

**Supplementary Table 1: Annualized rates of change in fractional anisotropy across regions-of-interest**

ROI	Hem	Control	agPPA	PPAOS	agPPA~Control	PPAOS~Control	agPPA~PPAOS
					AUROC (p)	AUROC (p)	AUROC (p)
Inferior Frontal White Matter	L	-0.005 (0.012)	-0.038 (0.027)	-0.013 (0.014)	0.9 (p=0.001)	0.707 (p=0.083)	0.768 (p=0.185)
	R	-0.004 (0.015)	-0.032 (0.02)	-0.012 (0.012)	0.881 (p=0.001)	0.726 (p=0.063)	0.8 (p=0.185)
Inferior Fronto-occipital Fasciculus	L	-0.002 (0.028)	-0.019 (0.023)	-0.008 (0.016)	0.734 (p=0.073)	0.59 (p=0.526)	0.641 (p=0.547)
	R	0.005 (0.021)	-0.031 (0.031)	-0.008 (0.019)	0.887 (p=0.001)	0.698 (p=0.091)	0.777 (p=0.185)
Middle Frontal white matter	L	-0.007 (0.014)	-0.033 (0.022)	-0.02 (0.018)	0.862 (p=0.002)	0.709 (p=0.083)	0.686 (p=0.503)
	R	-0.001 (0.011)	-0.027 (0.016)	-0.009 (0.019)	0.928 (p<0.001)	0.686 (p=0.098)	0.768 (p=0.185)
Middle Fronto-orbital white matter	L	-0.005 (0.026)	-0.018 (0.042)	-0.006 (0.014)	0.592 (p=0.523)	0.534 (p=0.818)	0.555 (p=0.848)
	R	0.004 (0.023)	-0.022 (0.043)	0.006 (0.027)	0.712 (p=0.109)	0.534 (p=0.818)	0.686 (p=0.503)
Superior Frontal white matter	L	-0.002 (0.011)	-0.012 (0.02)	-0.005 (0.013)	0.737 (p=0.071)	0.557 (p=0.732)	0.659 (p=0.547)
	R	-0 (0.011)	-0.013 (0.021)	-0.005 (0.011)	0.765 (p=0.038)	0.634 (p=0.306)	0.695 (p=0.503)
Superior Fronto-occipital Fasciculus	L	0.006 (0.044)	0.006 (0.04)	0 (0.041)	0.517 (p=0.934)	0.559 (p=0.732)	0.527 (p=0.949)
	R	-0.002 (0.038)	0.026 (0.042)	0.003 (0.042)	0.671 (p=0.217)	0.553 (p=0.732)	0.645 (p=0.547)
Superior Longitudinal Fasciculus	L	-0 (0.014)	-0.021 (0.019)	-0.019 (0.015)	0.803 (p=0.018)	0.833 (p=0.001)	0.5 (p=1)
	R	0.002 (0.01)	-0.018 (0.017)	-0.01 (0.026)	0.859 (p=0.002)	0.784 (p=0.007)	0.586 (p=0.797)
Lateral Fronto-orbital white matter	L	-0.012 (0.043)	-0.035 (0.047)	-0.009 (0.032)	0.705 (p=0.115)	0.605 (p=0.449)	0.655 (p=0.547)
	R	-0.003 (0.03)	-0.006 (0.035)	0 (0.028)	0.583 (p=0.579)	0.524 (p=0.85)	0.536 (p=0.949)
Cingulum	L	0 (0.015)	-0.008 (0.029)	-0.008 (0.028)	0.655 (p=0.255)	0.626 (p=0.341)	0.518 (p=0.974)
	R	0 (0.021)	-0.024 (0.022)	-0.009 (0.022)	0.799 (p=0.018)	0.591 (p=0.526)	0.677 (p=0.544)
Body of Corpus Callosum		0.001 (0.018)	0.014 (0.042)	0.001 (0.04)	0.527 (p=0.903)	0.614 (p=0.406)	0.645 (p=0.547)
Genu of Corpus Callosum		-0.001 (0.01)	-0.004 (0.022)	-0.002 (0.016)	0.561 (p=0.737)	0.536 (p=0.818)	0.545 (p=0.904)
Splenium of Corpus Callosum		0.002 (0.007)	-0.001 (0.033)	-0.004 (0.018)	0.687 (p=0.163)	0.676 (p=0.119)	0.527 (p=0.949)
Precentral	L	0.002 (0.009)	-0.017 (0.035)	-0.017 (0.014)	0.655 (p=0.255)	0.895 (p<0.001)	0.668 (p=0.547)
	R	-0.002 (0.009)	-0.016 (0.017)	-0.017 (0.015)	0.784 (p=0.023)	0.803 (p=0.004)	0.532 (p=0.949)
Postcentral	L	-0 (0.011)	0.001 (0.024)	-0.007 (0.015)	0.549 (p=0.806)	0.631 (p=0.316)	0.659 (p=0.547)
	R	-0.001 (0.01)	-0.004 (0.017)	-0.004 (0.015)	0.505 (p=0.976)	0.595 (p=0.512)	0.5 (p=1)
Corticospinal Tract	L	0.006 (0.024)	-0.02 (0.037)	-0.013 (0.026)	0.796 (p=0.018)	0.695 (p=0.093)	0.645 (p=0.547)
	R	0.005 (0.027)	-0.005 (0.054)	-0.012 (0.025)	0.687 (p=0.163)	0.676 (p=0.119)	0.555 (p=0.848)
Temporal	L	-0.002 (0.003)	-0.005 (0.006)	-0.004 (0.005)	0.727 (p=0.077)	0.569 (p=0.663)	0.595 (p=0.792)

