# THE LANCET Oncology 

## Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Seddon B, Strauss SJ, Whelan J,et al. Gemcitabine and docetaxel versus doxorubicin as first-line treatment in previously untreated advanced unresectable or metastatic soft-tissue sarcomas (GeDDiS): a randomised controlled phase 3 trial. Lancet Oncol 2017; published online Sept 4. http://dx.doi.org/10.1016/S1470-2045(17)30622-8.

Appendix Table 1. Recruiting investigator sites

| Site | Investigator | Number of patients |
| :---: | :---: | :---: |
| University College Hospital, London | Dr Beatrice Seddon | 48 |
| The Royal Marsden Hospital, London | Prof Ian Judson | 34 |
| The Christie Hospital, Manchester | Dr Michael Leahy | 32 |
| Clatterbridge Centre for Oncology, Bebington | Dr Nasim Ali | 19 |
| St James's University Hospital, Leeds | Dr Maria Marples | 17 |
| Weston Park Hospital, Sheffield | Prof Penella Woll | 14 |
| Beatson West of Scotland Cancer Centre, Glasgow | Dr Fiona Cowie | 12 |
| Kantonsspital, St Gallen, Switzerland | Dr Christian Rothermundt | 8 |
| Western General Hospital; Edinburgh | Dr Richard Hayward | 8 |
| Belfast City Hospital | Dr Heather McCarty | 7 |
| Bristol Haematology \& Oncology Centre | Dr Adam Dangoor | 7 |
| Nottingham University Hospital | Dr Ivo Hennig | 6 |
| Singleton Hospital, Swansea | Prof John Wagstaff | 6 |
| Cheltenham General Hospital | Dr Charles Candish | 5 |
| Northampton General Hospital | Dr Craig Mcmillan | 5 |
| Queen Elizabeth Hospital, Birmingham | Dr David Peake | 5 |
| Royal Derby Hospital | Dr Mojca Persic | 5 |
| Addenbrookes Hospital, Cambridge | Dr Helena Earl | 3 |
| Churchill Hospital | Prof Andrew Hassan | 3 |
| Leicester Royal Infirmary | Dr Samreen Ahmed | 3 |
| Norfolk \& Norwich University Hospital | Dr Helen Stubbings | 3 |
| Royal Devon and Exeter Hospital | Dr Mark Napier | 3 |
| Ninewells Hospital, Dundee | Dr Michelle Ferguson | 2 |
| Aberdeen Royal Infirmary | Dr Radha Todd | 1 |
| Castle Hill Hospital | Prof Michael Lind | 1 |

Appendix Table 2. 'Other' sarcoma subtypes

| Type | Dox (N=129) | GemDoc ( $\mathrm{N}=128$ ) |
| :---: | :---: | :---: |
| Pre-listed options on CRF |  |  |
| Non-uterine leiomyosarcoma | 18 (14.0\%) | 21 (16.4\%) |
| Dedifferentiated liposarcoma | 7 (5.4\%) | 5 (3.9\%) |
| Spindle cell sarcoma with myofibroblastic differentiation/high grade | 4 (3.1\%) | 5 (3.9\%) |
| Myxoid and round cell liposarcoma | 7 (5.4\%) | 2 (1.6\%) |
| Myxofibrosarcoma | 4 (3.1\%) | 4 (3.1\%) |
| Malignant peripheral nerve sheath tumour | 5 (3.9\%) | 2 (1.6\%) |
| Angiosarcoma | 3 (2.3\%) | 4 (3.1\%) |
| Epithelioid sarcoma | 3 (2.3\%) | 1 (0.8\%) |
| Malignant solitary fibrous tumour ( $>4$ mitoses/10 hpf) | 0 | 3 (2.3\%) |
| Fibrosarcoma | 1 (0.8\%) | 1 (0.8\%) |
| Malignant fibrous histiocytoma | 1 (0.8\%) | 1 (0.8\%) |
| Sarcoma NOS | 0 | 2 (1.6\%) |
| Clear cell sarcoma | 1 (0.8\%) | 0 |
| Entered as free text on CRF |  |  |
| Endometrial stromal sarcoma (high grade) | 0 | 1 (0.8\%) |
| Endometrial stromal sarcoma of the endometrium | 0 | 1 (0.8\%) |
| Haemangiopericytoma | 0 | 1 (0.8\%) |
| Leiomyosarcoma | 4 (3.1\%) | 0 |
| Liposarcoma | 0 | 2 (1.6\%) |
| Liposarcoma well-differentiated | 1 (0.8\%) | 0 |
| Metastatic leiomyosarcoma | 1 (0.8\%) | 2 (1.6\%) |
| Undifferentiated pleomorphic spindle cell sarcoma, grade 3 | 0 | 1 (0.8\%) |
| Undifferentiated spindle cell sarcoma | 1 (0.8\%) | 0 |
| Undifferentiated spindle and round cell sarcoma | 0 | 1 (0.8\%) |
| Adenosarcoma of uterine origin | 0 | 1 (0.8\%) |
| Endometrial sarcoma | 0 | 1 (0.8\%) |
| High grade endometrial stromal sarcoma | 1 (0.8\%) | 0 |
| High grade leiomyosarcoma in the mesentery of small intestine | 1 (0.8\%) | 0 |
| High grade leiomyosarcoma | 1 (0.8\%) | 0 |
| High grade pleomorphic spindle cell sarcoma, not otherwise specified, grade 3 | 0 | 1 (0.8\%) |
| High grade undifferentiated sarcoma | 2 (1.6\%) | 0 |
| Intimal sarcoma | 0 | 1 (0.8\%) |
| Liposarcoma myxoid round cell grade 3 | 0 | 1 (0.8\%) |
| Myosarcoma | 1 (0.8\%) | 0 |
| Peripheral nerve sheath tumour | 0 | 1 (0.8\%) |
| Pleomorphic myxoid liposarsoma | 0 | 1 (0.8\%) |
| Poorly differentiated liposarcoma | 1 (0.8\%) | 0 |
| Retroperitoneal leiomyosarcoma | 0 | 1 (0.8\%) |
| Retroperitoneal sarcoma | 1 (0.8\%) | 0 |
| Spindle cell sarcoma most in keeping with a malignant peripheral nerve sheath tumour | 0 | 1 (0.8\%) |
| Undifferentiated myxoid endometrial sarcoma | 0 | 1 (0.8\%) |
| Well-differentiated and de-differentiated liposarcoma with myxofibrosarcomatous and chondrosarcoma elements | 1 (0.8\%) | 0 |
| Sarcoma (type not specified on CRF) | 1 (0.8\%) | . 0 |

