Additional file 1

Table 1. The analysis results of PAAD dataset about comparisons on the adopted wavelet-based, SWT-CNN methods and classic LASSO methods with diverse predictors

db6		Wavelet function	AUC at 3 years	AUC at 5 years	gene number
db		db2	0.707	0.825	7
db db5 0.787 0.845 6 db6 0.799 0.866 6 db7 0.804 0.867 5 db8 0.707 0.825 5 bior1.1 0.797 0.858 5 bior1.3 0.769 0.838 6 bior1.5 0.787 0.937 5 bior2.2 0.681 0.809 4 bior2.4 0.736 0.857 8 bior2.4 0.736 0.857 8 bior2.6 0.707 0.790 6 bior2.8 0.729 0.724 8 bior3.1 0.761 0.908 7 bior3.3 0.760 0.908 7 bior3.5 0.760 0.890 6 bior3.7 0.691 0.800 5 bior3.9 0.732 0.857 6 bior4.4 0.751 0.839 4 bior5.5 0.795 0.881 <td></td> <td>db3</td> <td>0.707</td> <td>0.825</td> <td>7</td>		db3	0.707	0.825	7
db6		db4	0.707	0.825	7
db7	db	db5	0.787	0.845	6
db8		db6	0.799	0.866	6
bior1.1 0.797 0.858 5 bior1.3 0.769 0.838 6 bior1.5 0.787 0.937 5 bior2.2 0.681 0.809 4 bior2.4 0.736 0.857 8 bior2.6 0.707 0.790 6 bior2.8 0.729 0.724 8 bior bior3.1 0.761 0.908 7 bior3.3 0.760 0.908 7 bior3.5 0.760 0.890 6 bior3.7 0.691 0.800 5 bior3.9 0.732 0.857 6 bior4.4 0.751 0.839 4 bior5.5 0.795 0.881 8 bior6.8 0.697 0.792 6 sym2 0.749 0.873 8 sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym6 0.658 0.837 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dedmeyer 0.823 0.869 7		db7	0.804	0.867	5
bior1.3		db8	0.707	0.825	5
bior1.5		bior1.1	0.797	0.858	5
bior2.2		bior1.3	0.769	0.838	6
bior2.4 0.736 0.857 8 bior2.6 0.707 0.790 6 bior2.8 0.729 0.724 8 bior bior3.1 0.761 0.908 7 bior3.3 0.760 0.908 7 bior3.5 0.760 0.890 6 bior3.7 0.691 0.800 5 bior3.9 0.732 0.857 6 bior4.4 0.751 0.839 4 bior5.5 0.795 0.881 8 bior6.8 0.697 0.792 6 sym2 0.749 0.873 8 sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym sym5 0.767 0.855 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.788 0.825 6 sym8 0.787 0.788 0.825 6 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		bior1.5	0.787	0.937	5
bior2.6		bior2.2	0.681	0.809	4
bior bior 2.8		bior2.4	0.736	0.857	8
bior bior3.1 0.761 0.908 7 bior3.3 0.760 0.908 7 bior3.5 0.760 0.890 6 bior3.7 0.691 0.800 5 bior3.9 0.732 0.857 6 bior4.4 0.751 0.839 4 bior5.5 0.795 0.881 8 bior6.8 0.697 0.792 6 sym2 0.749 0.873 8 sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif4 0.696 0.788 5 coif5 0.700 0.785 9 coif5 0.700 0.785		bior2.6	0.707	0.790	6
bior3.3		bior2.8	0.729	0.724	8
bior3.5 0.760 0.890 6 bior3.7 0.691 0.800 5 bior3.9 0.732 0.857 6 bior4.4 0.751 0.839 4 bior5.5 0.795 0.881 8 bior6.8 0.697 0.792 6 sym2 0.749 0.873 8 sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym6 0.658 0.837 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif4 0.696 0.788 5 coif5 0.700 0.785 9 coif5 0.700 0.785 9 coif5 0.700 0.785 9 chaar 0.618 0.756 5 dmeyer 0.823 0.869 7	bior	bior3.1	0.761	0.908	7
bior3.7		bior3.3	0.760	0.908	7
bior3.9		bior3.5	0.760	0.890	6
bior4.4 0.751 0.839 4 bior5.5 0.795 0.881 8 bior6.8 0.697 0.792 6 sym2 0.749 0.873 8 sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym6 0.658 0.837 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		bior3.7	0.691	0.800	5
bior5.5 0.795 0.881 8 bior6.8 0.697 0.792 6 sym2 0.749 0.873 8 sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym sym5 0.767 0.855 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		bior3.9	0.732	0.857	6
bior6.8 0.697 0.792 6 sym2 0.749 0.873 8 sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym sym5 0.767 0.855 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif5 0.700 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		bior4.4	0.751	0.839	4
sym2 0.749 0.873 8 sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym sym5 0.767 0.855 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		bior5.5	0.795	0.881	8
sym3 0.806 0.904 5 sym4 0.691 0.756 7 sym sym5 0.767 0.855 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		bior6.8	0.697	0.792	6
sym sym5 0.767 0.855 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		sym2	0.749	0.873	8
sym sym5 0.767 0.855 5 sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		sym3	0.806	0.904	5
sym6 0.658 0.837 5 sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		sym4	0.691	0.756	7
sym7 0.788 0.825 6 sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7	sym	sym5	0.767	0.855	5
sym8 0.787 0.845 7 coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		sym6	0.658	0.837	5
coif2 0.700 0.785 9 coif3 0.775 0.745 6 coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		sym7	0.788	0.825	6
coif3 0.775 0.745 6 coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		sym8	0.787	0.845	7
coif coif4 0.696 0.788 5 coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		coif2	0.700	0.785	9
coif5 0.700 0.785 9 haar 0.618 0.756 5 dmeyer 0.823 0.869 7		coif3	0.775	0.745	6
haar 0.618 0.756 5 dmeyer 0.823 0.869 7	coif	coif4	0.696	0.788	5
dmeyer 0.823 0.869 7		coif5	0.700	0.785	9
·	haar		0.618	0.756	5
rbio1.1 0.759 0.826 11	dmeyer		0.823	0.869	7
	-	rbio1.1	0.759	0.826	11