	R	-0.003 (0.004)	-0.006 (0.009)	-0.003 (0.007)	0.592 (p=0.523)	0.524 (p=0.85)	0.568 (p=0.848)
Parietal	L	-0.001 (0.005)	-0.005 (0.011)	-0.005 (0.008)	0.633 (p=0.342)	0.691 (p=0.096)	0.514 (p=0.974)
	R	-0.001 (0.003)	-0.006 (0.01)	-0.006 (0.007)	0.639 (p=0.328)	0.75 (p=0.029)	0.555 (p=0.848)
Occipital	L	-0.003 (0.006)	-0.002 (0.009)	-0.004 (0.007)	0.524 (p=0.903)	0.553 (p=0.732)	0.555 (p=0.848)
	R	-0.003 (0.007)	-0.006 (0.006)	-0.004 (0.006)	0.614 (p=0.424)	0.502 (p=0.992)	0.586 (p=0.797)
Uncinate Fasciculus	L	-0.015 (0.034)	-0.031 (0.035)	-0.018 (0.04)	0.655 (p=0.255)	0.512 (p=0.931)	0.614 (p=0.672)
	R	0.021 (0.051)	-0.027 (0.047)	-0.015 (0.061)	0.727 (p=0.077)	0.662 (p=0.167)	0.555 (p=0.848)
Posterior Thalamic Radiation	L	0.003 (0.012)	0.004 (0.022)	-0.002 (0.02)	0.511 (p=0.965)	0.576 (p=0.628)	0.564 (p=0.848)
	R	0 (0.011)	-0.002 (0.021)	0.003 (0.029)	0.608 (p=0.453)	0.548 (p=0.749)	0.564 (p=0.848)
Superior Cerebellar Peduncle	L	0.001 (0.016)	-0.019 (0.013)	-0.002 (0.023)	0.856 (p=0.002)	0.574 (p=0.628)	0.736 (p=0.338)
	R	-0.001 (0.018)	0 (0.017)	-0.008 (0.014)	0.549 (p=0.806)	0.603 (p=0.449)	0.645 (p=0.547)
Anterior Limb of Internal Capsule	L	-0.001 (0.024)	-0.001 (0.042)	0.003 (0.031)	0.53 (p=0.903)	0.543 (p=0.784)	0.514 (p=0.974)
	R	-0.005 (0.026)	0.017 (0.036)	0 (0.039)	0.658 (p=0.255)	0.566 (p=0.68)	0.605 (p=0.731)
Posterior Limb of Internal Capsule	L	-0.001 (0.014)	-0.008 (0.024)	-0.009 (0.016)	0.624 (p=0.376)	0.643 (p=0.261)	0.532 (p=0.949)
	R	0.001 (0.014)	-0.002 (0.021)	-0.008 (0.024)	0.527 (p=0.903)	0.698 (p=0.091)	0.627 (p=0.601)
External Capsule	L	-0.006 (0.018)	-0.025 (0.016)	-0.019 (0.022)	0.793 (p=0.018)	0.719 (p=0.069)	0.636 (p=0.547)
	R	-0.001 (0.02)	-0.024 (0.026)	-0.011 (0.017)	0.752 (p=0.052)	0.686 (p=0.098)	0.636 (p=0.547)

