

Supplementary Table S1. Characteristics of PET Trials Registered in ClinicalTrials.gov between October 2005 and September 2015 according to Common Cancer Types Studied

| Characteristic | No./Total No. (%) | | | | | |
|-----------------------------------|---------------------|--------------------|-----------------------|------------------|-------------------------|-----------------|
| | Urinary (N = 84) | Breast (N = 69) | Digestive (N = 55) | Lung (N = 52) | Hematologic (N = 49) | CNS (N = 43) |
| Study registration | | | | | | |
| Before first participant enrolled | 60/84 (71.4) | 40/68 (58.8) | 28/54 (51.9) | 27/52 (51.9) | 27/49 (55.1) | 30/42 (71.4) |
| After first participant enrolled | 24/84 (28.6) | 28/68 (41.2) | 26/54 (48.1) | 25/52 (48.1) | 22/49 (44.9) | 12/42 (28.6) |
| With DMC | 40/71 (56.3) | 34/56 (60.7) | 24/47 (51.1) | 24/40 (60.0) | 26/41 (63.4) | 20/39 (51.3) |
| Phase | | | | | | |
| Phase 0 or 1 | 14/55 (25.5) | 14/39 (35.9) | 4/24 (16.7) | 6/33 (18.2) | 3/34 (8.8) | 8/26 (30.8) |
| Phase 1/2 or 2 | 35/55 (63.6) | 18/39 (46.2) | 18/24 (75.0) | 24/33 (72.7) | 18/34 (52.9) | 16/26 (61.5) |
| Phase 2/3 or 3 | 6/55 (10.9) | 3/39 (7.7) | 2/24 (8.3) | 2/33 (6.1) | 11/34 (32.4) | 2/26 (7.7) |
| Phase 4 | 0/55 (0) | 4/39 (10.3) | 0/24 (0) | 1/33 (3.0) | 2/34 (5.9) | 0/26 (0) |
| Primary purpose | | | | | | |
| Treatment | 8/84 (9.5) | 9/69 (13.0) | 17/55 (30.9) | 22/52 (42.3) | 35/49 (71.4) | 9/43 (20.9) |
| Diagnosis | 76/84 (90.5) | 60/69 (87.0) | 38/55 (69.1) | 30/52 (57.7) | 14/49 (28.6) | 34/43 (79.1) |
| Blinding | | | | | | |
| Open label | 78/83 (94.0) | 64/68 (94.1) | 48/52 (92.3) | 47/52 (90.4) | 45/47 (95.7) | 39/42 (92.9) |
| Blind | 5/83 (6.0) | 4/68 (5.9) | 4/52 (7.7) | 5/52 (9.6) | 2/47 (4.3) | 3/42 (7.1) |
| Allocation | | | | | | |
| Randomized | 3/82 (3.7) | 2/66 (3.0) | 9/53 (17.0) | 6/49 (12.2) | 13/46 (28.3) | 3/42 (7.1) |
| Non-randomized | 79/82 (96.3) | 64/66 (97.0) | 44/53 (83.0) | 43/49 (87.8) | 33/46 (71.7) | 39/42 (92.9) |
| Study arms | | | | | | |

| | | | | | | |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| One | 70/83 (84.3) | 55/66 (83.3) | 40/51 (78.4) | 37/49 (75.5) | 22/44 (50.0) | 36/42 (85.7) |
| Two | 11/83 (13.3) | 9/66 (13.6) | 10/51 (19.6) | 10/49 (20.4) | 17/44 (38.6) | 4/42 (9.5) |
| Three or more | 2/83 (2.4) | 2/66 (3.0) | 1/51 (2.0) | 2/49 (4.1) | 5/44 (11.4) | 2/42 (4.8) |
| Funding source | | | | | | |
| Industry | 18/84 (21.4) | 8/69 (11.6) | 6/55 (10.9) | 9/52 (17.3) | 6/49 (12.2) | 4/43 (9.3) |
| NIH | 17/84 (20.2) | 14/69 (20.3) | 9/55 (16.4) | 15/52 (28.8) | 9/49 (18.4) | 11/43 (25.6) |
| Other | 49/84 (58.3) | 47/69 (68.1) | 40/55 (72.7) | 28/52 (53.8) | 34/49 (69.4) | 28/43 (65.1) |
| Participant enrollment | | | | | | |
| Median (interquartile range) | 30 (18-65) | 46 (20-80) | 35 (23-75) | 42 (23-100) | 100 (45-226) | 30 (20-60) |
| <50 | 54/84 (64.3) | 35/69 (50.7) | 30/53 (56.6) | 30/52 (57.7) | 13/49 (26.5) | 29/43 (67.4) |
| 50–100 | 16/84 (19.0) | 25/69 (36.2) | 16/53 (30.2) | 12/52 (23.1) | 12/49 (24.5) | 8/43 (18.6) |
| >100 | 14/84 (16.7) | 9/69 (13.0) | 7/53 (13.2) | 10/52 (19.2) | 24/49 (49.0) | 6/43 (14.0) |
| Region* | | | | | | |
| US/Canada | 60/80 (75.0) | 45/65 (69.2) | 28/51 (54.9) | 24/43 (55.8) | 23/46 (50.0) | 27/40 (67.5) |
| Europe | 19/80 (23.8) | 15/65 (23.1) | 18/51 (35.3) | 15/43 (34.9) | 20/46 (43.5) | 11/40 (27.5) |
| Asia | 3/80 (3.8) | 4/65 (6.2) | 4/51 (7.8) | 4/43 (9.3) | 7/46 (15.2) | 2/40 (5.0) |
| Other† | 1/80 (1.3) | 1/65 (1.5) | 1/51 (2.0) | 1/43 (2.3) | 1/46 (2.2) | 0/40 (0) |
| Tracer used | | | | | | |
| ¹⁸ F-FDG | 19/84 (22.6) | 26/69 (37.7) | 40/55 (72.7) | 35/52 (67.3) | 40/49 (81.6) | 3/43 (7.0) |
| Other | 65/84 (77.4) | 43/69 (62.3) | 15/55 (27.3) | 17/52 (32.7) | 9/49 (18.4) | 40/43 (93.0) |

¹⁸F-FDG, ¹⁸F-fluorodeoxyglucose; CNS, Central nervous system; DMC, data monitoring committee; NIH, National Institutes of Health; PET, positron emission tomography.

* The sum of the percentages may exceed 100% as categories are not mutually exclusive.

† Other regions included Oceania, South America, North America other than US/Canada, and Africa.