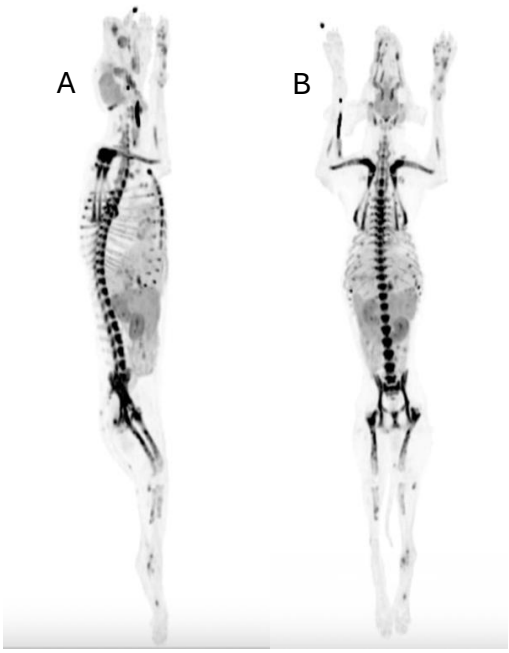
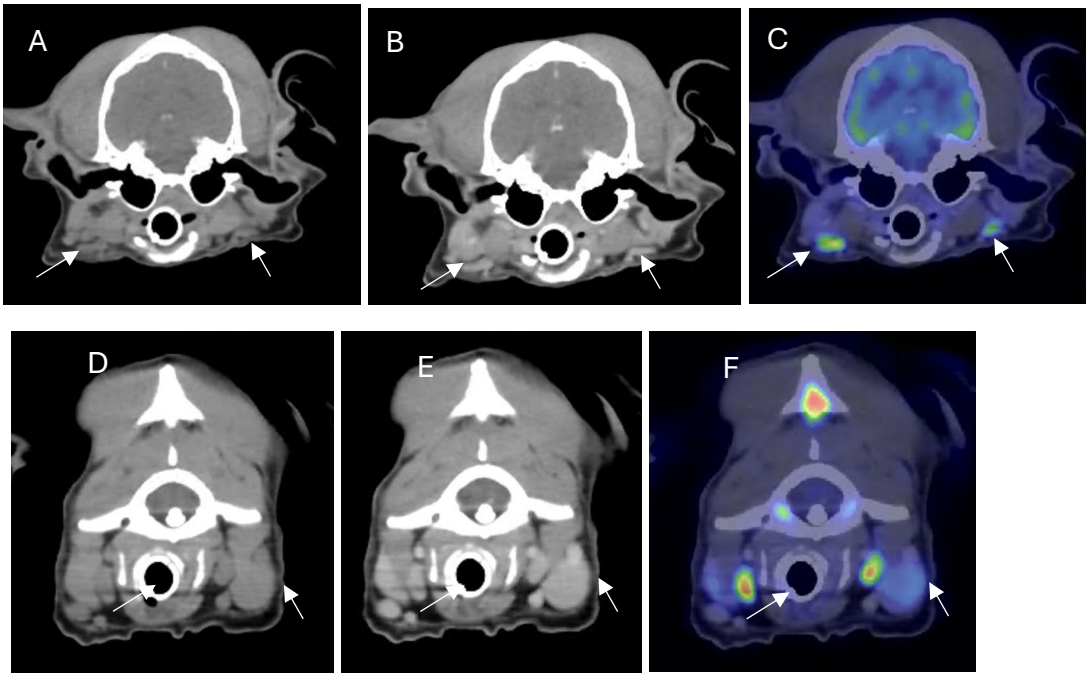
Figure S1.