Results are shown as Median (interquartile range). Declines in FA over time are represented as negative values. All p values are corrected using the false discovery rate

**Supplementary Table 2: Annualized rates of change in mean diffusivity across regions-of-interest**

ROI	He m	Control	agPPA	PPAOS	agPPA~Control AUROC (p)	PPAOS~Control AUROC (p)	agPPA~PPAOS AUROC (p)
Inferior Frontal White Matter	L	0.003 (0.014)	0.031 (0.024)	0.008 (0.015)	0.85 (p=0.004)	0.607 (p=0.355)	0.768 (p=0.154)
	R	0 (0.016)	0.025 (0.019)	0.008 (0.011)	0.9 (p=0.001)	0.698 (p=0.086)	0.8 (p=0.086)
Inferior Fronto-occipital Fasciculus	L	0.001 (0.011)	0.026 (0.034)	0.006 (0.01)	0.752 (p=0.058)	0.65 (p=0.196)	0.586 (p=0.906)
	R	-0.003 (0.014)	0.025 (0.048)	0.005 (0.015)	0.727 (p=0.076)	0.659 (p=0.171)	0.618 (p=0.906)
Middle Frontal white matter	L	0.008 (0.012)	0.038 (0.026)	0.013 (0.016)	0.84 (p=0.005)	0.591 (p=0.441)	0.795 (p=0.086)
	R	0.007 (0.018)	0.025 (0.017)	0.014 (0.014)	0.784 (p=0.028)	0.674 (p=0.13)	0.709 (p=0.468)
Middle Fronto-orbital white matter	L	0.001 (0.024)	0.015 (0.058)	0.01 (0.023)	0.514 (p=0.939)	0.538 (p=0.703)	0.536 (p=0.906)
	R	-0.005 (0.019)	0.002 (0.035)	-0.008 (0.037)	0.705 (p=0.094)	0.553 (p=0.604)	0.582 (p=0.906)
Superior Frontal white matter	L	0.003 (0.012)	0.019 (0.023)	0.008 (0.015)	0.752 (p=0.058)	0.648 (p=0.196)	0.655 (p=0.776)
	R	0.002 (0.01)	0.019 (0.016)	0.01 (0.014)	0.862 (p=0.002)	0.702 (p=0.084)	0.682 (p=0.712)
Superior Fronto-occipital Fasciculus	L	0.008 (0.026)	0.043 (0.036)	0.025 (0.026)	0.734 (p=0.071)	0.636 (p=0.234)	0.605 (p=0.906)
	R	0.002 (0.032)	0.016 (0.059)	0.012 (0.038)	0.658 (p=0.212)	0.591 (p=0.441)	0.595 (p=0.906)
Superior Longitudinal Fasciculus	L	0 (0.009)	0.013 (0.017)	0.013 (0.013)	0.734 (p=0.071)	0.802 (p=0.003)	0.518 (p=0.938)
	R	0.002 (0.008)	0.015 (0.018)	0.011 (0.011)	0.743 (p=0.071)	0.741 (p=0.03)	0.555 (p=0.906)
Lateral Fronto-orbital white matter	L	-0.002 (0.027)	0.026 (0.033)	0.012 (0.028)	0.73 (p=0.074)	0.641 (p=0.224)	0.623 (p=0.906)
	R	-0.01 (0.03)	0.002 (0.04)	-0.001 (0.019)	0.539 (p=0.843)	0.543 (p=0.683)	0.5 (p=1)
Cingulum	L	-0.003 (0.014)	0.008 (0.035)	-0.004 (0.033)	0.718 (p=0.081)	0.564 (p=0.552)	0.609 (p=0.906)
	R	-0.003 (0.012)	0.013 (0.034)	0 (0.022)	0.737 (p=0.071)	0.622 (p=0.29)	0.659 (p=0.776)
Body of Corpus Callosum		-0.007 (0.016)	-0.018 (0.052)	-0.013 (0.046)	0.527 (p=0.93)	0.609 (p=0.353)	0.586 (p=0.906)
Genu of Corpus Callosum		-0.001 (0.01)	-0.001 (0.023)	-0.006 (0.017)	0.514 (p=0.939)	0.54 (p=0.701)	0.527 (p=0.906)
Splenium of Corpus Callosum		-0.001 (0.009)	-0.004 (0.038)	0.001 (0.026)	0.555 (p=0.748)	0.6 (p=0.396)	0.545 (p=0.906)
Precentral	L	0 (0.009)	0.019 (0.028)	0.013 (0.011)	0.715 (p=0.081)	0.841 (p=0.001)	0.536 (p=0.906)
	R	0.003 (0.009)	0.022 (0.019)	0.017 (0.016)	0.828 (p=0.006)	0.803 (p=0.003)	0.541 (p=0.906)
Postcentral	L	-0.001 (0.01)	0.003 (0.019)	0.004 (0.014)	0.549 (p=0.782)	0.579 (p=0.492)	0.527 (p=0.906)

