### Supplemental Table 1. Characteristics of the study subjects from whom disc tissue used in qRT-PCR and IHC

| Characteristics                        | Control group | Case group |
|----------------------------------------|---------------|------------|
| **Age (years)**                        | Median (range)| 56.2 (24.8-76.3) | 53.1 (23.8-69.2) |
| Gender                                 |               |            |            |
| Male                                   | 13            | 18         |
| Female                                 | 8             | 16         |
| **Location of disc tissue**            |               |            |            |
| L1/2                                   | 10            | 0          |
| L2/3                                   | 9             | 0          |
| L3/4                                   | 1             | 4          |
| L4/5                                   | 1             | 16         |
| L5/S1                                  | 0             | 14         |
| **Schneiderman’s classification**      |               |            |            |
| 1                                      | 19            | 0          |
| 2                                      | 2             | 0          |
| 3                                      | 0             | 5          |
| 4                                      | 0             | 29         |

qRT-PCR: real-time quantitative PCR; IHC: immunohistochemistry; L: lumbar; S: sacral