LASSO		0.782	0.802	11
SWT-CNN	sym4	0.721	0.859	8
	fk22	0.733	0.856	8
	fk18	0.689	0.792	7
	fk14	0.672	0.861	5
fk	fk8	0.682	0.827	4
	fk6	0.681	0.859	7
	fk4	0.687	0.873	6
	rbio6.8	0.784	0.817	7
	rbio5.5	0.762	0.760	10
	rbio4.4	0.795	0.824	7
	rbio3.9	0.693	0.725	6
	rbio3.7	0.783	0.858	8
	rbio3.5	0.749	0.774	7
	rbio3.3	0.595	0.719	6
rbio	rbio3.1	0.812	0.834	9
	rbio2.8	0.852	0.897	10
	rbio2.6	0.790	0.894	9
	rbio2.4	0.799	0.894	9
	rbio2.2	0.823	0.884	7
	rbio1.5	0.766	0.827	8
	rbio1.3	0.726	0.734	5

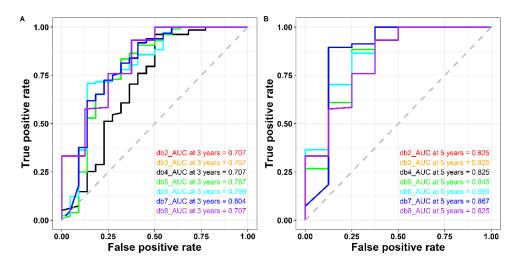


Figure 1. The performance of PAAD dataset on db basis function.

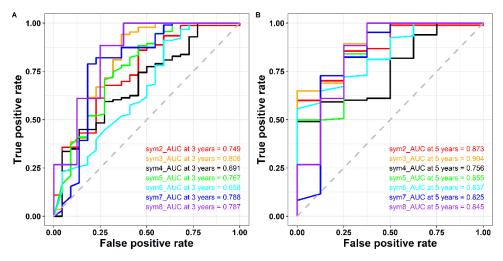


Figure 2. The performance of PAAD dataset on sym basis function.

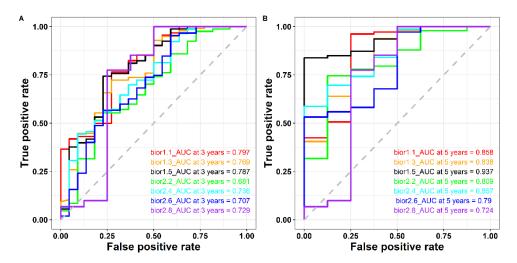


Figure 3. The performance of PAAD dataset on bior basis function (bior1.1~bior2.8).

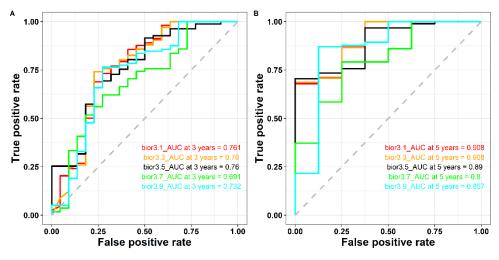


Figure 4. The performance of PAAD dataset on bior basis function (bior3.1~bior3.9).