	R	0 (0.008)	0 (0.021)	0.007 (0.012)	0.514 (p=0.939)	0.693 (p=0.088)	0.618 (p=0.906)
Corticospinal Tract	L	-0.001 (0.031)	0.001 (0.075)	0.007 (0.025)	0.63 (p=0.315)	0.559 (p=0.572)	0.614 (p=0.906)
	R	-0.004 (0.02)	0.013 (0.063)	0.01 (0.024)	0.649 (p=0.246)	0.669 (p=0.135)	0.527 (p=0.906)
Temporal	L	0.001 (0.005)	0.005 (0.01)	0.004 (0.005)	0.718 (p=0.081)	0.64 (p=0.224)	0.591 (p=0.906)
	R	0.003 (0.006)	0.008 (0.01)	0.002 (0.006)	0.677 (p=0.155)	0.583 (p=0.492)	0.709 (p=0.468)
Parietal	L	0 (0.005)	0.005 (0.007)	0.004 (0.007)	0.683 (p=0.14)	0.693 (p=0.088)	0.541(p=0.906)
	R	0 (0.005)	0.005 (0.007)	0.005 (0.007)	0.699 (p=0.105)	0.688 (p=0.097)	0.523 (p=0.922)
Occipital	L	0 (0.006)	0.003 (0.005)	0.003 (0.009)	0.618 (p=0.358)	0.579 (p=0.492)	0.532 (p=0.906)
	R	0.002 (0.004)	0.004 (0.007)	0.002 (0.005)	0.561 (p=0.713)	0.514 (p=0.88)	0.559 (p=0.906)
Uncinate Fasciculus	L	0.007 (0.024)	0.018 (0.046)	0.015 (0.023)	0.502 (p=1)	0.629 (p=0.266)	0.582 (p=0.906)
	R	-0.005 (0.047)	0.025 (0.041)	0.018 (0.028)	0.724 (p=0.079)	0.65 (p=0.196)	0.509 (p=0.987)
Posterior Thalamic Radiation	L	0 (0.011)	-0.002 (0.034)	-0.001 (0.019)	0.52 (p=0.939)	0.528 (p=0.769)	0.555 (p=0.906)
	R	-0.001 (0.016)	0.011 (0.028)	0 (0.024)	0.718 (p=0.081)	0.56 (p=0.569)	0.641 (p=0.895)
Superior Cerebellar Peduncle	L	0.006 (0.011)	0.005 (0.017)	0.005 (0.014)	0.52 (p=0.939)	0.534 (p=0.721)	0.532 (p=0.906)
	R	0 (0.009)	0.003 (0.015)	0.004 (0.014)	0.574 (p=0.629)	0.621 (p=0.291)	0.568 (p=0.906)
Anterior Limb of Internal Capsule	L	0.003 (0.022)	0.029 (0.039)	0.018 (0.022)	0.693 (p=0.117)	0.679 (p=0.118)	0.559 (p=0.906)
	R	0.003 (0.016)	0.016 (0.036)	0.008 (0.035)	0.636 (p=0.291)	0.622 (p=0.29)	0.559 (p=0.906)
Posterior Limb of Internal Capsule	L	0.003 (0.012)	0.016 (0.022)	0.018 (0.019)	0.661 (p=0.206)	0.736 (p=0.033)	0.555( p=0.906)
	R	-0.002 (0.017)	0.016 (0.027)	0.01 (0.021)	0.737 (p=0.071)	0.733 (p=0.033)	0.564 (p=0.906)
External Capsule	L	0 (0.018)	0.027 (0.028)	0.014 (0.013)	0.828 (p=0.006)	0.762 (p=0.018)	0.609 (p=0.906)
	R	0.006 (0.014)	0.021 (0.017)	0.011 (0.015)	0.708 (p=0.09)	0.578 (p=0.495)	0.659 (p=0.776)