Appendix Table 3. Central pathology review - major and minor discrepancies

| Trial ID | Local histology | Central review histology | Discrepancy type |
| :--- | :--- | :--- | :--- |
| GEDD087 | Pleomorphic sarcoma | Leiomyosarcoma- non-uterine | Major |
| GEDD112 | Epithelioid sarcoma | Leiomyosarcoma - non-uterine | Major |
| GEDD144 | Pleomorphic sarcoma | Leiomyosarcoma - non-uterine | Major |
| GEDD160 | Other eligible sarcomas (Non-uterine <br> leiomyosarcoma) | Pleomorphic sarcoma/malignant fibrous <br> histiocytoma | Major |
| GEDD184 | Other eligible sarcomas (Non-uterine <br> leiomyosarcoma) | Pleomorphic sarcoma/malignant fibrous <br> histiocytoma | Major |
| GEDD205 | Other eligible sarcomas <br> (retroperitoneal sarcoma) | Leiomyosarcoma - non-uterine | Major |
| GEDD226 | Spindle cell sarcoma with <br> myofibroblastic differentiation/high <br> grade | Leiomyosarcoma - non-uterine | Major |
| GEDD008 | Dedifferentiated liposarcoma | Pleomorphic sarcoma/malignant fibrous <br> histiocytoma | Spindle cell sarcoma with myofibroblastic <br> differentiation/myofibrosarcoma - (intermediate <br> and high grade) |
| GEDD016 | Sarcoma NOS | Major |  |
| GEDD018 | spindle cell sarcoma most in keeping <br> with a malignant peripheral nerve <br> sheath tumour | Sarcoma NOS | MIST (CD117 positive) |


| Trial ID | Local histology | Central review histology | Discrepancy type |
| :---: | :---: | :---: | :---: |
| GEDD113 | Spindle cell sarcoma with myofibroblastic differentiation/high grade | Pleomorphic sarcoma/malignant fibrous histiocytoma | Minor |
| GEDD118 | Myxofibrosarcoma | Pleomorphic sarcoma/malignant fibrous histiocytoma | Minor |
| GEDD127 | Myxofibrosarcoma | Sarcoma NOS | Minor |
| GEDD140 | Grade 2 liposarcoma | Dedifferentiated liposarcoma | Minor |
| GEDD141 | Pleomorphic sarcoma | Other (specify) - High Grade Uterine Sarcoma, NOS | Minor |
| GEDD149 | Pleomorphic sarcoma | Sarcoma NOS | Minor |
| GEDD150 | Myosarcoma | Spindle cell sarcoma with myofibroblastic differentiation/ myofibrosarcoma - (intermediate and high grade) | Minor |
| GEDD163 | Undifferentiated spine and round cell sarcoma | Sarcoma NOS | Minor |
| GEDD168 | Liposarcoma well differentiated | Dedifferentiated liposarcoma | Minor |
| GEDD197 | Spindle cell sarcoma with myofibroblastic differentiation/high grade | Myxofibrosarcoma | Minor |
| GEDD209 | Pleomorphic sarcoma | Sarcoma NOS | Minor |
| GEDD227 | Pleomorphic sarcoma | Spindle cell sarcoma with myofibroblastic differentiation/ myofibrosarcoma - (intermediate and high grade) | Minor |
| GEDD259 | Spindle cell sarcoma with myofibroblastic differentiation/high grade | Pleomorphic sarcoma/malignant fibrous histiocytoma | Minor |

${ }^{1}$ Patient withdrawn from trial by site following review of pathology and diagnosis of GIST (included in ITT analysis)
${ }^{2}$ Patient classified as ineligible on central review of pathology (included in ITT analysis)

Appendix Table 4. Chemotherapy cycles received

| Cycle |  | Dox (N=129) | Gem (N=128) | Doc (N=128) |
| :--- | :--- | :--- | :--- | :--- |
| 1 | Started | $128(99 \cdot 2 \%)$ | $126(98 \cdot 4 \%)$ | $118(92 \cdot 2 \%)$ |
|  | Did not complete | 0 | $8(6 \cdot 3 \%)$ | $1(0 \cdot 8 \%)$ |
| 2 | Started | $118(91 \cdot 5 \%)$ | $110(85 \cdot 9 \%)$ | $106(82 \cdot 8 \%)$ |
|  | Did not complete | $1(0 \cdot 8 \%)$ | $7(6 \cdot 4 \%)$ | $4(3 \cdot 8 \%)$ |
| 3 | Started | $100(77 \cdot 5 \%)$ | $89(69 \cdot 5 \%)$ | $87(68 \cdot 0 \%)$ |
|  | Did not complete | 0 | $5(5 \cdot 6 \%)$ | $3(3 \cdot 4 \%)$ |
| 4 | Started | $95(73 \cdot 6 \%)$ | $75(58 \cdot 6 \%)$ | $71(55 \cdot 5 \%)$ |
|  | Did not complete | 0 | $6(8 \cdot 0 \%)$ | $2(2 \cdot 8 \%)$ |
| 5 | Started | $79(61 \cdot 2 \%)$ | $59(46 \cdot 1 \%)$ | $53(41 \cdot 4 \%)$ |
|  | Did not complete | 0 | $8(13 \cdot 6 \%)$ | $2(3 \cdot 8 \%)$ |
| 6 | Started | $71(55 \cdot 0 \%)$ | $52(40 \cdot 6 \%)$ | $49(38 \cdot 3 \%)$ |
|  | Did not complete | 0 | $3(5 \cdot 8 \%)$ | $0(0 \cdot 0 \%)$ |

## Appendix Table 5. Reason for withdrawal from treatment

| Reason $^{\mathbf{1}}$ | Dox (N=129) | GemDoc (N=128) |
| :--- | :--- | :--- |
| Disease progression | 34 | 39 |
| Serious adverse event | 2 | 2 |
| Unacceptable toxicity | 1 | 13 |
| Clinician decision | 5 | 5 |
| Death | 5 | 4 |
| Symptomatic deterioration | 4 | 3 |
| Intercurrent illness preventing further treatment | 1 | 1 |
| Patient decision ${ }^{2}$ | 1 | 2 |
| Other | 5 | 9 |
| Unknown | 0 | 1 |
| Total | $\mathbf{5 8}$ | $\mathbf{7 9}$ |

Notes:

1. Participants who did not start treatment are included in this table.
2. Includes one participant in each arm who withdrew consent

