

Report from the Kennel Club/  
British Small Animal Veterinary Association  
Scientific Committee

Summary results of the  
Purebred Dog Health Survey  
for the Norwegian Buhund breed

Warning: The results of this survey and particularly the breed-specific analyses should be interpreted with caution. The overall response rate was only 24% with breed-specific response rates from 4.5% to 64.7%.

## The Norwegian Buhund breed

A total of 84 forms were sent out and 29 were returned, representing 42 live dogs. This breed had a 34.5% response rate (29/84) and it represented 0.21% of all returns (29/13,741).

### Mortality data

A total of 17 deaths were reported and this represents 0.11% of all deaths reported in the survey (17/15,881). The median age at death for the Norwegian Buhund breed was 12 years and 8 months (min = 3 years and 6 months, max = 16 years and 2 months) and this was higher than the overall median of 11 years and 3 months (Figure 1). Table 1 shows the causes of death for the Norwegian Buhund breed. Age at death is presented for the most common causes of death (Figure 2).

Table 1. Causes of death by organ system/category for the Norwegian Buhund breed.

| Cause of death      | N  | %     | Most common specific causes in descending order              |
|---------------------|----|-------|--|
| 1 Cancer            | 6  | 35.3  | Type unspecified); unspecified                               |
| 2 Combinations      | 3  | 17.6  | Arthritis; incontinence; pneumonia; heart defect unspecified |
| 3 Old age           | 2  | 11.8  | Old age  |
| 4 Other             | 2  | 11.8  | Uncodeable   |
| 5 Cardiac           | 1  | 5.9   | Heart failure  |
| 6 Cerebral vascular | 1  | 5.9   | Stroke or cerebral vascular accident                         |
| 7 Neurologic        | 1  | 5.9   | Seizures   |
| 8 Urologic          | 1  | 5.9   | Kidney failure   |
| Total               | 17 | 100.0 |  |

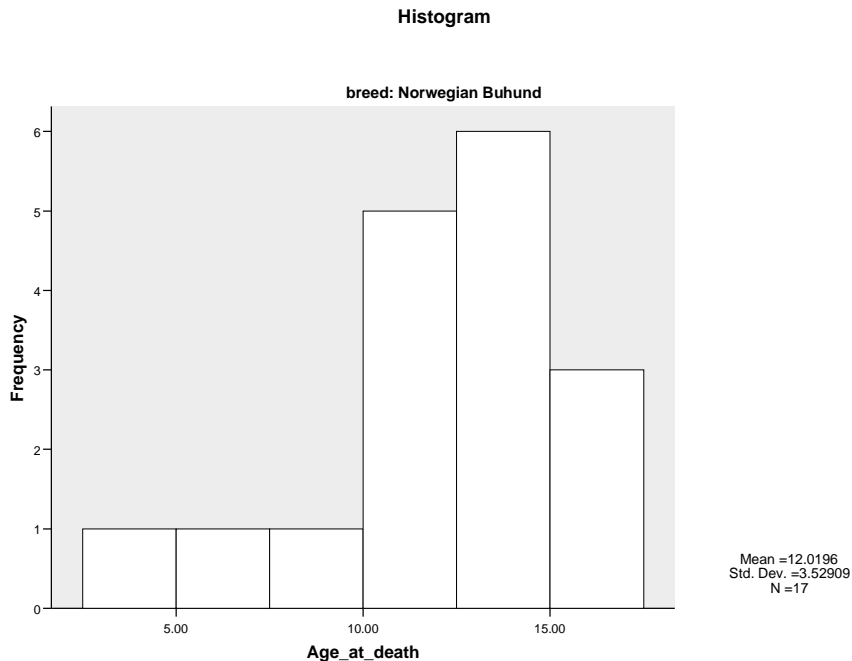


Figure 1. Histogram showing the frequency (as number of dogs) of age at death (in years) for the 17 Norwegian Buhund deaths with age at death reported.