Results are shown as Median (interquartile range). Increase in mean diffusivity over time is represented as positive values. All p values are corrected using the false discovery rate

**Supplementary Table 3: Annualized rates of change in radial diffusivity across regions-of-interest**

ROI	Hem	Control	agPPA	PPAOS	agPPA~Control	PPAOS~Control	agPPA~PPAOS
					AUROC (p)	AUROC (p)	AUROC (p)
Inferior Frontal White Matter	L	0.005 (0.012)	0.031 (0.029)	0.003 (0.019)	0.751 (p=0.046)	0.569 (p=0.529)	0.791 (p=0.082)
	R	0.001 (0.01)	0.025 (0.021)	0.005 (0.009)	0.925 (p<0.001)	0.628 (p=0.267)	0.855 (p=0.022)
Inferior Fronto-occipital Fasciculus	L	0.001 (0.014)	0.025 (0.029)	0.008 (0.013)	0.789 (p=0.022)	0.625 (p=0.277)	0.691 (p=0.45)
	R	-0.001 (0.013)	0.024 (0.043)	0.005 (0.018)	0.751 (p=0.046)	0.587 (p=0.424)	0.641 (p=0.71)
Middle Frontal white matter	L	0.007 (0.013)	0.036 (0.025)	0.005 (0.013)	0.856 (p=0.003)	0.543 (p=0.728)	0.877 (p=0.016)
	R	0.003 (0.011)	0.023 (0.017)	0.007 (0.011)	0.826 (p=0.006)	0.601 (p=0.351)	0.795 (p=0.082)
Middle Fronto-orbital white matter	L	0.004 (0.022)	0.014 (0.039)	0.015 (0.02)	0.61 (p=0.434)	0.619 (p=0.306)	0.5 (p=1)
	R	-0.006 (0.021)	0.006 (0.038)	-0.002 (0.037)	0.639 (p=0.305)	0.635 (p=0.232)	0.532 (p=0.989)
Superior Frontal white matter	L	0.002 (0.009)	0.015 (0.023)	0.011 (0.012)	0.703 (p=0.103)	0.741 (p=0.032)	0.523 (p=0.989)
	R	0 (0.008)	0.016 (0.014)	0.01 (0.01)	0.869 (p=0.002)	0.775 (p=0.019)	0.664 (p=0.634)
Superior Fronto-occipital Fasciculus	L	0.008 (0.03)	0.039 (0.03)	0.012 (0.017)	0.775 (p=0.031)	0.572 (p=0.528)	0.777 (p=0.1)
	R	-0.001 (0.033)	0.006 (0.062)	0.005 (0.035)	0.634 (p=0.325)	0.607 (p=0.338)	0.577 (p=0.886)
Superior Longitudinal Fasciculus	L	0 (0.009)	0.015 (0.017)	0.01 (0.014)	0.743 (p=0.051)	0.697 (p=0.082)	0.573 (p=0.886)
	R	-0.001 (0.01)	0.015 (0.017)	0.002 (0.017)	0.794 (p=0.02)	0.615 (p=0.306)	0.695 (p=0.45)
Lateral Fronto-orbital white matter	L	0.003 (0.032)	0.033 (0.039)	0.014 (0.029)	0.714 (p=0.093)	0.618 (p=0.306)	0.641 (p=0.71)
	R	-0.008 (0.031)	-0.001 (0.044)	-0.002 (0.019)	0.529 (p=0.877)	0.525 (p=0.812)	0.514 (p=0.989)
Cingulum	L	-0.003 (0.014)	0.006 (0.034)	-0.003 (0.035)	0.703 (p=0.103)	0.568 (p=0.53)	0.586 (p=0.886)
	R	-0.003 (0.012)	0.013 (0.031)	0.002 (0.023)	0.759 (p=0.041)	0.638 (p=0.224)	0.595 (p=0.886)
Body of Corpus Callosum		-0.004 (0.017)	-0.018 (0.051)	-0.012 (0.05)	0.513 (p=0.94)	0.599 (p=0.354)	0.609 (p=0.886)
Genu of Corpus Callosum		-0.001 (0.009)	-0.001 (0.019)	-0.005 (0.017)	0.505 (p=0.969)	0.513 (p=0.896)	0.518 (p=0.989)
Splenium of Corpus Callosum		-0.003 (0.008)	-0.004 (0.039)	0.004 (0.017)	0.61 (p=0.434)	0.666 (p=0.161)	0.523 (p=0.989)
Precentral	L	-0.001 (0.009)	0.016 (0.026)	0.003 (0.015)	0.725 (p=0.078)	0.649 (p=0.204)	0.595 (p=0.886)
	R	0.002 (0.008)	0.018 (0.019)	0.001 (0.028)	0.773 (p=0.031)	0.615 (p=0.306)	0.673 (p=0.584)
Postcentral	L	-0.002 (0.009)	0.001 (0.02)	0.002 (0.013)	0.532 (p=0.872)	0.599 (p=0.354)	0.541 (p=0.989)
	R	-0.003 (0.012)	0 (0.021)	0.012 (0.015)	0.516 (p=0.94)	0.769 (p=0.019)	0.709 (p=0.377)
Corticospinal Tract	L	0.005 (0.02)	0.007 (0.041)	0.006 (0.025)	0.545 (p=0.865)	0.551 (p=0.669)	0.536 (p=0.989)
	R	0 (0.015)	0.011 (0.02)	0.011 (0.026)	0.703 (p=0.103)	0.65 (p=0.204)	0.514 (p=0.989)
Temporal	L	0.002 (0.005)	0.003 (0.01)	0.01 (0.015)	0.615 (p=0.421)	0.666 (p=0.161)	0.591 (p=0.886)