Appendix Table 6. SAEs by grade and treatment arm. Data are $\mathbf{N}$ (\% within treatment arm by SAE)

| ! | Dox |  |  |  |  | GemDoc |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | 1 or 2 | 3 | 4 | 5 | Total | 1 or 2 | 3 | 4 | 5 | Total |
| Abdominal pain | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 3 (50.0\%) | 3 (50.0\%) | 0 (0.0\%) | 0 (0.0\%) | 6 |
| Anemia | 3 (50.0\%) | 3 (50.0\%) | 0 (0.0\%) | 0 (0.0\%) | 6 | 2 (50.0\%) | 1 (25.0\%) | 1 (25.0\%) | 0 (0.0\%) | 4 |
| Anorectal infection | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Ascites | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 2 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 |
| Back pain | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Bloating | 0 | 0 | 0 | 0 | 0 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Blood bilirubin increased | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Bronchial infection | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 (0.0\%) | 2 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 |
| Catheter related infection | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Chest pain - cardiac | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Colonic ulcer | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Confusion | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Constipation | 4 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 4 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Cough | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Diarrhea | 2 (33.3\%) | 4 (66.7\%) | 0 (0.0\%) | 0 (0.0\%) | 6 | 3 (33.3\%) | 5 (55.6\%) | 1 (11.1\%) | 0 (0.0\%) | 9 |
| Dyspepsia | 0 | 0 | 0 | 0 | 0 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Dyspnea | 0 (0.0\%) | 5 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 5 | 1 (20.0\%) | 3 (60.0\%) | 1 (20.0\%) | 0 (0.0\%) | 5 |
| Edema limbs | 0 | 0 | 0 | 0 | 0 | 2 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 |
| Esophageal hemorrhage | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Fatigue | 1 (50.0\%) | 1 (50.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 | 0 | 0 | 0 | 0 | 0 |
| Febrile neutropenia | 0 (0.0\%) | 26 (96.3\%) | 1 (3.7\%) | 0 (0.0\%) | 27 | 0 (0.0\%) | 13 (86.7\%) | 2 (13.3\%) | 0 (0.0\%) | 15 |
| Female genital tract fistula | 0 | 0 | 0 | 0 | 0 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Fever | 17 (94.4\%) | 1 (5.6\%) | 0 (0.0\%) | 0 (0.0\%) | 18 | 19 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 19 |
| Gastrointestinal disorders, other: diverticulitis | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Gastrointestinal disorders, other: oral thrush | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Heart failure | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |


|  | Dox |  |  |  |  | GemDoc |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | 1 or 2 | 3 | 4 | 5 | Total | 1 or 2 | 3 | 4 | 5 | Total |
| Hot flashes | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Hypercalcemia | 0 (0.0\%) | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Hypokalemia | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Infections and infestations, other: NOS | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 (0.0\%) | 2 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 |
| Infections and infestations, other: e-coli infection at tumour site | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Infections and infestations, other: gastrointestinal | 0 | 0 | 0 | 0 | 0 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Infections and infestations, other: hickman line | 0 (0.0\%) | 2 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 | 0 | 0 | 0 | 0 | 0 |
| Infections and infestations, other: source unknown | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Infections and infestations, other: varicella zoster | 0 (0.0\%) | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Infections and infestations, other: viral | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Left ventricular systolic dysfunction | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Lung infection | 0 (0.0\%) | 6 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 6 | 1 (20.0\%) | 3 (60.0\%) | 1 (20.0\%) | 0 (0.0\%) | 5 |
| Myalgia | 0 | 0 | 0 | 0 | 0 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Myocardial infarction | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 (100.0\%) | 1 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Nail infection | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Nausea | 3 (75.0\%) | 1 (25.0\%) | 0 (0.0\%) | 0 (0.0\%) | 4 | 1 (50.0\%) | 1 (50.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 |
| Neutrophil count decreased | 2 (9.1\%) | 8 (36.4\%) | 12 (54.5\%) | 0 (0.0\%) | 22 | 2 (20.0\%) | 5 (50.0\%) | 3 (30.0\%) | 0 (0.0\%) | 10 |
| Non-cardiac chest pain | 3 (75.0\%) | 1 (25.0\%) | 0 (0.0\%) | 0 (0.0\%) | 4 | 2 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 |
| Pain | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Pain in extremity | 0 | 0 | 0 | 0 | 0 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Palpitations | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Pelvic pain | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Pharyngitis | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Pleuritic pain | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Pneumonitis | 0 | 0 | 0 | 0 | 0 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Pneumothorax | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Seizure | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |


|  | Dox |  |  |  |  | GemDoc |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | 1 or 2 | 3 | 4 | 5 | Total | 1 or 2 | 3 | 4 | 5 | Total |
| Sepsis | 0 (0.0\%) | 0 (0.0\%) | 1 (50.0\%) | 1 (50.0\%) | 2 | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 (100.0\%) | 1 |
| Skin and subcutaneous tissue disorders, other: cellulitis | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 3 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 3 |
| Skin and subcutaneous tissue disorders, other: hickman line | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Skin infection | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 1 (33.3\%) | 2 (66.7\%) | 0 (0.0\%) | 0 (0.0\%) | 3 |
| Skin ulceration | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Small intestinal obstruction | 0 | 0 | 0 | 0 | 0 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Sudden death NOS | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 (100.0\%) | 1 | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 (100.0\%) | 1 |
| Syncope | 0 (0.0\%) | 2 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 | 0 | 0 | 0 | 0 | 0 |
| Thromboembolic event | 1 (11.1\%) | 6 (66.7\%) | 2 (22.2\%) | 0 (0.0\%) | 9 | 0 (0.0\%) | 2 (50.0\%) | 2 (50.0\%) | 0 (0.0\%) | 4 |
| Tremor | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Tumor pain | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 | 0 | 0 | 0 | 0 |
| Upper respiratory infection | 1 (33.3\%) | 2 (66.7\%) | 0 (0.0\%) | 0 (0.0\%) | 3 | 2 (66.7\%) | 1 (33.3\%) | 0 (0.0\%) | 0 (0.0\%) | 3 |
| Urinary retention | 0 | 0 | 0 | 0 | 0 | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |
| Urinary tract infection | 0 | 0 | 0 | 0 | 0 | 1 (50.0\%) | 1 (50.0\%) | 0 (0.0\%) | 0 (0.0\%) | 2 |
| Vomiting | 1 (33.3\%) | 2 (66.7\%) | 0 (0.0\%) | 0 (0.0\%) | 3 | 4 (80.0\%) | 1 (20.0\%) | 0 (0.0\%) | 0 (0.0\%) | 5 |
| Wound infection | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 | 0 (0.0\%) | 1 (100.0\%) | 0 (0.0\%) | 0 (0.0\%) | 1 |

## Appendix Table 7. Causes of death.

|  | Dox (N=74) | GemDoc (N=80) |
| :--- | :---: | :---: |
| Disease progression | $67(90.5 \%)$ | $76(95.0 \%)$ |
| Combination of disease \& treatment | $1(1.4 \%)$ | $1(1.3 \%)$ |
| Cardiac death | $2(2.7 \%)$ | $0(0.0 \%)$ |
| Other | $4(5.4 \%)^{1}$ | $3(3.8 \%)^{2}$ |

