## Additional file 1. Definition of subsequent (second-line) treatments

| Molecular diagnosis | First-line treatment | Second-line treatment | Non-treatment |
|---------------------|----------------------|-----------------------|---------------|
|                      |                       | Active treatment      | Non-treatment |
|                      |                       | %                     | Treatment     | %                     | Treatment     |
| **ALK+**             | Alectinib             | 80.00%                | Cisp + pmtrx  | 20.00%                | BSC           |
|                     | Crizotinib            | 80.00%                | alectinib     | 20.00%                | BSC           |
| **EGFR+**            | Erlotinib             | 70.00%                | osimertinib   | 30.00%                | BSC           |
|                     | Gefitinib             | 70.00%                | osimertinib   | 30.00%                | BSC           |
|                     | Afatinib              | 70.00%                | osimertinib   | 30.00%                | BSC           |
|                     | Osimertinib           | 70.00%                | Cisp + pmtrx  | 30.00%                | BSC           |
| **ROS1+**            | Crizotinib            | 80.00%                | Cisp + pmtrx  | 20.00%                | BSC           |
| **WT**              |                       |                       |               |                        |               |
| **TPS≥50%**         | Pembrolizumab         | 60.80%                | Cisp + pmtrx  | 39.20%                | BSC           |
|                     |                       |                       |               |                        |               |
| **TPS<50%**         | Cisp + pmtrx          | 46.60%                | Inmunotherapies<sup>a</sup> (75%); docetaxel + nintedanib (25%) | 53.40%                | BSC           |
|                     | Carb+ paclitx + bev   | 46.60%                | docetaxel + nintedanib (25%) | 53.40%                | BSC           |
|                     | Cisp + pmtrx + pembro | 30.50%                | docetaxel + nintedanib | 69.50%                | BSC           |

ALK: anaplastic lymphoma kinase; EGFR: epidermal growth factor receptor; WT: wild-type; TPS: tumor proportion score; Cisp: cisplatin; Carb: carboplatin; pmtrx: pemetrexed; paclitx: paclitaxel; bev: bevacizumab; BSC: best supportive care.

<sup>a</sup> Atezolizumab, pembrolizumab and nivolumab