

SUPPLEMENT TO MANUSCRIPT

“Palliative care and the delivery of potentially inappropriate end-of-life care among patients with cancer: a nationwide retrospective population-based observational study in a mixed generalist and specialist palliative care model”

- Supplement Table1. Vektis database - Oncology identification codes
- Supplement Table 2. Characteristics of healthcare codes for generalist and specialist palliative care across care-settings

Supplement Table 1. Vektis database - Oncology identification codes

| Oncology identification | Specialist code | Diagnostic code | Oncology identification | Specialist code | Diagnostic code | Oncology identification | Specialist code | Diagnostic code |
|--|--|--|--|------------------------|------------------------|--|------------------------|------------------------|
| <i>Cancer of breast</i> | 0303 0313 0361 | 0318 0811 0105 | <i>Cancer of breast, secondary</i> | 0304 | 0221 | <i>Cancer of other respiratory & intrathoracic</i> | 0322 | 1305 |
| | | | | 0304 | 0222 | | 0322 | 1306 |
| | | | | 0304 | 0223 | | 0322 | 1307 |
| | | | | 0304 | 0224 | | 0303 | 0314 |
| | | | | 0304 | 0225 | | 0313 | 0623 |
| | | | | 0304 | 0226 | | 0313 | 0624 |
| | | | | 0304 | 0230 | | 0313 | 0629 |
| <i>Cancer of bronchus, lung</i> | 0303 0313 0313 0322 0322 0328 0328 0328 0328 0328 0328 0328 0328 0328 0328 0328 0328 0328 0328 0328 0361 | 0313 0621 0622 1303 1304 1210 1220 1230 1240 1250 1270 1310 1340 1430 1440 1460 1470 1510 1530 1595 1420 0103 | <i>Cancer, other & unspecified primary</i> | 0316 | 6119 | <i>Cancer of Head & Neck</i> | 0303 | 0358 |
| | | | | 0303 | 0352 | | 0301 | 0358 |
| | | | | 0303 | 0363 | | 0302 | 0019 |
| | | | | 0305 | 1150 | | 0302 | 0020 |
| | | | | 0305 | 1199 | | 0302 | 0021 |
| | | | | 0316 | 6115 | | 0302 | 0040 |
| | | | | 0316 | 6120 | | 0302 | 0041 |
| | | | | 0307 | OM17 | | 0302 | 0042 |
| | | | | 0361 | 0111 | | 0302 | 0060 |
| | | | | 0313 | 0899 | | 0302 | 0061 |
| | | | | 0303 | 0359 | | 0302 | 0062 |
| | | | | 0318 | 0906 | | 0302 | 0063 |
| | | | | 0335 | 0211 | | 0302 | 0064 |
| | | | | 0361 | 0109 | | 0302 | 0065 |
| | | | | 0389 | 0100 | | 0302 | 0066 |
| | | | | 0308 | 1145 | | 0302 | 0067 |
| | | | | 0308 | 1150 | | 0302 | 0068 |
| | | | | 0313 | 0243 | | 0302 | 0069 |
| | | | | 0313 | 0263 | | 0302 | 0072 |
| | | | | 0313 | 0264 | | 0302 | 0072 |
| 0303 | 0301 | 0303 | 0084 | | | | | |
| | | 0303 | 0306 | | | | | |
| | | 0303 | 0354 | | | | | |
| | | 0313 | 0801 | | | | | |
| | | 0361 | 0101 | | | | | |
| <i>Cancer of liver & bile duct</i> | 0303 0313 0316 0318 0318 0303 | 0367 0955 6118 0712 0735 0348 | <i>Cancer of colon</i> | 0303 | 0333 | <i>Cancer of other GI organs, peritoneum</i> | 0303 | 0357 |
| | | | | 0303 | 0347 | | 0303 | 0331 |
| | | | | 0313 | 0927 | | 0318 | 0810 |
| | | | | 0318 | 0607 | | 0361 | 0102 |
| | | | | 0318 | 0610 | | 0303 | 0349 |
| <i>Cancer of stomach</i> | 0303 0313 0318 | 0346 0914 0407 | <i>Cancer of esophagus</i> | 0303 | 0319 | <i>Cancer of pancreas</i> | 0313 | 0332 |
| | | | | 0313 | 0904 | | 0313 | 0964 |
| | | | | 0318 | 0307 | | 0318 | 0755 |