1. The 4 "other" causes of death in Dox are:
2. Multiorgan failure. Community acquired pneumonia. Metastatic angiosarcoma spleen
3. deep vein thrombosis
4. Intracerebral bleed
5. Unknown, patient died suddenly at home
6. The 3 "other" causes of death in GemDoc are:
7. Sudden death, no cause identified
8. Pulmonary embolism, Metastatic leiomyosarcoma
9. Pulmonary embolism due to abdominal sarcoma

## Appendix Table 8. Subgroup analyses (based on local histology diagnosis at baseline)

| Variable | Value | Treatment HR | Interaction p-value |
| :---: | :---: | :---: | :---: |
| Sex | Male ( $\mathrm{N}=101$ ) | $1 \cdot 82(1 \cdot 19,2 \cdot 80)$ * | $0 \cdot 03$ |
|  | Female ( $\mathrm{N}=156$ ) | $1.01(0.72,1.40)$ * |  |
| Uterine leiomyosarcoma | Other sarcomas ( $\mathrm{N}=186$ ) | $1 \cdot 37$ (1.01, 1.85) | $0 \cdot 38$ |
|  | Uterine leiomyosarcoma ( $\mathrm{N}=71$ ) | $1 \cdot 06(0 \cdot 65,1 \cdot 72)$ |  |
| Leiomyosarcoma | Other sarcomas ( $\mathrm{N}=139$ ) | $1 \cdot 56$ (1-10, 2.21) | 0. 14 |
|  | Leiomyosarcoma ( $\mathrm{N}=118$ ) | 1.06 (0.73, 1.55) |  |
| Histology | Uterine leiomyosarcoma ( $\mathrm{N}=71$ ) | $1 \cdot 06(0.65,1.72)$ | 0. 24 |
|  | Synovial sarcoma (N=11) | $4 \cdot 15(1 \cdot 16,14 \cdot 85)$ |  |
|  | Pleomorphic sarcoma ( $\mathrm{N}=32$ ) | $1 \cdot 00(0 \cdot 48,2 \cdot 08)$ |  |
|  | Other eligible sarcomas ( $\mathrm{N}=143$ ) | $1 \cdot 32(0.94,1 \cdot 86)$ |  |

[^0]Appendix Table 9. PFS and OS associated with SNPs predicted to have an impact on the pharmacology of Dox (blue), Doc (yellow) and Gem (orange)

