

Supplementary table S1. Composition of One-vs-Rest training data set.

| Positive class        |          |           | Negative class        |          |           |
|-----------------------|----------|-----------|-----------------------|----------|-----------|
|                       | original | augmented |                       | original | augmented |
| Crescentic            | 81       | 81        |                       |          |           |
|                       |          |           | Endocapillary         | 10       | 10        |
|                       |          |           | FSGS                  | 10       | 10        |
|                       |          |           | Hypertrophy           | 10       | 10        |
|                       |          |           | Membranoproliferative | 10       | 10        |
|                       |          |           | Membranous            | 10       | 10        |
|                       |          |           | Mesangioproliferative | 10       | 10        |
|                       |          |           | Normal                | 10       | 10        |
|                       |          |           | Sclerosed             | 10       | 10        |
| Total                 |          | 162       | Total                 |          | 160       |
| Endocapillary         | 81       | 81        | Crescentic            | 10       | 10        |
|                       |          |           |                       |          |           |
|                       |          |           | FSGS                  | 10       | 10        |
|                       |          |           | Hypertrophy           | 10       | 10        |
|                       |          |           | Membranoproliferative | 10       | 10        |
|                       |          |           | Membranous            | 10       | 10        |
|                       |          |           | Mesangioproliferative | 10       | 10        |
|                       |          |           | Normal                | 10       | 10        |
|                       |          |           | Sclerosed             | 10       | 10        |
| Total                 |          | 162       | Total                 |          | 160       |
| FSGS                  | 81       | 81        | Crescentic            | 10       | 10        |
|                       |          |           | Endocapillary         | 10       | 10        |
|                       |          |           |                       |          |           |
|                       |          |           | Hypertrophy           | 10       | 10        |
|                       |          |           | Membranoproliferative | 10       | 10        |
|                       |          |           | Membranous            | 10       | 10        |
|                       |          |           | Mesangioproliferative | 10       | 10        |
|                       |          |           | Normal                | 10       | 10        |
|                       |          |           | Sclerosed             | 10       | 10        |
| Total                 |          | 162       | Total                 |          | 160       |
| Hypertrophy           | 81       | 81        | Crescentic            | 10       | 10        |
|                       |          |           | Endocapillary         | 10       | 10        |
|                       |          |           | FSGS                  | 10       | 10        |
|                       |          |           |                       |          |           |
|                       |          |           | Membranoproliferative | 10       | 10        |
|                       |          |           | Membranous            | 10       | 10        |
|                       |          |           | Mesangioproliferative | 10       | 10        |
|                       |          |           | Normal                | 10       | 10        |
|                       |          |           | Sclerosed             | 10       | 10        |
| Total                 |          | 162       | Total                 |          | 160       |
| Membranoproliferative | 81       | 81        | Crescentic            | 10       | 10        |
|                       |          |           | Endocapillary         | 10       | 10        |
|                       |          |           | FSGS                  | 10       | 10        |
|                       |          |           | Hypertrophy           | 10       | 10        |
|                       |          |           |                       |          |           |
|                       |          |           | Membranous            | 10       | 10        |
|                       |          |           | Mesangioproliferative | 10       | 10        |
|                       |          |           | Normal                | 10       | 10        |
|                       |          |           | Sclerosed             | 10       | 10        |
| Total                 |          | 162       | Total                 |          | 160       |
| Membranous            | 81       | 81        | Crescentic            | 10       | 10        |
|                       |          |           | Endocapillary         | 10       | 10        |
|                       |          |           | FSGS                  | 10       | 10        |
|                       |          |           | Hypertrophy           | 10       | 10        |
|                       |          |           | Membranoproliferative | 10       | 10        |
|                       |          |           |                       |          |           |
|                       |          |           | Mesangioproliferative | 10       | 10        |
|                       |          |           | Normal                | 10       | 10        |
|                       |          |           | Sclerosed             | 10       | 10        |
| Total                 |          | 162       | Total                 |          | 160       |

Supplementary table S1 (continued). Composition of One-vs-Rest training data set.

| Positive class        |          |           | Negative class        |          |           |
|-----------------------|----------|-----------|-----------------------|----------|-----------|
|                       | original | augmented |                       | original | augmented |
| Mesangioproliferative | 81       | 81        | Crescentic            | 10       | 10        |
|                       |          |           | Endocapillary         | 10       | 10        |
|                       |          |           | FSGS                  | 10       | 10        |
|                       |          |           | Hypertrophy           | 10       | 10        |
|                       |          |           | Membranoproliferative | 10       | 10        |
|                       |          |           | Membranous            | 10       | 10        |
|                       |          |           |                       |          |           |
|                       |          |           | Normal                | 10       | 10        |
| Sclerosed             | 10       | 10        |                       |          |           |
| Total                 | 162      |           | Total                 | 160      |           |
| Normal                | 81       | 81        | Crescentic            | 10       | 10        |
|                       |          |           | Endocapillary         | 10       | 10        |
|                       |          |           | FSGS                  | 10       | 10        |
|                       |          |           | Hypertrophy           | 10       | 10        |
|                       |          |           | Membranoproliferative | 10       | 10        |
|                       |          |           | Membranous            | 10       | 10        |
|                       |          |           | Mesangioproliferative | 10       | 10        |
|                       |          |           |                       |          |           |
| Sclerosed             | 10       | 10        |                       |          |           |
| Total                 | 162      |           | Total                 | 160      |           |
| Sclerosed             | 81       | 81        | Crescentic            | 10       | 10        |
|                       |          |           | Endocapillary         | 10       | 10        |
|                       |          |           | FSGS                  | 10       | 10        |
|                       |          |           | Hypertrophy           | 10       | 10        |
|                       |          |           | Membranoproliferative | 10       | 10        |
|                       |          |           | Membranous            | 10       | 10        |
|                       |          |           | Mesangioproliferative | 10       | 10        |
|                       |          |           | Normal                | 10       | 10        |
|                       |          |           |                       |          |           |
| Total                 | 162      |           | Total                 | 160      |           |