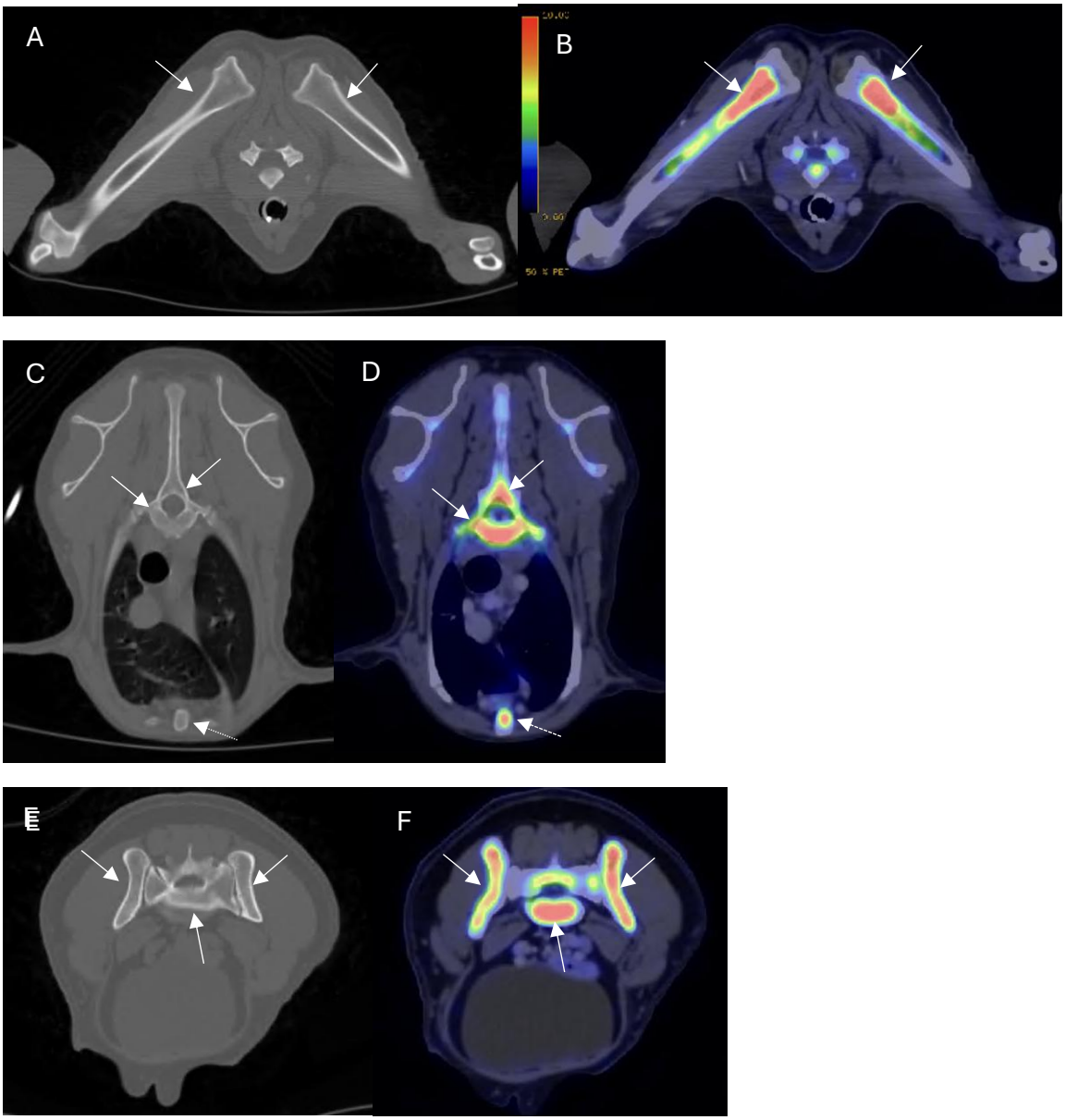
Supplementary Figure 1. Oblique lateral (A) maximum intensity projection (MIP) and ventral (B) image demonstrating marked FDG uptake in the axial skeleton (SUV max: 15.5) including the occipital condyles, vertebrae, sternebrae, costochondral junctions, pelvis, femurs, and humeri. Generalized, mild enlargement of peripheral and visceral lymph nodes with moderate to marked hypermetabolic activity (SUV max: 8.9) was observed. There was also left carpal and tarsal soft-tissue thickening with homogeneous to peripheral contrast enhancement and moderate FDG avidity (SUV max: 7.2 and SUV max: 5.6 respectively).

Figure S2.