|  |  |  |  | Dox |  |  | Gem/Doc |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | PFS | os |  | PFS | os |
| Drug | Gene | SNP | Taqman Assay | Allele | HR | HR | Allele | HR | HR |
|  |  |  |  | $\pi$ ( $\mathrm{N}=28$ ) | 1.00 (...) | 1.00 (.., ) | $\pi(N=30)$ | 1.00 (., .) | 1.00 (., .) |
|  |  | rs1045642 | C__7586657_20 | $\mathrm{CT}(\mathrm{N}=66)$ | 0.92 (0.58, 1.46) | 0.76 (0.42, 1.39) | $\mathrm{CT}(\mathrm{N}=68)$ | 1.62 (1.03, 2.54) | 1.25 (0.72, 2.17) |
|  |  |  |  | $\mathrm{CC}(\mathrm{N}=25)$ | 1.30 (0.74, 2.29) | 1.48 (0.74, 2.94) | $\mathrm{CC}(\mathrm{N}=23)$ | 1.87 (1.06, 3.31) | 1.12 (0.56, 2.27) |
|  |  |  |  | $\mathrm{CC}(\mathrm{N}=46)$ | 1.00 (.,.) | 1.00 (...) | $\mathrm{CC}(\mathrm{N}=36)$ | 1.00 (.,.) | 1.00 (., .) |
|  |  | rs1128503 | C__7586662_10 | CT ( $\mathrm{N}=54$ ) | 0.74 (0.49, 1.13) | 0.79 (0.46, 1.34) | $\mathrm{CT}(\mathrm{N}=62$ ) | 0.84 (0.55, 1.28) | 1.36 (0.80, 2.30) |
|  | ABCB1 |  |  | $\Pi$ ( $\mathrm{N}=19)$ | 1.01 (0.58, 1.77) | 1.50 (0.76, 2.94) | $\pi(N=23)$ | 0.67 (0.39, 1.14) | 1.12 (0.58, 2.16) |
|  |  |  |  | GG ( $\mathrm{N}=42$ ) | 1.00 (.,.) | 1.00 (., .) | GG ( $\mathrm{N}=30$ ) | 1.00 (., .) | 1.00 (., .) |
|  |  |  | C_11711720D_40 | $\mathrm{GT}(\mathrm{N}=53)$ | 0.76 (0.49, 1.16) | 0.73 (0.42, 1.26) | GT ( $\mathrm{N}=61$ ) | 0.72 (0.46, 1.13) | 1.39 (0.79, 2.45) |
|  |  | rs2032582 | \& | GA ( $\mathrm{N}=4$ ) | 0.48 (0.15, 1.57) | $0.37(0.05,2.75)$ | GA ( $\mathrm{N}=6$ ) | 0.53 (0.22, 1.30) | 1.02 (0.34, 3.01) |
|  |  |  | C_11711720C_30 | TA ( $\mathrm{N}=2$ ) | 0.69 (0.17, 2.86) | 0.95 (0.22, 4.05) | TA ( $\mathrm{N}=2$ ) | 0.86 (0.20, 3.61) | 0.69 (0.09, 5.22) |
|  |  |  |  | $\Pi$ ( $\mathrm{N}=17)$ | 0.88 (0.49, 1.57) | 1.12 (0.55, 2.27) | $\Pi$ ( $\mathrm{N}=22$ ) | $0.53(0.30,0.95)$ | 0.99 (0.48, 2.02) |
|  |  |  |  | AA ( $\mathrm{N}=59$ ) | 1.00 (., .) | 1.00 (.,.) | AA ( $\mathrm{N}=55$ ) | 1.00 (.,.) | 1.00 (.,.) |
|  | GSTP1 | rs1695 | C__3237198_20 | AG ( $\mathrm{N}=46$ ) | 1.14 (0.76, 1.72) | 1.13 (0.68, 1.86) | AG ( $\mathrm{N}=49$ ) | 1.10 (0.74, 1.63) | 1.04 (0.64, 1.70) |
|  |  |  |  | $\mathrm{GG}(\mathrm{N}=14)$ | 1.21 (0.67, 2.19) | 0.62 (0.26, 1.48) | GG ( $\mathrm{N}=17$ ) | 1.14 (0.65, 2.00) | 1.17 (0.58, 2.37) |
|  | SLC22A16 | rs12210538 | C_22271871_10 | AA ( $\mathrm{N}=71$ ) | 1.00 (., .) | 1.00 (., .) | AA ( $\mathrm{N}=75$ ) | 1.00 (., .) | 1.00 (.,.) |
|  |  |  |  | AG ( $\mathrm{N}=41$ ) | 0.77 (0.51, 1.16) | 1.17 (0.71, 1.94) | AG ( $\mathrm{N}=39$ ) | $0.84(0.57,1.26)$ | 0.96 (0.58, 1.57) |
| $\begin{aligned} & \text { 듬 } \\ & \text { 를 } \\ & \text { 히 } \end{aligned}$ |  |  |  | $\mathrm{GG}(\mathrm{N}=7)$ | 0.84 (0.36, 1.98) | 0.75 (0.23, 2.47) | $\mathrm{GG}(\mathrm{N}=7)$ | 1.39 (0.60, 3.22) | 1.12 (0.45, 2.84) |
|  |  | $\begin{gathered} \text { rs714368 \& } \\ \text { rs } 6907567 \end{gathered}$ | C__2256675_10\& | AA ( $\mathrm{N}=70$ ) | 1.00 (., .) | 1.00 (., .) | AA ( $\mathrm{N}=74$ ) | 1.00 (., .) | 1.00 (., .) |
|  |  |  |  | AG ( $\mathrm{N}=45$ ) | 1.75 (1.16, 2.62) | 1.36 (0.83, 2.22) | AG ( $\mathrm{N}=42$ ) | 1.11 (0.75, 1.64) | 1.04 (0.64, 1.67) |
|  |  |  |  | $\mathrm{GG}(\mathrm{N}=4)$ | 1.33 (0.48, 3.71) | 0.40 (0.05, 2.92) | GG ( $\mathrm{N}=5$ ) | 1.75 (0.70, 4.38) | 1.10 (0.34, 3.54) |
|  |  | rs723685 | C__2953081_10 | $\pi(\mathrm{N}=98)$ | 1.00 (.,.) | 1.00 (.,.) | T ( $\mathrm{N}=98$ ) | 1.00 (., .) | 1.00 (.,.) |
|  |  |  |  | $\mathrm{CT}(\mathrm{N}=21)$ | 1.72 (1.06, 2.79) | 0.89 (0.47, 1.66) | $\mathrm{CT}(\mathrm{N}=22)$ | 0.98 (0.60, 1.59) | 0.83 (0.45, 1.51) |
|  |  |  |  | $\mathrm{CC}(\mathrm{N}=0)$ | . (.,.) | . (.,.) | $\mathrm{CC}(\mathrm{N}=1)$ | 1.00 (0.14, 7.24) | 0.00 (0.00,.) |
|  | NQ01 | rs1800566 | C__2091255_30 | $\mathrm{CC}(\mathrm{N}=71)$ | 1.00 (.,.) | 1.00 (...) | $\mathrm{CC}(\mathrm{N}=79)$ | 1.00 (., .) | 1.00 (.,.) |
|  |  |  |  | $\mathrm{CT}(\mathrm{N}=42)$ | 1.31 (0.88, 1.97) | 0.85 (0.51, 1.42) | $\mathrm{CT}(\mathrm{N}=36)$ | 1.03 (0.68, 1.55) | 1.00 (0.59, 1.68) |
|  |  |  |  | $\Pi$ ( $\mathrm{N}=6$ ) | 0.50 (0.20, 1.26) | 0.56 (0.17, 1.82) | T( $\mathrm{N}=6$ ) | 0.69 (0.30, 1.59) | 1.42 (0.60, 3.32) |
|  | NQO2 | rs1143684 | C__8774861_1_ | $\Pi$ ( $\mathrm{N}=71$ ) | 1.00 (., .) | 1.00 (., .) | $\Pi$ ( $\mathrm{N}=67$ ) | 1.00 (., .) | 1.00 (., .) |
|  |  |  |  | $\mathrm{CT}(\mathrm{N}=43$ ) | 1.30 (0.87, 1.93) | 0.82 (0.47, 1.40) | $\mathrm{CT}(\mathrm{N}=46)$ | 1.35 (0.91, 2.01) | 1.40 (0.88, 2.23) |
|  |  |  |  | $\mathrm{CC}(\mathrm{N}=5$ ) | 1.08 (0.43, 2.69) | 0.86 (0.31, 2.40) | $\mathrm{CC}(\mathrm{N}=8)$ | 1.51 (0.72, 3.17) | 1.01 (0.36, 2.85) |
|  | CBR1 | rs9024 | C__2440206_1_ | GG ( $\mathrm{N}=96$ ) | 1.00 (., .) | 1.00 (...) | GG ( $\mathrm{N}=89$ ) | 1.00 (., .) | 1.00 (., .) |
|  |  |  |  | AG ( $\mathrm{N}=21$ ) | 0.85 (0.51, 1.43) | 1.28 (0.69, 2.35) | AG ( $\mathrm{N}=30$ ) | 0.85 (0.55, 1.30) | 0.90 (0.53, 1.51) |
|  |  |  |  | AA ( $\mathrm{N}=2$ ) | 1.33 (0.32, 5.42) | 3.28 (0.79, 13.63) | AA ( $\mathrm{N}=2$ ) | 0.62 (0.15, 2.52) | 0.60 (0.08, 4.34) |
|  | CBR3 | rs1056892 | C__9483603_10 | GG ( $\mathrm{N}=55$ ) | 1.00 (., .) | 1.00 (.., .) | GG ( $\mathrm{N}=45$ ) | 1.00 (., .) | 1.00 (., .) |
|  |  |  |  | AG ( $\mathrm{N}=49)$ | 1.23 (0.82, 1.85) | 1.00 (0.60, 1.68) | AG ( $\mathrm{N}=57$ ) | 1.35 (0.89, 2.04) | 1.38 (0.84, 2.26) |
|  |  |  |  | $\mathrm{AA}(\mathrm{N}=15)$ | 1.73 (0.96, 3.11) | 1.25 (0.59, 2.63) | AA ( $\mathrm{N}=19$ ) | 1.29 (0.74, 2.22) | 0.74 (0.36, 1.55) |