	R	0.002 (0.005)	0.007 (0.01)	0.004 (0.018)	0.65 (p=0.266)	0.532 (p=0.785)	0.623 (p=0.836)
Parietal	L	-0.001 (0.004)	0.004 (0.008)	0 (0.025)	0.682 (p=0.157)	0.643 (p=0.224)	0.532 (p=0.989)
	R	0 (0.006)	0.004 (0.007)	-0.006 (0.028)	0.679 (p=0.161)	0.571 (p=0.528)	0.573 (p=0.886)
Occipital	L	0 (0.007)	0.001 (0.004)	0.004 (0.007)	0.54 (p=0.872)	0.665 (p=0.161)	0.641 (p=0.71)
	R	0.003 (0.007)	0.003 (0.006)	0.003 (0.006)	0.543 (p=0.87)	0.538 (p=0.742)	0.509 (p=1)
Uncinate Fasciculus	L	0.01 (0.027)	0.018 (0.048)	0.016 (0.025)	0.508 (p=0.965)	0.623 (p=0.351)	0.553 (p=0.989)
	R	-0.006 (0.039)	0.025 (0.042)	0.023 (0.031)	0.652 (p=0.261)	0.684 (p=0.196)	0.508 (p=1)
Posterior Thalamic Radiation	L	0 (0.009)	-0.007 (0.033)	-0.002 (0.023)	0.535 (p=0.872)	0.549 (p=0.684)	0.527 (p=0.989)
	R	0 (0.012)	0.007 (0.024)	0.006 (0.012)	0.706 (p=0.103)	0.638 (p=0.224)	0.591 (p=0.886)
Superior Cerebellar Peduncle	L	0.006 (0.012)	0.005 (0.01)	0.009 (0.019)	0.513 (p=0.94)	0.509 (p=0.922)	0.541 (p=0.989)
	R	0.002 (0.009)	0.003 (0.014)	0.005 (0.015)	0.548 (p=0.865)	0.54 (p=0.742)	0.523 (p=0.989)
Anterior Limb of Internal Capsule	L	0.003 (0.017)	0.022 (0.034)	0.014 (0.017)	0.687 (p=0.144)	0.682 (p=0.124)	0.605 (p=0.886)
	R	0.005 (0.013)	0.007 (0.036)	0.006 (0.033)	0.532 (p=0.872)	0.531 (p=0.785)	0.514 (p=0.989)
Posterior Limb of Internal Capsule	L	0.001 (0.013)	0.015 (0.02)	0.012 (0.015)	0.746 (p=0.05)	0.71 (p=0.062)	0.586 (p=0.886)
	R	-0.002 (0.013)	0.009 (0.021)	0.007 (0.021)	0.644 (p=0.285)	0.699 (p=0.082)	0.55 (p=0.989)
External Capsule	L	0.005 (0.017)	0.027 (0.027)	0.016 (0.015)	0.77 (p=0.031)	0.725 (p=0.04)	0.582 (p=0.886)
	R	0.006 (0.015)	0.02 (0.016)	0.013 (0.016)	0.741 (p=0.052)	0.638 (p=0.224)	0.609 (p=0.886)

Results are shown as Median (interquartile range). Increase in radial diffusivity is represented with positive values. All p values are corrected using the false discovery rate