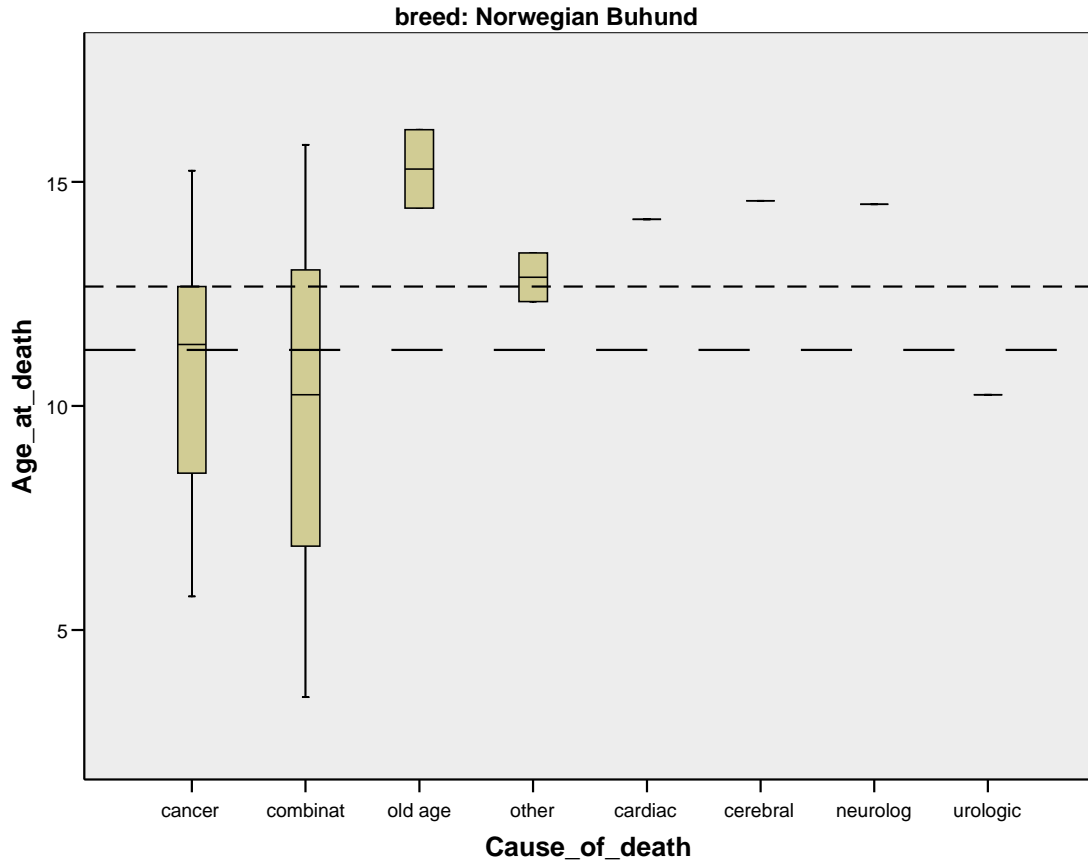


Figure 2. Box and whisker plot of age at death in years for the most common causes of death in the Norwegian Buhund breed (N=17). The dashed line (---) is the overall median age at death for all dogs in the survey and the dotted line (----) is the overall median age of death for the Norwegian Buhund breed. The solid line within each grey box represents the median age at death from the condition.

### Morbidity data

The median current age of the 42 live dogs with a reported age was 5 years and 7 months (min=7 months, max=14 years and 5 months, Figure 3). Health information was reported for 42 live dogs of which 29 (69%) were healthy and 13 (31%) had at least one reported health condition, resulting in a total of 20 reported conditions with a median of 1 condition/dog (min=1, max=3).

The median current age of all healthy dogs with a reported age (N=29) was 4 years (min=7 months, max=14 years and 5 months). The distribution of gender and neuter status is shown in Table 2.

The median current age of all dogs with one or more disease conditions and a reported age (N=13) was 7 years and 2 months (min=1 year and 3 months, max=12 years and 7 months). The median age at diagnosis for all disease occurrences with a reported age at diagnosis (N=20) was 7 years and 3 months (min= 5 months, max= 11 years and 9 months, Figure 4). Table 3 shows the disease conditions for the Norwegian Buhund breed. Age at diagnosis is presented for the most common disease conditions (Figure 5).

Table 2. Distribution of gender and neuter status for the 42 Norwegian Buhund breed with reported gender and neuter status.

| Gender | Neuter status |          | Totals    |
|--------|---------------|----------|-----------|
|        | Intact        | Neutered |           |
| Female | 12            | 7        | 19 (45%)  |
| Male   | 15            | 8        | 23 (55%)  |
| Totals | 27 (64%)      | 15 (36%) | 42 (100%) |

There was no association between gender and neuter status (P=0.8897).