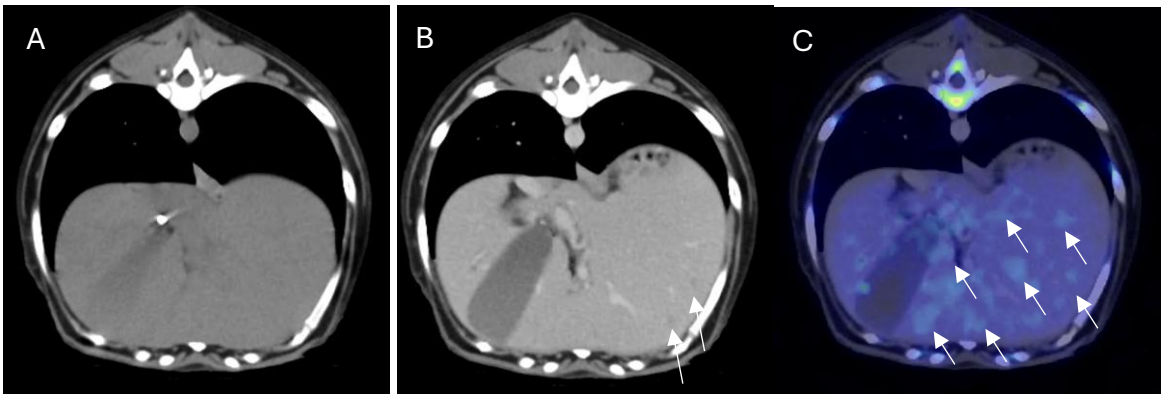
Supplementary Figure 2. Panels (A) and (D) Pre-, (B) and (E) post-contrast CT, and (C) and (F) corresponding fused PET/CT images in a transverse plane. Panels (A), (B), and (C) represent PET/CT images of the head, at the level of the tympanic bullae, and show mild bilateral enlargement of the mandibular lymph nodes with moderate FDG uptake (arrows; SUV max: 6.1). Panels (D), (E) and (F) represent PET/CT images of the craniocervical region, at the level of the atlas, and show mild bilateral enlargement of the medial retropharyngeal lymph nodes with marked FDG uptake (arrows; (SUV max: 8.9).

Figure S3.



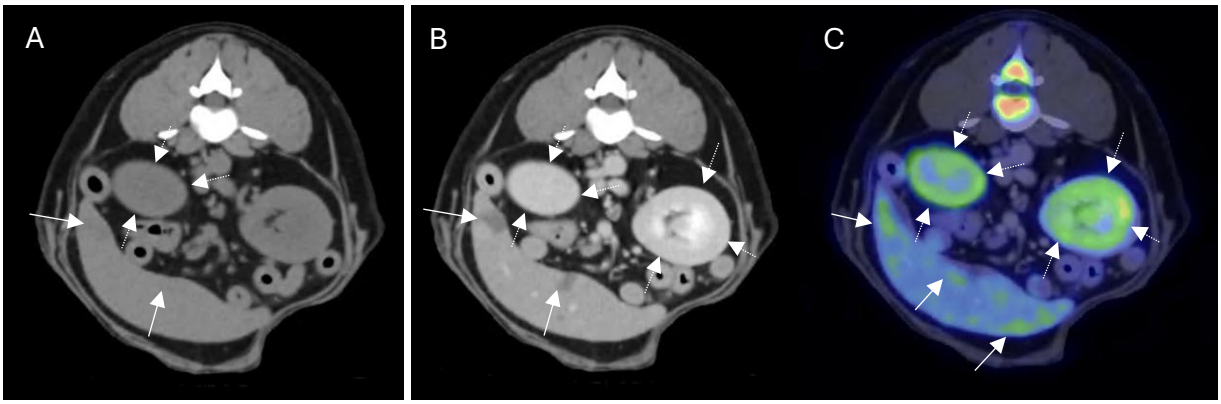
Supplementary Figure 3. Panels (A), (C) and (E) represent CT images in a bone algorithm, transverse plane. Panels (B), (D) and (F) represent the corresponding fused PET/CT images in a transverse plane. In (A), the bilateral humeri are characterized by normal shape and attenuation, with preservation of the cortex whereas in (B), marked FDG uptake is noted within the marrow cavities (arrows; (SUV max: 15.5). Similarly, in (C), a thoracic vertebra (arrows) and sternebra (dashed arrow), and in (E) the sacroiliac region (arrows), are unremarkable in the CT images. However, in (D) and (F), the corresponding fused PET/CT images show marked FDG uptake within the marrow cavities (SUV max: 15.5).

Figure S4.



Supplementary Figure 4. (A), (B) and (C) represent pre-, post-contrast and fused PET/CT images of the liver in a transverse plane, respectively. The hepatic parenchyma (arrows) is unremarkable in attenuation (A), with a few ill-defined, non-enhancing lesions (B, arrows) and heterogeneous moderate FDG uptake (C, arrows; SUV max: 3.4).

Figure S5.



Supplementary Figure 5. Panels (A), (B) and (C) represent pre-, post-contrast and fused PET/CT images of the kidneys and spleen in a transverse plane, respectively. The splenic parenchyma (arrows) is heterogeneous in attenuation (A) with non-enhancing wedge-shaped areas (B), and moderate, heterogeneous FDG uptake (C). The kidneys (dashed arrows) are normal in attenuation (A) and contrast-enhancement (B), with moderate parenchymal FDG uptake (C; SUV max: 6.2).

Table S1.