**Supplementary Table 4: Annualized rates of change in axial diffusivity across regions-of-interest**

ROI	Hem	Control	agPPA	PPAOS	agPPA~Control	PPAOS~Control	agPPA~PPAOS
					AUROC (p)	AUROC (p)	AUROC (p)
Inferior Frontal White Matter	L	0.005 (0.015)	0.031 (0.031)	0.011 (0.018)	0.761 (p=0.041)	0.619 (p=0.251)	0.689 (p=0.7)
	R	0 (0.012)	0.027 (0.022)	0.011 (0.013)	0.892 (p=0.005)	0.725 (p=0.022)	0.706 (p=0.7)
Inferior Fronto-occipital Fasciculus	L	0.004 (0.019)	0.028 (0.031)	0.012 (0.014)	0.719 (p=0.09)	0.666 (p=0.108)	0.622 (p=0.814)
	R	-0.001 (0.015)	0.028 (0.035)	0.009 (0.014)	0.81 (p=0.024)	0.71 (p=0.03)	0.65 (p=0.752)
Middle Frontal white matter	L	0.004 (0.013)	0.033 (0.022)	0.018 (0.018)	0.863 (p=0.008)	0.743 (p=0.013)	0.7 (p=0.7)
	R	0.003 (0.011)	0.026 (0.029)	0.019 (0.014)	0.732 (p=0.077)	0.838 (p<0.001)	0.589 (p=0.927)
Middle Fronto-orbital white matter	L	0.003 (0.02)	0.013 (0.044)	0.009 (0.016)	0.634 (p=0.334)	0.591 (p=0.418)	0.544 (p=0.999)
	R	-0.002 (0.021)	0.011 (0.047)	-0.011 (0.049)	0.637 (p=0.334)	0.557 (p=0.617)	0.561 (p=0.999)
Superior Frontal white matter	L	0 (0.014)	0.021 (0.023)	0.013 (0.016)	0.801 (p=0.029)	0.75 (p=0.011)	0.633 (p=0.752)
	R	0.002 (0.012)	0.02 (0.018)	0.014 (0.013)	0.824 (p=0.019)	0.771 (p=0.007)	0.639 (p=0.752)
Superior Fronto-occipital Fasciculus	L	0.012 (0.035)	0.036 (0.041)	0.027 (0.024)	0.657 (p=0.265)	0.66 (p=0.118)	0.522 (p=0.999)
	R	0.011 (0.03)	0.012 (0.052)	0.014 (0.042)	0.588 (p=0.521)	0.56 (p=0.603)	0.539 (p=0.999)
Superior Longitudinal Fasciculus	L	-0.001 (0.012)	0.018 (0.02)	0.019 (0.019)	0.788 (p=0.031)	0.806 (p=0.002)	0.5 (p=1)
	R	0 (0.01)	0.017 (0.015)	0.016 (0.017)	0.788 (p=0.031)	0.762 (p=0.007)	0.517 (p=0.999)
Lateral Fronto-orbital white matter	L	0.009 (0.027)	0.021 (0.032)	0.016 (0.024)	0.598 (p=0.481)	0.593 (p=0.417)	0.511 (p=0.999)
	R	-0.009 (0.037)	0.003 (0.048)	-0.004 (0.02)	0.565 (p=0.649)	0.531 (p=0.787)	0.572 (p=0.967)
Cingulum	L	-0.001 (0.017)	0.008 (0.037)	-0.008 (0.032)	0.686 (p=0.163)	0.534 (p=0.774)	0.683 (p=0.7)
	R	0 (0.014)	0.005 (0.023)	-0.004 (0.021)	0.614 (p=0.425)	0.509 (p=0.939)	0.639 (p=0.752)
Body of Corpus Callosum		-0.004 (0.015)	-0.024 (0.053)	-0.018 (0.044)	0.611 (p=0.434)	0.512 (p=0.928)	0.567 (p=0.99)
Genu of Corpus Callosum		0.001 (0.011)	-0.01 (0.024)	-0.004 (0.016)	0.621 (p=0.397)	0.574 (p=0.508)	0.578 (p=0.967)
Splenium of Corpus Callosum		-0.001 (0.009)	-0.002 (0.04)	-0.002 (0.028)	0.647 (p=0.294)	0.575 (p=0.507)	0.589 (p=0.927)
Precentral	L	-0.001 (0.01)	0.025 (0.033)	0.019 (0.013)	0.768 (p=0.039)	0.887 (p<0.001)	0.528 (p=0.999)
	R	0.002 (0.012)	0.025 (0.024)	0.023 (0.017)	0.797 (p=0.029)	0.875 (p<0.001)	0.511 (p=0.999)
Postcentral	L	0.001 (0.013)	0.007 (0.021)	0.005 (0.014)	0.601 (p=0.472)	0.585 (p=0.455)	0.511 (p=0.999)
	R	-0.001 (0.013)	0.008 (0.022)	0.009 (0.015)	0.562 (p=0.659)	0.719 (p=0.024)	0.528 (p=0.999)
Corticospinal Tract	L	0.004 (0.019)	0.04 (0.023)	0.012 (0.022)	0.882 (p=0.005)	0.625 (p=0.248)	0.811 (p=0.388)
	R	0.004 (0.015)	0.029 (0.022)	0.009 (0.026)	0.837 (p=0.015)	0.504 (p=0.965)	0.739 (p=0.7)
Temporal	L	0.002 (0.005)	0.002 (0.009)	0.005 (0.006)	0.552 (p=0.7)	0.625 (p=0.248)	0.556 (p=0.999)

