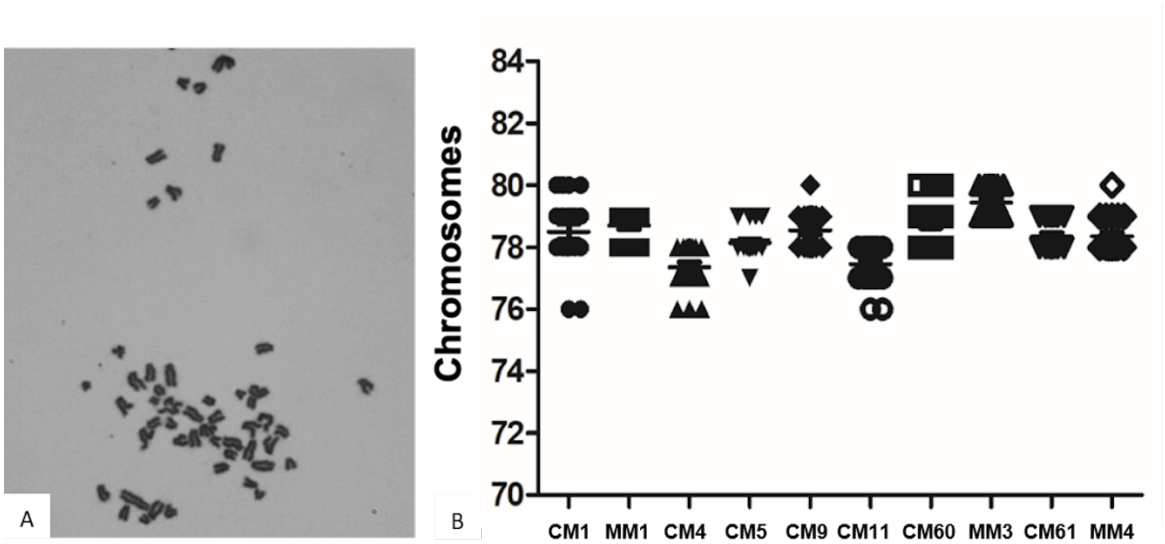
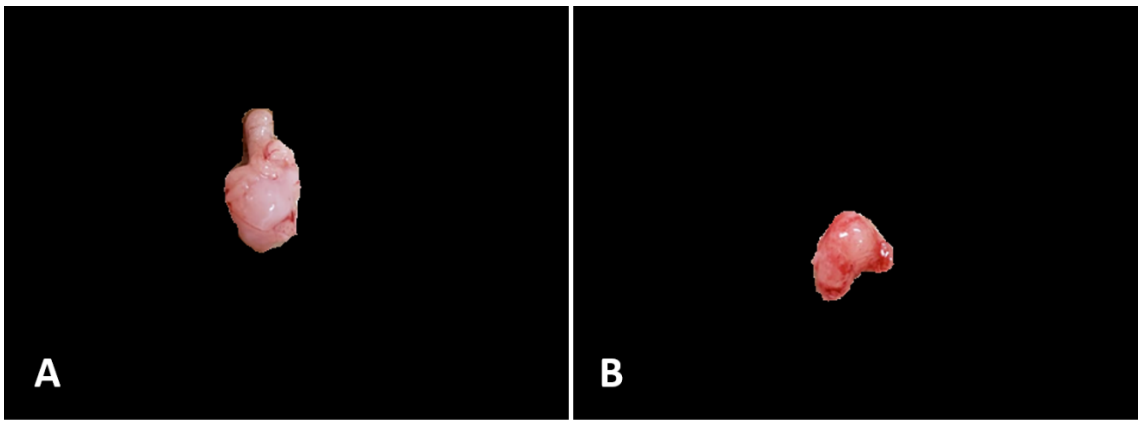


Supplementary Figure 1. Chromosomal preparation from cell culture of female dog mammary gland carcinoma (A). Graphic representation of chromosomal alterations in different cultures of canine mammary gland cancer and its metastases (B).



Supplementary Figure 2. Macroscopic appearance of tumours after 60 days of growth. A: Tumour growth from MM4 cell line. B: Tumour growth from CM60 cell line.