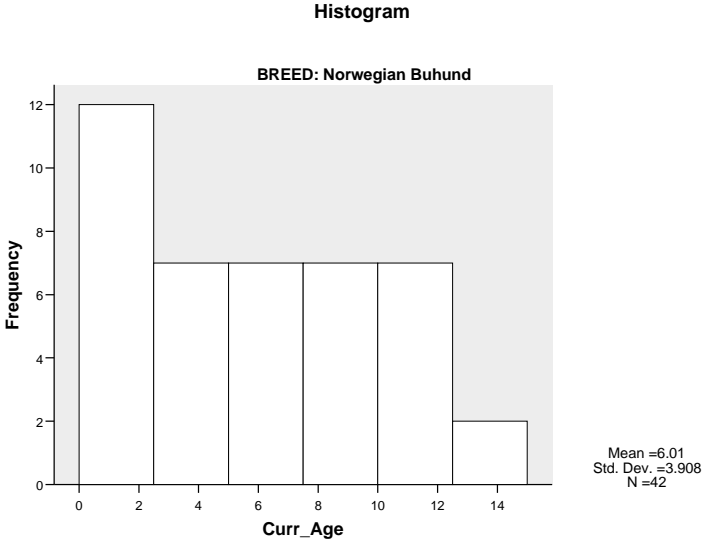


Figure 3. Histogram showing frequency of current age in years for the 42 live Norwegian Buhund breed with age reported.

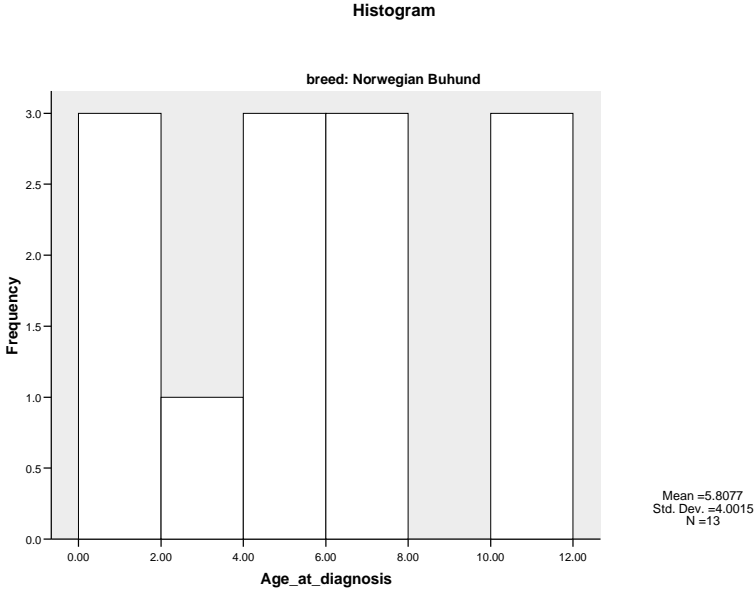


Figure 4. Histogram showing frequency of age at diagnosis for the 13 Norwegian Buhund breed with one or more disease conditions, using the youngest age at which a disease condition was first reported for those dogs with more than one disease condition or episode.