Supplement Table 1. Vektis database - Oncology identification codes (continued)

| Oncology identification | Specialist code | Diagnostic code | Oncology identification | Specialist code | Diagnostic code | Oncology identification | Specialist code | Diagnostic code |
|---|------------------------|------------------------|---|------------------------|------------------------|--|------------------------|------------------------|
| <i>Cancer of rectum & anus</i> | 0303 | 0334 | <i>Cancer of thyroid</i> | 0303 | 0303 | <i>Melanoma</i> | 0302 | 0001 |
| | 0303 | 0335 | | 0313 | 0214 | | 0303 | 0350 |
| | | | | 0313 | 0291 | | 0313 | 0842 |
| <i>Cancer of female genital organs</i> | 0307 | 0M13 | <i>Cancer of brain & nervous system</i> | 0330 | 9921 | <i>Cancer of brain & nervous system (cont'd)</i> | 0316 | 3505 |
| | 0313 | 0822 | | 0304 | 0353 | | 0316 | 6113 |
| | 0307 | 0M14 | | 0308 | 1101 | | 0327 | 0316 |
| | 0307 | 0M15 | | 0308 | 1105 | | 0330 | 0201 |
| | 0307 | 0M16 | | 0308 | 1110 | | 0330 | 0202 |
| | 0307 | 0M99 | | 0308 | 1115 | | 0330 | 0204 |
| | 0307 | 0M11 | | 0308 | 1120 | | 0330 | 0211 |
| | 0307 | 0M12 | | 0308 | 1125 | | 0330 | 0212 |
| | 0313 | 0821 | | 0308 | 1130 | | 0330 | 0213 |
| | 0313 | 0823 | | 0308 | 1135 | | 0330 | 0221 |
| | 0361 | 0106 | | 0308 | 1140 | | 0330 | 0222 |
| | | | | 0308 | 1810 | | 0330 | 0223 |
| | | | | 0308 | 2101 | | 0330 | 0231 |
| <i>Cancer of male genital organs & prostate</i> | 0306 | 0050 | 0308 | 2105 | 0330 | 0232 | | |
| | 0306 | 0060 | 0308 | 2110 | 0330 | 0233 | | |
| | 0306 | 0069 | 0308 | 2115 | 0330 | 0241 | | |
| | 0306 | 0092 | 0308 | 2120 | 0330 | 0242 | | |
| | 0313 | 0831 | 0308 | 2125 | 0330 | 0243 | | |
| | 0306 | 0040 | 0308 | 2130 | 0330 | 0251 | | |
| | 0306 | 0045 | 0308 | 3101 | 0330 | 0299 | | |
| | 0306 | 0048 | 0313 | 0802 | 0361 | 0108 | | |
| | 0313 | 0832 | | | | | | |
| | 0361 | 0107 | | | | | | |
| <i>Cancer of bone & connective tissue</i> | 0305 | 1140 | <i>Cancer of kidney & renal pelvis</i> | 0306 | 0025 | <i>Cancer of other urinary organs</i> | 0306 | 0020 |
| | 0313 | 0841 | | 0303 | 0370 | | 0306 | 0070 |
| | 0313 | 0843 | | 0306 | 0010 | | 0306 | 0078 |
| | 0316 | 6107 | | 0306 | 0016 | | 0313 | 0833 |
| | 0361 | 0104 | | 0313 | 0834 | | 0313 | 0839 |
| <i>Cancer of bladder</i> | | | <i>Secondary malignancies</i> | 0316 | 6116 | <i>Other oncological diseases</i> | | |
| | 0306 | 0030 | | 0303 | 0360 | | | |
| | 0306 | 0084 | | 0305 | 1110 | | 8418 | 0513 |
| | | | | 0322 | 1308 | | | |
| | | | 0330 | 0203 | | | | |
| <i>Pain, due to malignancy</i> | 0324 | 0715 | | | | | | |

Supplement Table 2. Characteristics of healthcare codes for generalist and specialist palliative care across care-settings

| Reimbursement code | Type of care | Billable for | Billable timeframe | Location of care |
|---|----------------------------|-----------------------------------|-------------------------------|-------------------------|
| <i>Weighing treatment options in light of advance care planning</i> | Generalist palliative care | MO ^a / NP ^b | Throughout disease trajectory | Hospital |
| <i>Supportive care/ palliative care in oncology setting</i> | Generalist palliative care | MO ^a / NP ^b | Throughout disease trajectory | Hospital |
| <i>Interdisciplinary palliative care team</i> | Specialist palliative care | Multidisciplinary | Throughout disease trajectory | Hospital |
| <i>Intensive home / hospice care*</i> | Generalist palliative care | Family physician | Prognosis < 3 months | Home / Hospice |
| <i>Multidisciplinary meeting with primary and specialty palliative care providers</i> | Specialist palliative care | Family physician | Throughout disease trajectory | Home / Hospice |
| <i>Bed-side palliative care consultation</i> | Specialist palliative care | Family physician | Prognosis < 3 months | Home / Hospice |
| <i>Hospice care at home</i> | Generalist palliative care | Nurse | Prognosis < 3 months | Home |
| <i>Community hospice care</i> | Generalist palliative care | Nurse | Prognosis < 3 months | Hospice |
| <i>Intensive long term care*</i> | Generalist palliative care | Physician / Nurse | Prognosis < 3 months | Nursing home |
| <i>Intensive long term care at home*</i> | Generalist palliative care | Physician / Nurse | Prognosis < 3 months | Home |
| <i>Palliative care unit</i> | Generalist palliative care | Multidisciplinary | Prognosis < 3 months | Nursing home |

^a MO; medical oncologist. ^b NP; nurse practitioner. * This reimbursement code refers to intensification of care for chronically or seriously ill patients in the last phase of their life.