

Results

At this stage of the study we compared the differential expression between two aligners; kallisto and salmon based on six samples from 64, three control and three liver cancer patient and we will report the results here;

Salmon has a significant higher number of differentially expressed genes than kallisto as shown in figure (1) and figure (2), both aligners used human transcriptome as a reference. Kindly NOTE we worked on 6 samples out of our proposed 64 paired-end samples, also STAR, Magicblast and HiSat all requested huge memory and time so we were capable of analyzing this section only, although we are committed to analyze the whole study with the other aligners followed by wet-lab experiment validation using real-time PCR for the top DEGs.

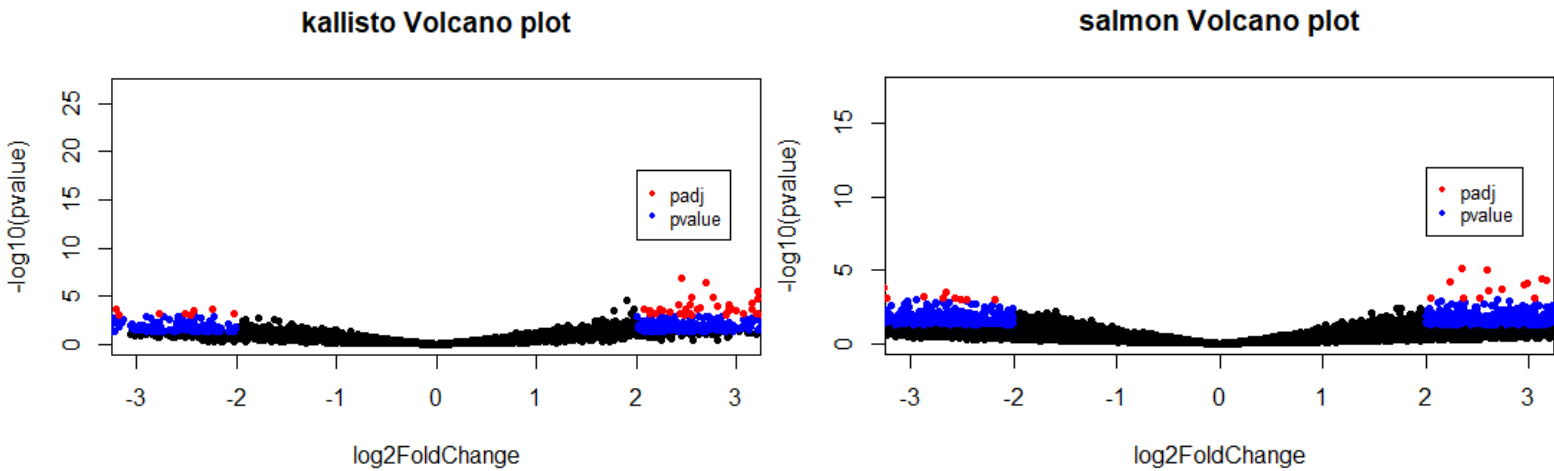


figure (1); volcano plot to visualize the abundance of the differentially expressed genes between kallisto and salmon the colored DEGs are higher than log2 fold change, red for adjusted p value lower than 0.05, and blue for p value lower than 0.05.

	baseMean	log2FoldChange	lfcSE	stat	pvalue	padj							
ENST00000621803.2	8.125057	6.677011	1.6363580	4.080410	4.495636e-05	5.760409e-03							
ENST00000633714.1	16.023466	7.659327	1.5389256	4.977061	6.455696e-07	1.908900e-04							
ENST00000631466.1	78.903354	8.992410	1.5339303	5.862332	4.564101e-09	4.048709e-06							
ENST00000632774.1	11.517318	6.207810	1.5802373	3.928404	8.551160e-05	8.883962e-03							
	baseMean	log2FoldChange	lfcSE	stat	pvalue	padj							
ENST00000626472.2	13.033880	6.384084	1.58	ENST00000372064.8	39.311092	9.641372	2.7976555	3.446233	5.684606e-04	3.581302e-02			
ENST00000390545.3	8.125057	6.677011	1.63	ENST00000611116.2	64.751948	4.909457	1.4630846	3.355553	7.920656e-04	4.354793e-02			
ENST00000390547.3	16.023466	7.659327	1.53	ENST00000633705.1	73.399790	4.547052	1.2813656	3.548598	3.872873e-04	2.708379e-02			
ENST00000390549.6	78.903354	8.992410	1.53	ENST00000436911.6	12.101202	4.984023	1.5117755	3.296801	9.779270e-04	4.813673e-02			
ENST00000390551.6	11.517318	6.207810	1.58	ENST00000618981.2	49.988447	7.740999	1.5467938	5.004545	5.599418e-07	3.342920e-04			
ENST00000390559.6	13.033880	6.384084	1.58	ENST00000621803.2	397.737426	7.564373	1.1489833	6.583536	4.593890e-11	1.985388e-07			
ENST00000390321.2	191.570460	6.129093	1.11	ENST00000633714.1	553.726667	7.298684	1.4150683	5.157831	2.498264e-07	1.799499e-04			
ENST00000390323.2	238.740413	5.748243	0.69	ENST00000631466.1	3253.761687	8.131874	1.0246629	7.936145	2.085618e-15	1.502271e-11			
Showing 1 to 12 of 232 entries							ENST00000626472.2	443.762266	5.467165	1.6222597	3.370093	7.514291e-04	4.260967e-02
figure (2); kallisto identified 232 differentially expressed genes while salmon was able to identify 446 DEGs							ENST00000390539.2	82.022601	4.450210	1.3460775	3.306058	9.461862e-04	4.776217e-02
							ENST00000390551.6	238.312787	11.281746	2.6084790	4.325029	1.525121e-05	3.003868e-03
							ENST00000390331.3	74.766437	10.552858	2.4244235	4.352729	1.344535e-05	2.740948e-03
							Showing 1 to 12 of 446 entries						

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