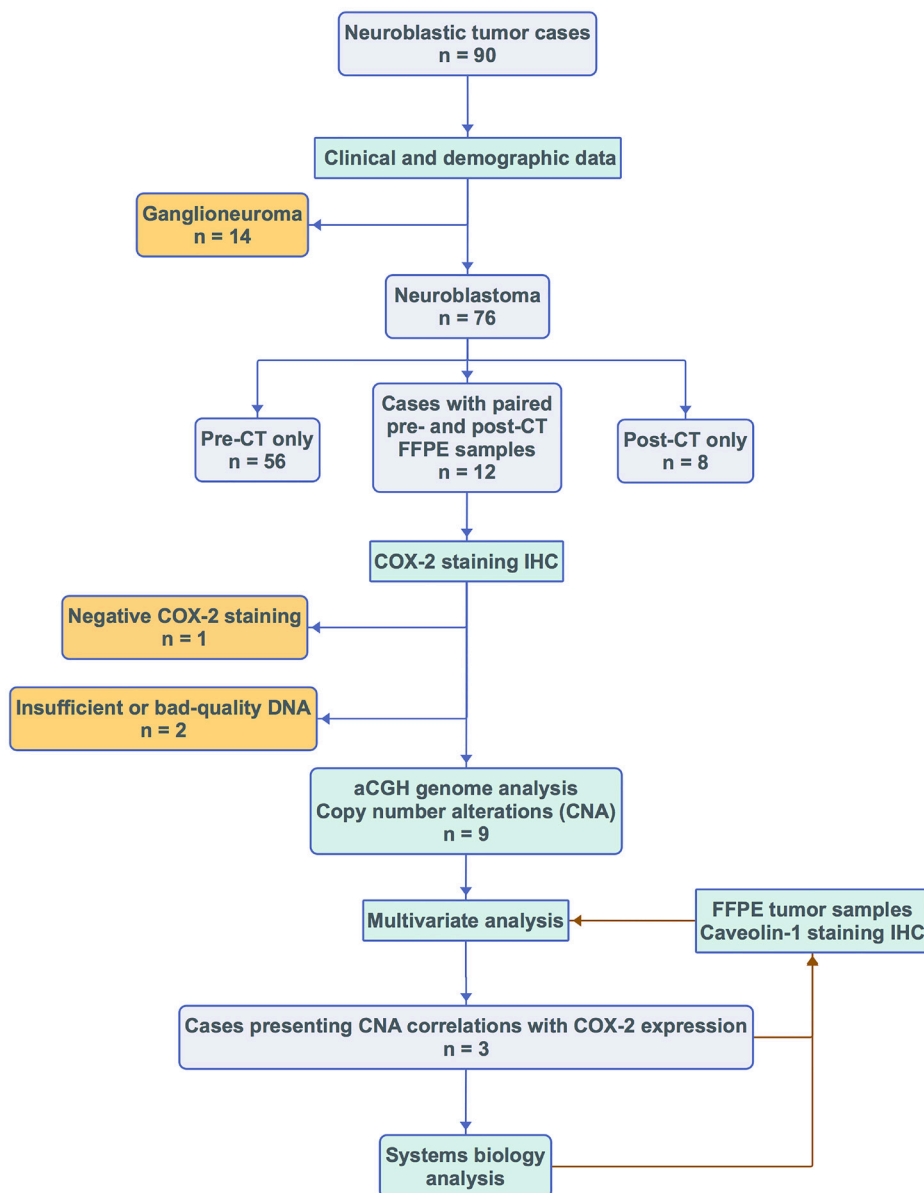


## Systems biology network reveals the correlation between COX-2 expression and Ch 7q copy number alterations in Ch 11q-deleted pediatric neuroblastoma tumors

### SUPPLEMENTARY MATERIALS



**Supplementary Figure 1: Experimental design.** Ninety patients treated for neuroblastic tumors in the Pequeno Principe Pediatric Hospital were included in the study. Clinical and demographic data were obtained from medical records, uncovering 76 cases of neuroblastoma. FFPE tumor samples collected in diagnosis and post-chemotherapy were stained for COX-2 by IHC. The genome profile of cases with paired pre- and post-CT COX-2-positive samples were determined by a-CGH and analyzed by statistics multivariate tests. Three cases presented chromosomal copy number alterations correlated with COX-2 expression and segmental chromosomal alterations were deeply analyzed by systems biology approaches. Notes: FFPE, formalin-fixed paraffin-embedded; IHC, immunohistochemistry; CNA, copy number alterations.