Supplementary Table 1: Mammary gland tumors information used to obtain neoplastic cells cultured *in vitro.*

Identification	Breed	Age (years)	Histologic Classification*	Grade*	Acquisition technique	Collagenase/explant time	Actual culture passage	Immunohistochemistry (IHC)*	Tubular formation
UNESP-CM1	Poodle	12	Solid Carcinoma	Grade II	Collagenase	4 hours	P10	HER-2 overexpressing	Yes
UNESP-CM2	Teckel	15	Comedocarcinoma	Grade II	Collagenase	Overnight	-	-	-
UNESP-CM3	Poodle	13	Comedocarcinoma	Grade II	Collagenase	Overnight	-	-	-
UNESP-CM4	Teckel	13	Tubulopapillary	Grade II	Collagenase	4 hours	P10	Triple-negative non basal-like	No
UNESP-CM5	Teckel	10	Tubulopapillary	Grade II	Collagenase	4 hours	P10	Triple-negative basal-like	No
UNESP-CM6	Pinscher	11	Carcinoma–mixed type	Grade I	Explant	15 days	-	-	-
UNESP-CM7	Poodle	15	Carcinoma–mixed type	Grade II	Explant	7 days	-	-	-
UNESP-CM8	Poodle	11	Comedocarcinoma	Grade II	Collagenase	4 hours	-	-	-
UNESP-CM9	Mixed breed	12	Tubulopapillary	Grade II	Collagenase	4 hours	P10	HER-2 overexpressing	Yes
UNESP-CM10	Mixed breed	13	Carcinoma–mixed type	Grade I	Collagenase	4 hours	-	-	-
UNESP-CM11	Mixed breed	13	Tubulopapillary	Grade I	Collagenase	3 hours	P10	HER-2 overexpressing	No
UNESP-CM12	German Shepherd	17	Carcinoma–mixed type	Grade II	Collagenase	4 hours	-	-	-
UNESP-CM13	Beagle	17	Carcinoma–mixed type	Grade II	Collagenase	4 hours	-	-	-
UNESP-CM14	Poodle	14	Carcinoma–mixed type	Grade I	Collagenase	4 hours	-	-	-
UNESP-CM15	Akita	13	Carcinoma–mixed type	Grade II	Collagenase	4 hours	-	-	-
UNESP-CM60	Teckel	14	Adenosquamous carcinoma	Grade II	Collagenase IV	3 hours	P10	HER-2 overexpressing	Yes
UNESP-CM61	Teckel	14	Comedocarcinoma	Grade III	Collagenase IV	3 hours	P10	Triple-negative basal-like	No
UNESP-MM1	Poodle	12	CM1 Metastasis	-	Collagenase	4 hours	P10	Triple-negative basal-like	No
UNESP-MM3	Teckel	14	CM60 Metastasis	-	Collagenase IV	3 hours	P10	HER-2 overexpressing	No
UNESP-MM4	Teckel	14	CM61 Metastasis	-	Collagenase IV	3 hours	P10	HER-2 overexpressing	Yes

Neoplasms were classified and graded following Goldschmidt et al., 2011 and immunohistochemical classifications according to Nielsen et al., 2004.

Supplementary Table 2. Primary antibodies used in immunochemistry to characterize the molecular phenotype from mammary gland tumors.

Antibody	Manufacture	Clone	Dilution	Imunolocalization
P63	Dako, Agilent Technologies, Santa Clara, CA, USA	4A4	1:100	Nuclei
HER2	Roche Diagnostics, Risch-Rotkreuz, Switzerland	4B5	1:400	Membrane
ERα	Santa Cruz Biotechnology®, Santa Cruz, CA, USA	C311	1:50	Nuclei
PR	Roche Diagnostics, Risch-Rotkreuz, Switzerland	1E2	Prediluted	Nuclei
Ki-67	Dako, Agilent Technologies, Santa Clara, CA, USA	MIB1	1:50	Nuclei
CK5/6	Dako, Agilent Technologies, Santa Clara, CA, USA	D5/16B4	1:10	Citoplasm
EGFR	Invitrogen, Thermo Fisher Scientific Corporation, Carlsbad, CA, USA	31G7	1:20	Citoplasm

Supplementary Table 3. Primary antibodies used in cell immunofluorescence to characterize the cell clone (cell origin) that was expanded in each culture.

Antibody	Manufacture	Clone	Dilution	Imunolocalization
Pan-citoqueratin	Invitrogen, Thermo Fisher Scientific Corporation, Carlsbad, CA, USA	AE1/AE3	1:300	Citoplasm
Vimentin	Invitrogen, Thermo Fisher Scientific Corporation, Carlsbad, CA, USA	V9	1:300	Citoplasm
CK8/18	Novocastra, Vision BioSystems Ltd, Newcastle, UK, Europe	5D3	1:600	Citoplasm