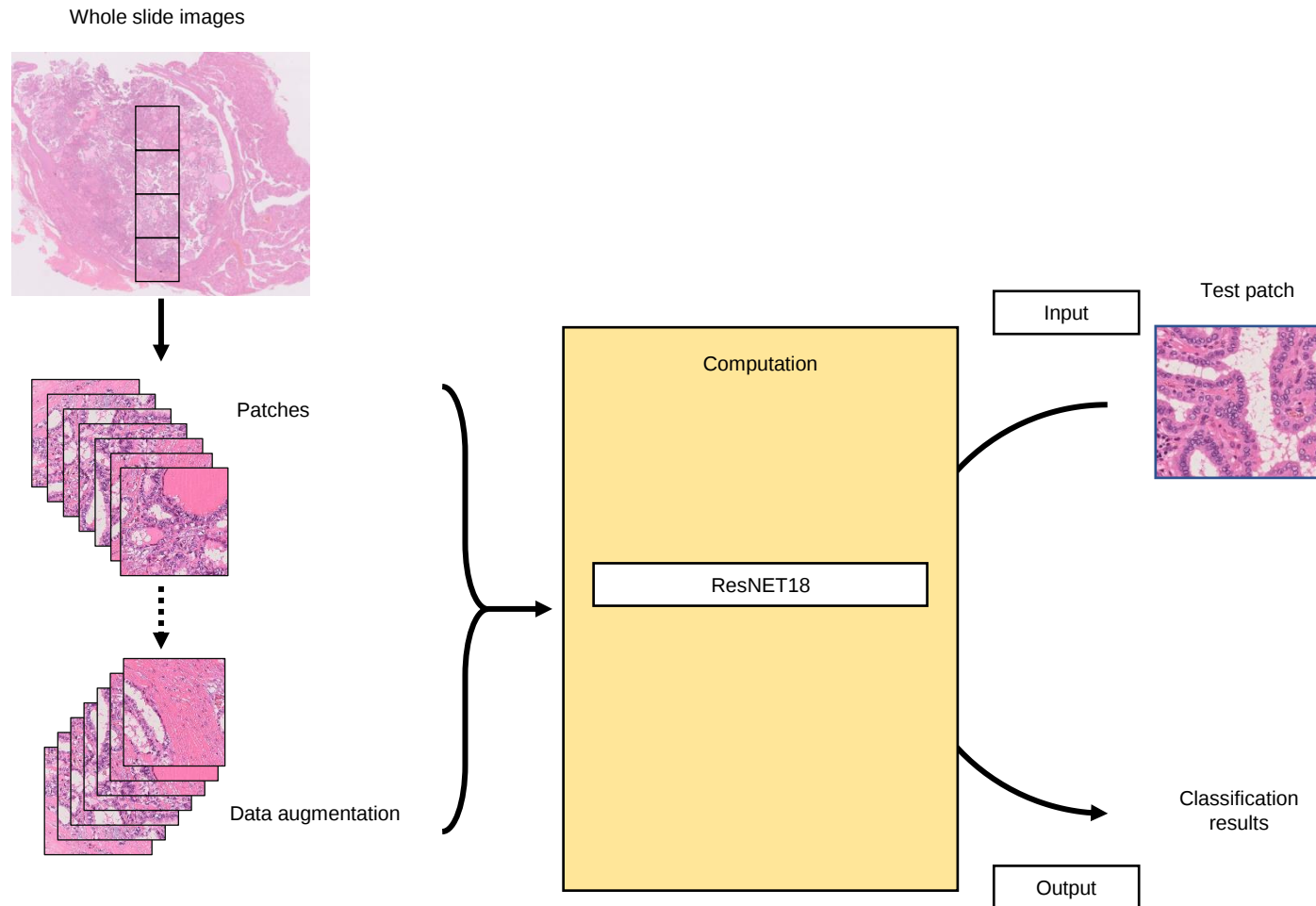


Supplementary Figure S1



Supplementary Figure S1. Schematic model for the construction of the AI classifier using ResNet18.

Tumor lesions in whole slide images were manually annotated by pathologists and the images were subsequently exported and cropped into patches. The ResNet18-based classifier was trained on the patch images including their augmentations.

Supplementary Table S1. Numbers of patch images and the purpose of their use

		Morphological diagnosis							Purpose of use		
		Normal	PTC	PDTC	AC	FTC	PTCFV	MC	ResNet18	CycleGAN	FS
UFH	slides	7	76	9	12	7	34	5			
	total	11690	146023	2871	10594	2962	1859	2113			
	training	8353	109442	5223	6537	1425	1360	1597	Yes	Yes	Yes
	test	3105	33175	1901	2228	503	462	516			
TA	slides*				34	67	9	37			
	total	0	0	0	1056	301	1133	580			
	training	0	0	0	785	215	830	433			
	test	0	0	0	271	76	303	147			
FRCH	slides			2	2	2	2				
	total	0	0	339	334	350	345	0			
	training	0	0	172	168	192	182	0			
	test	0	0	159	166	158	163	0			
MKH	slides						2				
	total	0	0	0	0	0	248	0			
	training	0	0	0	0	0	176	0			
	test	0	0	0	0	0	72	0			
FS	slides	10	8								
	total	2237	2084	0	0	0	0	0			
	training	1664	1599	0	0	0	0	0			
	test	573	485	0	0	0	0	0			

* The number of captured core images on tissue microarray slides for this study.

Usually, 15 to 20 patches were cropped from each core.

Abbreviations: AC, anaplastic carcinoma; FRCH, Japanese Red Cross Fukui Hospital;

FS, frozen section; FTC, follicular thyroid carcinoma; MC, medullary carcinoma;

MKH, Maizuru Kyosai Hospital; PDTC, poorly differentiated thyroid carcinoma; PTC,

papillary thyroid carcinoma; PTCFV, papillary thyroid carcinoma, follicular variant; TA,

tissue microarray; UFH, University of Fukui Hospital.