**Supplementary Table 1: Correlation analysis between clinical data, chromosomal alterations, and immunoexpression of COX-2 and CAV-1. See Supplementary Table 1**

**Supplementary Table 2: Network topological analysis**

HBS	HB	HUB	Bottleneck	Switch
ACTA1	APOA4	ATP5L	ACAT1	ARHGEF12
ACTL6B	ARCN1	ATP6V0E2	ADAMTS4	ATXN7L1
ADCY10	ATP5J2	ATP6V1G3	ADAR	BCL9L
AGK	BCAN	C7orf60	AKR1B1	CD36
AGT	BET1	CHCHD3	ALDH9A1	CDC73
AKAP9	BIRC3	COPG2	ANKRD49	CENPL
APOA1	C11orf73	DOCK4	AVPR1B	CXCR5
APOA2	CAPZA2	DYNC2H1	BRINP2	EIF2D
ARF1	CASP1	EPHB6	C4BPA	FCGR3B
ARPC1B	CAV1	GCC1	CADM3	FLI1
ARPC5	CLPB	GIMAP4	CASP2	GON4L
ARRB1	CNIH3	GIMAP6	CD244	GPR161
ASPM	CNOT4	GRIK4	CUX1	GPSM1
ATM	CNTN2	HYOU1	DARS2	H3F3A
BRAF	COG2	LAMTOR4	ENAH	HIST3H2BB
CACNA1S	COG5	MMP10	F11R	KCNJ5
CBL	COPA	MRPL48	FDPS	MED17
CCT3	CPSF4	MUC12	FMOD	MEF2D
CD247	CRP	NDUFB2	GBA	MTNR1B
CD3D	CRTC2	NDUFC2	GLUL	NFRKB
CD3E	CTSC	NDUFC2-KCTD14	GNPAT	NR5A2
CD3G	CWC15	NUP133	GPC2	OPN1SW
CD48	CYP3A4	PRSS1	HSD11B1	P2RY2
CDK5	CYP51A1	RHEB	HSD17B7	PARP1
CFTR	DAP3	SCN3B	IL18	PDC
CHEK1	DDX6	SDHC	KCNH2	PICALM
CKS1B	DIEXF	STX6	LHX3	PYGO2
COPS6	DLAT	XCL1	MTPN	RGSL1
CUL1	DLD		NNMT	RSF1
DCUN1D5	DYNC1H1	MMP13	ORC5	SNAPC4
DDX10	EDEM3	DNAJC2	PAFAH1B2	TADA1
DHX9	GALNT2	ATP6V1F	PGR	TAF1A
DTL	GRM8	B3GNT6	PTGS2	TAF1D
EED	IARS2	SRP9	PVRIG	TAF5L
EPHA1	IFI16	NRCAM	RAB13	UBAP2L
EPRS	IL10	TMEM126A	SAMD9L	USF1
EZH2	KIFAP3	WNT2	SC5D	VIPR2
FCER1G	LAMTOR2	SDE2	SH2D1B	WDR42A
FCGR2A	MMP1	GIMAP7	SPCS2	
FCGR3A	MMP3	CD55	STT3A	
FZD4	MMP7	F5	TAGLN	

GAB2	MUC1	XCL2	TNR
GNAI1	NDUFA5	BUD31	UBE2H
GNB2	NDUFS2	MUC17	ZPR1
GNG11	NVL	MRPS33	
GNGT1	PDIA4	COL1A2	
GRM3	PKLR	ARF5	
H2AFX	PMPCB	NOM1	
HGF	PON1	WNT16	
HIST3H3	PPP1R3A	GPATCH4	
HSPA8	RAB6A	NME7	
HTR5A	RBM28	BIRC2	
IL10RA	SEC16A	APOC3	
IL6R	SEC16B		
ILF2	SHFM1	GIMAP5	
KCNJ9	SHH	WDR60	
KDM7A	SPTA1		
LAMB1	SRPK2	SCN2B	
LAMB3	SSBP1	SDHD	
LAMC2	ST3GAL4		
LEP	TMEM126B	MRPL55	
LMNA	TOMM40L	NUP205	
MCM7	TPM3	SCN4B	
MET	TRAF2	INTS3	
MNDA	TREH	COL5A1	
MRE11A	UBQLN4	DNAJB13	
MRPL24	VAMP4	ASB4	
MRPS14	YAP1	EPHB4	
MRPS2	ZNF212	SERPINC1	
NCAPG2	ZW10	GIMAP8	
NCF2	ZYX	WNT9A	
NOTCH1			
NTRK1			
NUF2			
PAK1			
PIK3CG			
PLA2G4A			
PLOD3			
POLR2J			
POU2F1			
PPP2R1B			
PPP2R5A			
PRKAG2			
PRKAR2B			
PSMC2			
PTPRC			
RBBP5			

RC3H1  
RFWD2  
RGS18  
RPS25  
RPS27  
RPS3  
RXRA  
SHC1  
SMO  
SMURF1  
SND1  
SNRPE  
TPR  
TRAF3IP3  
TRIM24  
TRRAP  
UCHL5  
WASL  
WDR5  
ZC3HAV1

---

List of HBS, HB, B, HUB, Switches.