple visual stimuli such as colour and form.

We have shown that functional abnormalities in these areas are directly related to a slower behavioural output (seconds), which can be objectively measured with AQS.

References:

1. Wiig et al., *Perceptual & Motor Skills*, 2002, 94, 1230-1244.
2. Wiig et al., Poster presented at ICAD, Sockholm, 2002.