|  |  |  |  | Dox |  |  | Gem/Doc |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | PFS | OS |  | PFS | OS |
| Drug | Gene | SNP | Taqman Assay | Allele | HR | HR | Allele | HR | HR |
|  | CYP3A41b | rs2740574 | C__1837671_50 | AA ( $\mathrm{N}=107$ ) <br> AG ( $\mathrm{N}=10$ ) <br> GG ( $\mathrm{N}=2$ ) | $\begin{aligned} & \hline 1.00(., .) \\ & 1.14(0.57,2.27) \\ & 1.35(0.33,5.50) \end{aligned}$ | $\begin{aligned} & \hline 1.00(., .) \\ & 1.73(0.79,3.79) \\ & 1.04(0.14,7.56) \end{aligned}$ | AA ( $\mathrm{N}=111$ ) <br> AG ( $\mathrm{N}=8$ ) <br> GG ( $\mathrm{N}=2$ ) | $\begin{aligned} & \hline 1.00(., .) \\ & 1.19(0.57,2.45) \\ & 1.42(0.35,5.82) \end{aligned}$ | $\begin{aligned} & \hline 1.00(., .) \\ & 0.46(0.15,1.47) \\ & 2.28(0.55,9.46) \end{aligned}$ |
|  | CYP1B | rs1056836 | C __3099976_30 | $\begin{aligned} & \text { CC }(N=20) \\ & \text { CG }(N=65) \\ & \text { GG }(N=34) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 1.04(0.61,1.76) \\ & 0.75(0.41,1.36) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 1.08(0.57,2.03) \\ & 0.67(0.32,1.42) \end{aligned}$ | $\begin{aligned} & \mathrm{CC}(\mathrm{~N}=28) \\ & \mathrm{CG}(\mathrm{~N}=59) \\ & \mathrm{GG}(\mathrm{~N}=34) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 0.63(0.39,1.02) \\ & 0.91(0.55,1.51) \end{aligned}$ | $\begin{aligned} & 1.00 \text { (... .) } \\ & 0.68(0.40,1.17) \\ & 0.53(0.29,0.98) \end{aligned}$ |
| $\times$ |  | rs7311358 | C_25765587_40 | AA ( $\mathrm{N}=85$ ) AG ( $\mathrm{N}=26$ ) GG ( $N=8$ ) | $\begin{aligned} & 1.00(., .) \\ & 1.14(0.71,1.83) \\ & 0.98(0.47,2.04) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 0.93(0.51,1.72) \\ & 0.96(0.35,2.67) \end{aligned}$ | AA ( $N=87$ ) <br> $A G(N=29)$ <br> GG ( $\mathrm{N}=5$ ) | $\begin{aligned} & 1.00(., .) \\ & 1.18(0.76,1.83) \\ & 0.87(0.35,2.15) \end{aligned}$ | $\begin{aligned} & 1.00(. ., .) \\ & 1.20(0.71,2.03) \\ & 1.40(0.50,3.89) \end{aligned}$ |
|  |  | rs11045585 | C_31106434_10 | AA ( $\mathrm{N}=86$ ) <br> AG ( $\mathrm{N}=27$ ) <br> GG ( $\mathrm{N}=6$ ) | $\begin{aligned} & 1.00(., .) \\ & 1.03(0.65,1.62) \\ & 1.13(0.49,2.59) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 0.81(0.44,1.49) \\ & 1.49(0.54,4.15) \end{aligned}$ | AA ( $\mathrm{N}=88$ ) <br> AG ( $\mathrm{N}=30$ ) <br> GG ( $\mathrm{N}=3$ ) | $\begin{aligned} & 1.00(., .) \\ & 1.04(0.67,1.60) \\ & 2.16(0.68,6.92) \end{aligned}$ | $\begin{aligned} & 1.00(. .,) \\ & 1.28(0.77,2.12) \\ & 0.48(0.07,3.47) \end{aligned}$ |
|  | XRCC4 | rs1382368 | C __3098143_10 | GG ( $\mathrm{N}=36$ ) AG ( $\mathrm{N}=61$ ) AA ( $\mathrm{N}=22$ ) | $\begin{aligned} & 1.00(., .) \\ & 0.78(0.50,1.21) \\ & 0.91(0.52,1.62) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 1.09(0.62,1.90) \\ & 1.23(0.61,2.49) \end{aligned}$ | $\begin{aligned} & \text { GG }(\mathrm{N}=41) \\ & \text { AG }(\mathrm{N}=57) \\ & \mathrm{AA}(\mathrm{~N}=23) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 0.83(0.55,1.26) \\ & 0.72(0.42,1.22) \end{aligned}$ | $\begin{aligned} & 1.00 \text { (... .) } \\ & 0.85(0.51,1.42) \\ & 0.63(0.32,1.24) \end{aligned}$ |
|  | PRDX4 | rs518329 | C___590682_20 | $\begin{aligned} & \text { GG or } \mathrm{G}-(\mathrm{N}=44) \\ & \text { AG ( } \mathrm{N}=43) \\ & \text { AA or } \mathrm{A}-(\mathrm{N}=32) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 1.27(0.81,1.98) \\ & 0.73(0.45,1.21) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 0.89(0.52,1.51) \\ & 0.43(0.22,0.85) \end{aligned}$ | $\begin{aligned} & \text { GG or } G-(N=49) \\ & A G(N=35) \\ & \text { AA or } A-(N=37) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 0.71(0.45,1.12) \\ & 0.85(0.55,1.32) \end{aligned}$ | $\begin{aligned} & 1.00(., .) \\ & 0.78(0.45,1.38) \\ & 0.97(0.57,1.66) \end{aligned}$ |



Appendix Figure 1: Kaplan Meier plots of PFS of groups selected according to genetic variants in the SLC22A16 gene in the Dox arm ( $\mathbf{a}, \mathrm{b}, \& \mathrm{c}$ ) and the GemDoc arm ( $\mathrm{d}, \mathrm{e} \& \mathrm{f}$ ). P values obtained using a Likelihood ratio test.


## Appendix Table 10. Frequency distribution of second line treatment

|  | Dox (N=62) | GemDoc (N=77*) | Total (\%) |
| :--- | :---: | :---: | :---: |
| Doxorubicin | 1 | 60 | $61(42 \cdot 1 \%)$ |
| Gemcitabine and docetaxel | 18 | 1 | $19(13 \cdot 1 \%)$ |
| Ifosfamide | 15 | 2 | $17(11 \cdot 7 \%)$ |
| Trabectedin | 9 | 4 | $13(9 \%)$ |
| Pazopanib | 4 | 5 | $9(6 \cdot 2 \%)$ |
| Gemcitabine | 7 | 0 | $7(4 \cdot 8 \%)$ |
| Axitinib | 4 | 1 | $5(3 \cdot 5 \%)$ |
| Doxorubicin and ifosfamide | 0 | 4 | $4(2 \cdot 8 \%)$ |
| NGR-nTNF and doxorubicin | 0 | 3 | $3(2 \cdot 1 \%)$ |
| Caelyx ${ }^{\text {TM }}$ | 1 | 0 | $1(0 \cdot 7 \%)$ |
| Anastrozole | 0 | 1 | $1(0 \cdot 7 \%)$ |
| Dacarbazine | 1 | 0 | $1(0 \cdot 7 \%)$ |
| Imatinib | 1 | 0 | $1(0 \cdot 7 \%)$ |
| Paclitaxel | 1 | 0 | $1(0 \cdot 7 \%)$ |
| Paclitaxel and hedgehog inhibitor | 0 | 1 | $1(0 \cdot 7 \%)$ |
| Unknown | 0 | 1 | $1(0 \cdot 7 \%)$ |
| Total | 62 | 83 | 145 |