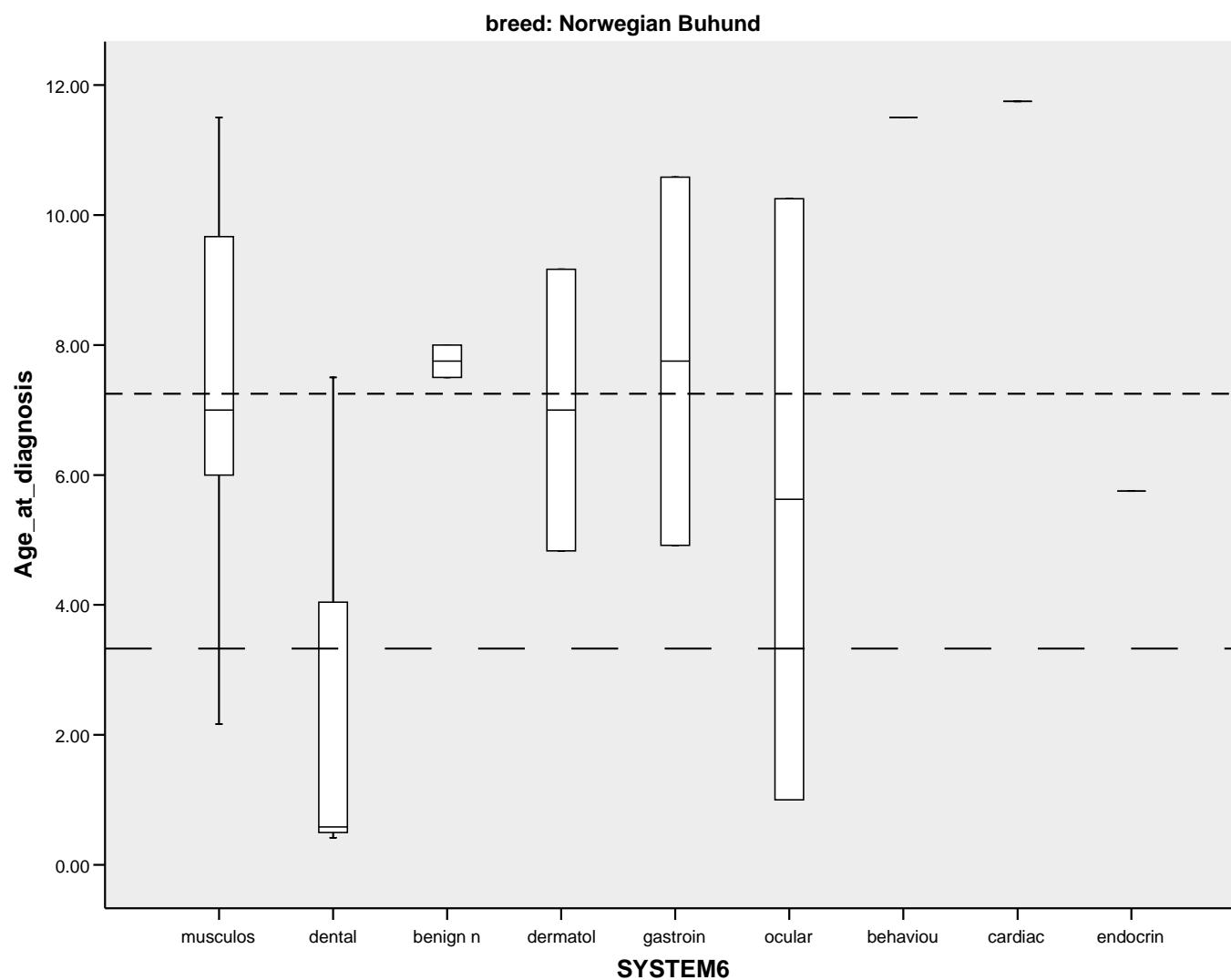


Figure 5. Box and whisker plot of age at diagnosis in years for the most common disease conditions in descending order for the Norwegian Buhund breed (N=13 dogs with 20 conditions with age reported). The dashed line (---) is the overall median age at diagnosis for all dogs in the survey and the dotted line (----) is the overall median age at diagnosis for the Norwegian Buhund breed. The solid line within each grey box represents the median age at diagnosis from the condition.

Table 3. Disease conditions by organ system/category for the Norwegian Buhund breed.

| Disease condition  | All conditions |       | Most common specific conditions in descending order |
|--------------------|----------------|-------|---|
|                    | N              | %     |   |
| 1 Musculoskeletal  | 6              | 30.0  | Arthritis; unspecified; CHD                         |
| 2 Dental           | 3              | 15.0  | Retained puppy teeth; dental disease                |
| 3 Benign neoplasia | 2              | 10.0  | Lipoma  |
| 4 Dermatologic     | 2              | 10.0  | Sebaceous adenitis                                  |
| 5 Gastrointestinal | 2              | 10.0  | Pancreatitis  |
| 6 Ocular           | 2              | 10.0  | Blocked tear duct; red eye                          |
| 7 Behaviour        | 1              | 5.0   | Unspecified   |
| 8 Cardiac          | 1              | 5.0   | Mitral valve disease (MVD)                          |
| 9 Endocrine        | 1              | 5.0   | Hypothyroidism                                      |
| Total              | 20             | 100.0 |   |