	R	0.003 (0.005)	0.008 (0.008)	0.004 (0.006)	0.699 (p=0.129)	0.546 (p=0.718)	0.661 (p=0.752)
Parietal	L	0 (0.005)	0.007 (0.008)	0.007 (0.009)	0.775 (p=0.037)	0.76 (p=0.007)	0.533 (p=0.999)
	R	0 (0.006)	0.008 (0.007)	0.008 (0.009)	0.82 (p=0.019)	0.766 (p=0.007)	0.55 (p=0.999)
Occipital	L	0.001 (0.007)	0.002 (0.005)	0.005 (0.01)	0.575 (p=0.595)	0.671 (p=0.099)	0.617 (p=0.814)
	R	0.004 (0.009)	0.002 (0.007)	0.004 (0.005)	0.503 (p=0.988)	0.56 (p=0.603)	0.617 (p=0.814)
Uncinate Fasciculus	L	0.002 (0.032)	0.015 (0.025)	0.021 (0.027)	0.634 (p=0.334)	0.722 (p=0.023)	0.639 (p=0.752)
	R	-0.007 (0.039)	0.025 (0.027)	0.022 (0.034)	0.765 (p=0.039)	0.728 (p=0.021)	0.506 (p=1)
Posterior Thalamic Radiation	L	0.003 (0.013)	0.001 (0.038)	0.007 (0.019)	0.601 (p=0.472)	0.579 (p=0.494)	0.517 (p=0.999)
	R	0.001 (0.018)	0.01 (0.027)	0.008 (0.026)	0.68 (p=0.18)	0.649 (p=0.151)	0.533 (p=0.999)
Superior Cerebellar Peduncle	L	0.004 (0.012)	0.007 (0.01)	0.007 (0.017)	0.592 (p=0.511)	0.528 (p=0.801)	0.539 (p=0.999)
	R	0.004 (0.012)	0 (0.016)	0.006 (0.014)	0.542 (p=0.755)	0.575 (p=0.507)	0.583 (p=0.951)
Anterior Limb of Internal Capsule	L	0.005 (0.013)	0.032 (0.035)	0.014 (0.024)	0.719 (p=0.09)	0.613 (p=0.278)	0.661 (p=0.752)
	R	0.008 (0.014)	0.01 (0.027)	0.01 (0.033)	0.533 (p=0.795)	0.537 (p=0.76)	0.5 (p=1)
Posterior Limb of Internal Capsule	L	0.008 (0.016)	0.024 (0.02)	0.019 (0.017)	0.745 (p=0.061)	0.693 (p=0.051)	0.55 (p=0.999)
	R	0.001 (0.019)	0.024 (0.022)	0.009 (0.023)	0.781 (p=0.033)	0.621 (p=0.25)	0.689 (p=0.7)
External Capsule	L	0.004 (0.016)	0.021 (0.021)	0.018 (0.017)	0.725 (p=0.087)	0.732 (p=0.019)	0.572 (p=0.967)
	R	0.005 (0.014)	0.024 (0.02)	0.016 (0.02)	0.765 (p=0.039)	0.662 (p=0.118)	0.633 (p=0.752)

Results are shown as Median (interquartile range). Increase in axial diffusivity is represented with positive values. All p values are corrected using the false discovery rate