Supplementary Table 1. Serial hemograms from a 12-year-old, mixed breed dog with sepsis of unknown origin.

End point	Day 2	Day 3	Day 5	RI
RBC	6.7	6.95	6.73	5.80-8.50 x 10^12/L
Hgb	152	158	152	133-197 g/L
Hct	0.453	0.476	0.461	0.390-0.560 L/L
MCV	67.6	68.5	68.4	62.0-72.0 fL
MCH	22.7	22.7	22.5	21.0-25.0 pg
MCHC	336	332	**329**	330-360 g/L
RDW	13	13.2	13.2	11.0-14.0 %
RBC morphology	Anisocytosis 1+, Echinocytes 1 2+, Echinocytes 3 1+, Keratocytes Slight, Acanthocytes Slight	Anisocytosis 1+, Echinocytes 1 2+, Echinocytes 3 1+, Acanthocytes slight	Anisocytosis 1+, Echinocytes 1 2+, Echinocytes 3 2+, Acanthocytes slight, Keratocytes slight, Schizocytes slight	
WBC	7.5	5.9	11.1	4.9-15.4 x 10^9/L

WBC differential				
Segmented neutrophils	**2.325**	**2.301**	4.995	3.000-10.000 x10^9/L
Bands	**1.725**	**1.534**	**0.999**	0.000-0.100 x 10^9/L
Toxic change	**3+**	**3+**	**1+**	
Eosinophils	0.225	0.059	0.222	0.000-1.100 x 10^9/L
Basophils				0.000-0.100 x 10^9/L
Lymphocytes	**0.6**	0.649	0.444	1.200-5.000 x 10^9/L
Monocytes	**2.625**	**1.357**	**4.44**	0.080-1.000 x 10^9/L
Platelets				
Clumped	Yes	Yes	Yes	
Estimate (slide)	Normal	Normal	Normal	
Morphology (slide)	Enlarged	Enlarged	Enlarged	
Automated count	117	**104**	**96**	117-418 x 10 9/L
Total protein	63	na	na	56-74 g/L

Abbreviations:

RI: Reference interval; RBC: Red Blood Cell Count; Hgb: Hemoglobin; Hct: Hematocrit; MCV: Mean Cell Volume; MCH: Mean Cell Hemoglobin; MCHC: Mean Cell Hemoglobin Concentration; RDW: Red Cell Distribution Width; and WBC: White Blood Cell Count

Table S2.

Supplementary Table 2. Serial serum chemistry panels from a 12-year-old, mixed breed dog with sepsis of unknown origin.

Analyte	Day 1	Day 2	Day 3	RI
Sodium	144		150	140-153 mmol/L
Potassium	4.5		5.3	3.8-5.6 mmol/L
Na:K ratio	32		28	28-38
Chloride	115		119	105-120 mmol/L
Bicarbonate	**12**		16	15-25 mmol/L
Anion gap	22		20	15- 25
Calcium	2.17		2.19	1.91-3.03 mmol/L
Phosphorus	1.11		1.68	0.63-2.41 mmol/L
Magnesium	0.79		0.82	0.70-1.16 mmol/L
Urea	4.8		8	3.5-11.4 mmol/L
Creatinine	107		105	41-121 umol/L
Amylase	756		1016	343-1375 U/L
Lipase	65		117	25-353 U/L
Glucose	4.2		4.4	3.1-6.3 mmol/L
Cholesterol	**7.84**		**7.23**	2.70-5.94 mmol/L

Total bilirubin	**32.8**		**16.4**	1.0-4.0 umol/L
Direct bilirubin	**18.1**		**6.6**	0.0-2.0 umol/L
Indirect bilirubin	**14.7**		**9.8**	0.0-2.5 umol/L
ALP	**820**		**1012**	9-90 U/L
GGT	0		0	0-8 U/L
ALT	**73**		**82**	19-59 U/L
GLDH	3		6	0-7 U/L
CK	**521**		401	51-418 U/L
Total protein	**51**		**50**	55-71 g/L
Albumin	**23**		**22**	32-42 g/L
Globulin	28		28	20-34 g/L
A:G ratio	**0.82**		**0.79**	1.06-1.82
Cortisol		175		<27.6-270.0 nmol/L
Lipemia	none			
Hemolysis	slight			
Yellow/icterus	1+			

Abbreviations:

RI; Reference interval; ALP: Alkaline Phosphatase; GGT: Gamma-glutamyltransferase; ALT: Alanine Transferase GLDH: Glutamate Dehydrogenase*;* CK: Creatinine Kinase; and A:G: Albumin to Globulin Ratio