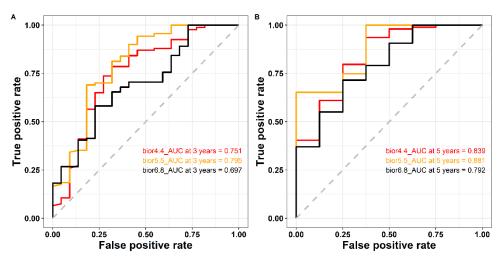


Figure 5. The performance of PAAD dataset on bior basis function (bior4.4~bior6.8).

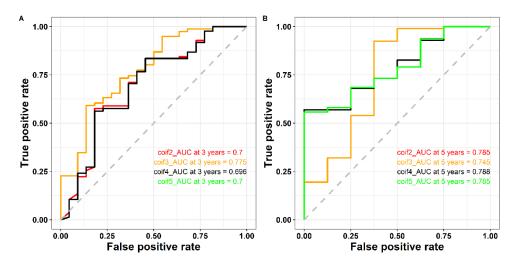


Figure 6. The performance of PAAD dataset on coif basis function.

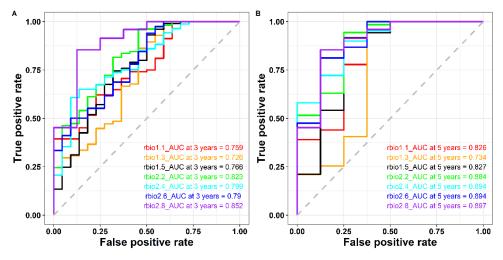


Figure 7. The performance of PAAD dataset on rbio basis function (rbio1.1~rbio2.8).

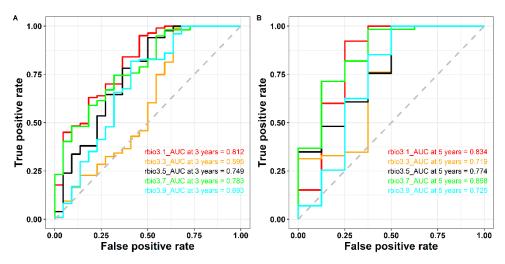


Figure 8. The performance of PAAD dataset on rbio basis function (rbio3.1~rbio3.9).

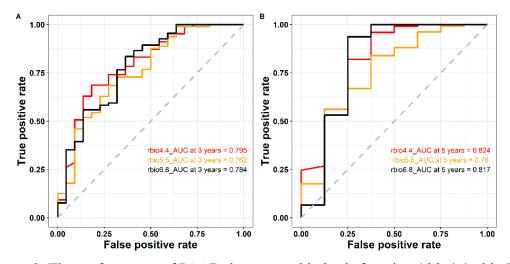


Figure 9. The performance of PAAD dataset on rbio basis function (rbio4.4~rbio6.8).

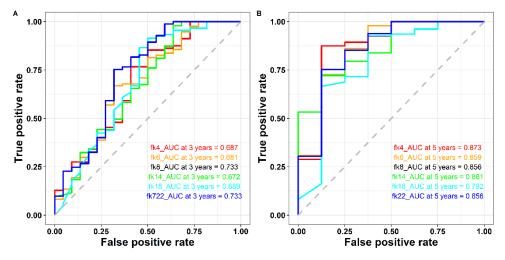


Figure 10. The performance of PAAD dataset on fk basis function.

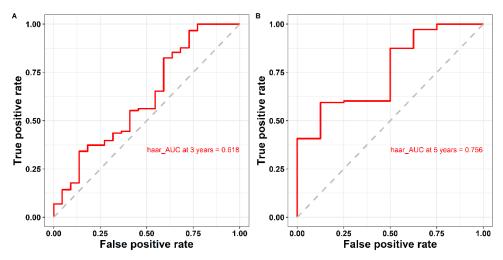


Figure 11. The performance of PAAD dataset on haar basis function.

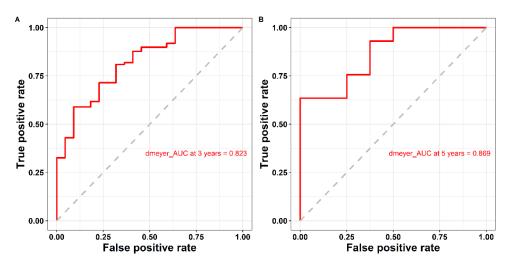


Figure 12. The performance of PAAD dataset on dmeyer basis function.

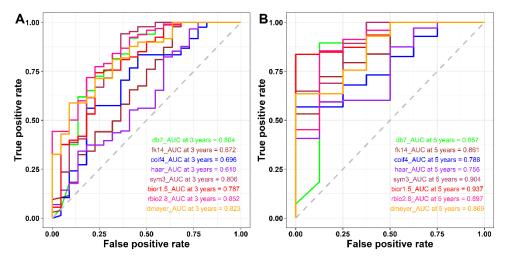


Figure 13. The performance of PAAD dataset on all basis functions (Take the smoothness corresponding to the best result for each basis function).