* Two patients were prescribed 2 drugs simultaneously; three patients were prescribed 3 drugs simultaneously

Appendix Table 11. Dose reductions per cycle


Appendix Table 12. Grade 3 or 4 Adverse Events associated with SNPs

| Any AE grade 3 or 4 within Dox |  |  |
| :---: | :---: | :---: |
| subgroup | Dox ( $\mathrm{N}=118$ ) | $p$-value |
| Overall | 79/118(66.9\%) |  |
| CYP3A41b - AA | 70/106(66.0\%) | 0.74 |
| CYP3A41b - AG | 8/10(80.0\%) |  |
| CYP3A41b-GG | 1/2(50.0\%) |  |
| CDArs1048977-CC | 37/53(69.8\%) | 0.74 |
| CDArs1048977-CT | 29/46(63.0\%) |  |
| CDArs1048977-TT | 13/19(68.4\%) |  |
| NT5C2rs11598702-TT | 26/45(57.8\%) | 0.16 |
| NT5C2rs11598702-CT | 38/52(73.1\%) |  |
| NT5C2rs11598702-CC | 15/21(71.4\%) |  |
| XRCC4rs1382368-GG | 20/36(55.6\%) | 0.07 |
| XRCC4rs1382368-AG | 42/60(70.0\%) |  |
| XRCC4rs1382368-AA | 17/22(77.3\%) |  |
| CYP1Brs1056836-CC | 13/19(68.4\%) | 0.78 |
| CYP1Brs1056836-CG | 42/65(64.6\%) |  |
| CYP1Brs1056836-GG | 24/34(70.6\%) |  |
| SLC22A16rs12210538-AA | 45/70(64.3\%) | 0.7 |
| SLC22A16rs12210538-AG | 30/41(73.2\%) |  |
| SLC22A16rs12210538-GG | 4/7(57.1\%) |  |
| CMPK1rs11211524-AA | 47/69(68.1\%) | 0.96 |
| CMPK1rs11211524-AC | 30/47(63.8\%) |  |
| CMPK1rs11211524-CC | 2/2(100.0\%) |  |
| PRDX4rs518329-GG | 27/43(62.8\%) | 0.18 |
| PRDX4rs518329-AG | 27/43(62.8\%) |  |
| PRDX4rs518329-AA | 25/32(78.1\%) |  |
| SLC28A3rs7867504-TT | 35/55(63.6\%) | 0.74 |
| SLC28A3rs7867504-TC | 36/50(72.0\%) |  |
| SLC28A3rs7867504-CC | 8/13(61.5\%) |  |
| ABCB1rs1045642-TT | 19/28(67.9\%) | 0.56 |
| ABCB1rs1045642-CT | 41/65(63.1\%) |  |
| ABCB1rs1045642-CC | 19/25(76.0\%) |  |
| NQO2rs1143684-TT | 51/70(72.9\%) | 0.24 |
| NQO2rs1143684-CT | 24/43(55.8\%) |  |
| NQO2rs1143684-CC | 4/5(80.0\%) |  |
| CMPK1rs4492666-CC | 22/33(66.7\%) | 0.7 |
| CMPK1rs 4492666 - AC | 39/60(65.0\%) |  |
| CMPK1rs4492666-AA | 18/25(72.0\%) |  |
| NQ01rs1800566-CC | 48/71(67.6\%) | 0.86 |
| NQ01rs1800566- CT | 26/41(63.4\%) |  |
| NQ01rs 1800566-T | 5/6(83.3\%) |  |
| ABCB1rs1128503-CC | 29/45(64.4\%) | 0.34 |
| ABCB1rs1128503-CT | 35/54(64.8\%) |  |
| ABCB1rs1128503-TT | 15/19(78.9\%) |  |
| CBR1rs9024-GG | 62/96(64.6\%) | 0.18 |
| CBR1rs9024-AG | 15/20(75.0\%) |  |
| CBR1rs9024-AA | 2/2(100.0\%) |  |
| DCKrs4694362-TT | 25/44(56.8\%) | 0.09 |
| DCKrs4694362-CT | 39/54(72.2\%) |  |
| DCKrs4694362- CC | 15/20(75.0\%) |  |
| GSTP1rs1695-AA | 40/58(69.0\%) | 0.2 |
| GSTP1rs1695-AG | 33/46(71.7\%) |  |
| GSTP1rs1695-GG | 6/14(42.9\%) |  |
| SLC22A16rs714368-AA | 51/69(73.9\%) | 0.03 |
| SLC22A16rs714368-AG | 27/45(60.0\%) |  |
| SLC22A16rs714368-GG | 1/4(25.0\%) |  |
| SLC29A1rs760370-AA | 26/39(66.7\%) | 0.72 |
| SLC29A1rs760370-AG | 39/56(69.6\%) |  |
| SLC29A1rs760370-GG | 14/23(60.9\%) |  |
| SLCO1B3rs7311358-AA | 59/84(70.2\%) | 0.32 |
| SLCO1B3rs7311358-AG | 15/26(57.7\%) |  |
| SLCO1B3rs7311358-GG | 5/8(62.5\%) |  |
| SLC22A16rs6907567-AA | 51/69(73.9\%) | 0.03 |
| SLC22A16rs6907567-AG | 27/45(60.0\%) |  |
| SLC22A16rs6907567-GG | 1/4(25.0\%) |  |
| CBR3rs1056892-GG | 37/54(68.5\%) | 0.8 |
| CBR3rs1056892-AG | 32/49(65.3\%) |  |
| CBR3rs1056892-AA | 10/15(66.7\%) |  |
| SLC29A1rs9394992-CC | 47/67(70.1\%) | 0.43 |
| SLC29A1rs9394992-CT | 27/43(62.8\%) |  |
| SLC29A1rs9394992-TT | 5/8(62.5\%) |  |
| CDArs2072671-AA | 41/56(73.2\%) | 0.06 |
| CDArs2072671-AC | 34/52(65.4\%) |  |
| CDArs2072671-CC | 4/10(40.0\%) |  |
| SLC22A16rs723685-TT | 69/97(71.1\%) | 0.04 |
| SLC22A16rs723685-CT | 10/21(47.6\%) |  |
| SLC22A16rs723685-CC | 0/0.\%) |  |
| RRM1rs9937-AA | 18/29(62.1\%) | 0.63 |
| RRM1rs9937-AG | 44/64(68.8\%) |  |
| RRM1rs9937-GG | 17/25(68.0\%) |  |
| SLCO1B3rs11045585-AA | 59/86(68.6\%) | 0.88 |
| SLCO1B3rs11045585-AG | 15/26(57.7\%) |  |
| SLCO1B3rs11045585-GG | 5/6(83.3\%) |  |


