

Supplementary Table 1: Signalment of dogs enrolled

| Breed | Sex | Age (years) | Weight (pounds) | Original diet | Medications/nutraceuticals | Group |
|-------------------|---------|-------------|-----------------|-----------------------------------|--|-------|
| Golden | CM | 1 | 65 | Purina JM | Carprofen | 1 |
| Pomeranian | SF | 2 | 3 | ProPlan Sport | | 1 |
| Dachshund/terrier | CM | 4 | 26 | DRM | | 1 |
| Dachshund/terrier | CM | 4 | 11 | DRM | | 1 |
| Shepherd mix | CM | 3 | 40 | Sci Diet Ideal Bal active formula | | 1 |
| Terrier mix | SF | 3 | 24 | ProPlan Lamb&Rice | | 1 |
| Hound mix | SF | 1 | 65 | Sci Diet Lamb&Rice | | 1 |
| Mix | CM | 3 | 45 | ProPlan | | 1 |
| | Male: 5 | Mean: 2.6 | Mean: 34.9 | | | |
| Vizsla | CM | 2 | 60 | Purina Lamb&Rice | | 2 |
| Terrier mix | CM | 2 | 14 | Sci Diet Lamb&Rice | | 2 |
| Mix | CM | 3 | 20 | ProPlan | | 2 |
| Bull terrier | SF | 4 | 45 | ProPlan Sens Skin&Stomach | Glucosamine, chondroitin, trimeprazine, prednisolone, psyllium, Famotidine | 2 |
| Lab mix | SF | 2 | 50 | j/d or JM | Glucosamine, chondroitin, Famotidine | 2 |
| Dachshund | CM | 6 | 14 | Ideal Balance | | 2 |
| Mastiff | F | 6 | 100 | ProPlan Sport | | 2 |
| Mastiff | F | 6 | 100 | ProPlan Sport | | 2 |
| | Male: 4 | Mean: 3.9 | Mean: 50.4 | | | |
| Terrier mix | SF | 4 | 14 | Hills c/d | | 3 |
| Terrier mix | SF | 3 | 18 | Hills c/d | | 3 |
| Mix | SF | 3 | 20 | DH/ProPlan Weight Management | | 3 |
| Lab mix | M | 3 | 65 | Merrick | | 3 |
| Husky | CM | 2 | 68 | Wellness | | 3 |
| Beagle mix | SF | 4 | 20 | TD/SciDiet Salmon | | 3 |
| Mix | SF | 1 | 40 | TD/SciDiet Salmon | | 3 |
| Mix | SF | 2 | 35 | TD/SciDiet Salmon | | 3 |
| | Male: 2 | Mean 2.8 | Mean: 35.0 | | | |