

Appendix Table 1: Signalment and clinical data of cases diagnosed with femoropatellar joint dysplasia

Case number	Year of birth	Lesion side	Age at diagnosis (months)	Synovial effusion score	Patellar instability score	Treatment	Outcome
1	2017	Right	7	moderate	3	None	Euthanasia
2	2018	Left	5	severe	2	PFJ Arthroscopy	Euthanasia
3	2018	Left	3	moderate	2	None	Live at pasture
4	2019	Right	6	severe	2	PFJ Arthroscopy	Live at pasture
5	2019	Right	6	mild	1	None	Started training but retired
6	2019	Left	9	mild	3	None	Live at pasture
7	2021	Right	3	moderate	2	PFJ Arthroscopy	Euthanasia
8	2022	Left	5	moderate	3	MPFL reconstruction with graft	Euthanasia
9	2023	Right	8	severe	3	None	Euthanasia
10	2025	Right & Left	10	severe	2	PFJ Arthroscopy	Euthanasia

Appendix Table 2: Abnormalities observed with different imaging modalities in cases diagnosed with femoropatellar joint dysplasia

Case number	Imaging modalities and post-mortem	Abnormalities detected in the examined femoropatellar joints
1	X-ray, US	Patellar Tilt (X-ray), LTR hypoplasia (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Synovial effusion femoropatellar joint (US),
2	X-ray, US, CT scan, pathology, histology	Patellar Tilt (X-ray, CT), LTR hypoplasia (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Synovial effusion femoropatellar joint (US), Abnormal femoropatellar axial engagement (CT)
3	X-ray, US	Patellar Tilt (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Synovial effusion femoropatellar joint (US)
4	X-ray, US	Patellar Tilt (X-ray), LTR hypoplasia (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Synovial effusion femoropatellar joint (US)
5	X-ray, US	Patellar Tilt (X-ray), LTR hypoplasia (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Synovial effusion femoropatellar joint (US)
6	X-ray, US	Patellar Tilt (X-ray), LTR hypoplasia (X-ray), Lateral luxation of the patella (X-ray), Synovial effusion femoropatellar joint (US)

7	X-ray, US, CT scan, arthroscopy, pathology	LTR hypoplasia (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Synovial effusion femoropatellar joint (US)
8	X-ray, US, CT scan, pathology, histology	Patellar Tilt (X-ray, CT), LTR hypoplasia (X-ray), Lateral luxation of the patella (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Synovial effusion femoropatellar joint (US), Abnormal femoropatellar axial engagement (CT)
9	X-ray, US, CT scan, MRI, pathology, histology	Patellar Tilt (X-ray, CT), LTR hypoplasia (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Synovial effusion femoropatellar joint (US), Abnormal femoropatellar axial engagement (CT), Cartilage lesion and bone edema in the subchondral bone of the LTR (MRI)
10	X-ray, CT scan, pathology	Patellar Tilt (X-ray, CT), LTR hypoplasia (X-ray), Lateral luxation of the patella (X-ray), OCD-like lesion on the proximal aspect of the LTR of the femur (X-ray), Abnormal femoropatellar axial engagement (CT)