| Any AE grade 3 or 4 within GemDoc |  |  |
| :---: | :---: | :---: |
| subgroup | GemDoc ( $\mathrm{N}=121$ ) | p-value |
| Overall | 89/121(73.6\%) |  |
| CYP3A41b - AA | 80/111(72.1\%) | 0.15 |
| CYP3A41b - AG | 7/8(87.5\%) |  |
| CYP3A41b-GG | 2/2(100.0\%) |  |
| CDArs1048977-CC | 41/54(75.9\%) | 0.53 |
| CDArs1048977-CT | 42/58(72.4\%) |  |
| CDArs1048977-TT | 6/9(66.7\%) |  |
| NT5C2rs11598702-TT | 36/46(78.3\%) | 0.36 |
| NT5C2rs11598702-CT | 40/56(71.4\%) |  |
| NT5C2rs11598702-CC | 13/19(68.4\%) |  |
| XRCC4rs1382368-GG | 30/41(73.2\%) | 0.61 |
| XRCC4rs1382368-AG | 44/57(77.2\%) |  |
| XRCC4rs1382368-AA | 15/23(65.2\%) |  |
| CYP1Brs1056836-CC | 24/28(85.7\%) | 0.32 |
| CYP1Brs1056836-CG | 40/59(67.8\%) |  |
| CYP1Brs1056836-GG | 25/34(73.5\%) |  |
| SLC22A16rs12210538-AA | 55/75(73.3\%) | 0.74 |
| SLC22A16rs12210538-AG | 30/39(76.9\%) |  |
| SLC22A16rs12210538-GG | 4/7(57.1\%) |  |
| CMPK1rs11211524-AA | 50/73(68.5\%) | 0.12 |
| CMPK1rs11211524-AC | 34/42(81.0\%) |  |
| CMPK1rs11211524-CC | 5/6(83.3\%) |  |
| PRDX4rs518329-GG | 35/49(71.4\%) | 0.84 |
| PRDX4rs518329-AG | 27/35(77.1\%) |  |
| PRDX4rs518329-AA | 27/37(73.0\%) |  |
| SLC28A3rs7867504-TT | 40/53(75.5\%) | 0.95 |
| SLC28A3rs7867504-TC | 43/61(70.5\%) |  |
| SLC28A3rs7867504-CC | 6/7(85.7\%) |  |
| ABCB1rs1045642-TT | 22/30(73.3\%) | 0.96 |
| ABCB1rs1045642-CT | 50/68(73.5\%) |  |
| ABCB1rs1045642-CC | 17/23(73.9\%) |  |
| NQO2rs1143684-TT | 50/67(74.6\%) | 0.89 |
| NQO2rs1143684-CT | 32/46(69.6\%) |  |
| NQO2rs1143684-CC | 7/8(87.5\%) |  |
| CMPK1rs4492666-CC | 27/33(81.8\%) | 0.03 |
| CMPK1rs 4492666 - AC | 46/60(76.7\%) |  |
| CMPK1rs 4492666 - AA | 16/28(57.1\%) |  |
| NQ01rs1800566-CC | 57/79(72.2\%) | 0.33 |
| NQ01rs1800566-CT | 26/36(72.2\%) |  |
| NQ01rs1800566-TT | 6/6(100.0\%) |  |
| ABCB1rs1128503-CC | 26/36(72.2\%) | 0.87 |
| ABCB1rs1128503-CT | 46/62(74.2\%) |  |
| ABCB1rs1128503-TT | 17/23(73.9\%) |  |
| CBR1rs9024-GG | 63/89(70.8\%) | 0.19 |
| CBR1rs9024-AG | 24/30(80.0\%) |  |
| CBR1rs9024-AA | 2/2(100.0\%) |  |
| DCKrs4694362-TT | 32/44(72.7\%) | 0.57 |
| DCKrs4694362-CT | 46/59(78.0\%) |  |
| DCKrs4694362-CC | 11/18(61.1\%) |  |
| GSTP1rs1695-AA | 41/55(74.5\%) | 0.99 |
| GSTP1rs1695-AG | 35/49(71.4\%) |  |
| GSTP1rs1695-GG | 13/17(76.5\%) |  |
| SLC22A16rs714368-AA | 50/74(67.6\%) | 0.03 |
| SLC22A16rs714368-AG | 34/42(81.0\%) |  |
| SLC22A16rs714368-GG | 5/5(100.0\%) |  |
| SLC29A1rs760370-AA | 41/50(82.0\%) | 0.11 |
| SLC29A1rs760370-AG | 38/56(67.9\%) |  |
| SLC29A1rs760370-GG | 10/15(66.7\%) |  |
| SLCO1B3rs7311358-AA | 63/87(72.4\%) | 0.37 |
| SLCO1B3rs7311358-AG | 21/29(72.4\%) |  |
| SLCO1B3rs7311358-GG | 5/5(100.0\%) |  |
| SLC22A16rs6907567-AA | 50/74(67.6\%) | 0.03 |
| SLC22A16rs6907567-AG | 34/42(81.0\%) |  |
| SLC22A16rs6907567-GG | 5/5(100.0\%) |  |
| CBR3rs1056892-GG | 30/45(66.7\%) | 0.12 |
| CBR3rs1056892-AG | 43/57(75.4\%) |  |
| CBR3rs1056892-AA | 16/19(84.2\%) |  |
| SLC29A1rs9394992-CC | 46/61(75.4\%) | 0.81 |
| SLC29A1rs9394992-CT | 36/51(70.6\%) |  |
| SLC29A1rs9394992-TT | 7/9(77.8\%) |  |
| CDArs2072671-AA | 46/64(71.9\%) | 0.99 |
| CDArs2072671-AC | 33/42(78.6\%) |  |
| CDArs2072671-CC | 10/15(66.7\%) |  |
| SLC22A16rs723685-TT | 69/98(70.4\%) | 0.08 |
| SLC22A16rs723685-CT | 19/22(86.4\%) |  |
| SLC22A16rs723685-CC | 1/1(100.0\%) |  |
| RRM1rs9937-AA | 18/31(58.1\%) | 0.05 |
| RRM1rs9937-AG | 47/60(78.3\%) | 0.05 |
| RRM1rs9937-GG | 24/30(80.0\%) | 0.05 |
| SLCO1B3rs11045585-AA | 64/88(72.7\%) | 0.53 |
| SLCO1B3rs11045585-AG | 22/30(73.3\%) | 0.53 |
| SLCO1B3rs11045585-GG | 3/3(100.0\%) | 0.53 |


[^0]:    * Adjusted for histological subtype

