

Online supplementary materials

Table 1. Characteristics of the included clinical trials

| Author/year | Mizukami ²⁹ | Navari 2011 ²¹ | Tan 2009 ²⁴ | Wang2015 ²⁶ | Mukhopadhyay2017 ³⁰ | Navari *2016 ²⁰ |
|--|--|--|--|--|---|--|
| Study design | Randomized, single-blind, placebo controlled trial | Randomized control trial; unblinded | Randomized control trial; unblinded | Randomized controlled trial | Randomized, double blinded controlled trial | Double blinded randomized trial |
| Total No. of patients | 44 | 241 | 247 | 84 | 100 | 120 |
| No. of patients OL /Control | 22/22 | 121/120 | 121/108 | 42/42 | 50/50 | 59/59 |
| Type of cancer | Breast , Bladder,, Lymphoma, Pharynx, Leukemia, Other | Bladder , Breast , Lung (non-small cell) , Malignant lymphoma | Lung , Stomach , Breast , Ovarian Lymphom, Oesophageal, Colorectal Oropharyngeal, Teratoma | Non-small cell lung cancer (NSCLC) | N/A | Head and neck or esophageal cancer |
| Chemotherapy used with degree of emetogenicity | HEC CDDP EC 3 AC 2 MEC Nedaplatin Carboplatin Others | HEC Cisplatin Doxorubicin and cyclophosphamide | HEC cisplatin dacarbazine MEC oxaliplatin epirubicin doxorubicin carboplatin | HEC Cisplatin- gemcitabine regimen | HEC cisplatin, carboplatin, and oxaliplatin | HEC plus radiation therapy |
| Intervention | C: corticosteroid + 5 HT3 receptor antagonist + NK-1 receptor antagonist O: C regimen + O 5 mg/d days 0–5 | C: aprepitant, palonosetron ,dexamethasone, (APD) regimen O: O 10 mg PO 1-4 days, palonosetron, and dexamethasone (OPD) regimen | C:corticosteroid (dexamethasone) + 5-HT3 receptor Antagonist(azasetron) O: C regimen + O 10 mg/d days 1–5 | C:Ondansetron 8 mg 30 min before chemo O: O 10 mg/day 1–8 Ondansetron 8 mg 30 min before chemo | C: Palonosetron d 1 Dexamethasone d 1 O: C regimen + O10 mg/day 1–5 | C: fosaprepitant, Dexamethasone Palonosetron (FPD) O: C regimen +O 10 mg |
| Age range | 22-78 | 39–81 | 18-74 | 39-76 | 55.04 ± 1.50 (median) | 52-76 |
| Ethnicity | Japanese | Americans | Chinese | Chinese | Indian | Americans |

Table 1. Characteristics of the included clinical trials (cont.)

| Author and /year | Navari 2016 ³² | Shumway 2009 ²³ | Navari 2015 ²² | Mao 2011 ²⁸ | Wang 2012 ²⁵ | Lu et al. 2013 ²⁷ | Babu 2016 ³¹ |
|--|--|---|--|---|--|--|--|
| Study design | Randomized, double-blind, placebo controlled trial | Randomized, single-blind, placebo-controlled trial | Randomized, single-blind, controlled trial | Randomized controlled trial | Randomized controlled trial | Randomized controlled trial | Randomized control trial |
| Total No. of patients | 380 | 18 | 101 | 92 | 120 | 60 | 100 |
| No. of patients OL /Control | 192/188 | 8/9 | 51/50 | 46/46 | 60/60 | 30/30 | 50/50 |
| Type of cancer | Breast, Lung Other | N/A | head and neck and esophageal cancer | N/A | N/A | Solid malignant tumors | Breast, lymphoma, head and neck. Osteosarcoma, stomach |
| Chemotherapy used with degree of emetogenicity | HEC Cisplatin-containing regimen Anthracycline and cyclophosphamide | HEC cisplatin AC ABVD | HEC cisplatin based and radiation therapy | MEC or HEC | HEC | MEC or HEC | HEC |
| Intervention | C: dexamethasone, NK1-receptor antagonist, and a 5-HT3-receptor antagonist O: C regimen + 10 mg of olanzapine day 1-4 | C: Placebo d-2, d-1, d 4, Aprepitant 125 mg PO d 1, 80 mg PO d 2-3, Dexamethasone 12 mg IV d 1, 4 mg PO BID d 2-4, Palonosetron 0.25mg IV d-1 O: Olanzapine 5 mg PO d -2, d -1, d 10 mg PO d 1-4 Dexamethasone 12 mg IV d 1, 4 mg PO BID d 2-4 Palonosetron 0.25 mg IV d 1 | C: Fosaprepitant 150 mg IV d 1, Palonosetron 0.25 mg IV d 1, Dexamethasone 12 mg IV d 14 mg BID d 2-3 O: Olanzapine 10 mg/day d 1-4, Palonosetron 0.25 mg IV d1. Dexamethasone 20 mg IV pre-chemo d 1 | C: Corticosteroid 5-HT3 receptor antagonist O: Olanzapine 10 mg/day days unspecified Corticosteroid 5-HT3 receptor antagonist | C: 5-HT3 receptor antagonist O: C regimen + Olanzapine 10 mg/d days 1-8 | C: diphenhydramine, corticosteroid, 5-HT3 receptor antagonist O: C regimen + Olanzapine 5 mg/d days 1 | C: aprepitant 125mg d 1, 80 mg d 2-3 Palonosetron 0.25 mg iv d 1, dexamethasone 12 mg iv d 1 Dexamethasone 4 mg twice bid p.o d 2-4 O: C plus O 10 mg p.o. day 1 O 5 mg bid p.o d 2-4 P |
| Age Median(range) | 28.0-89.0 | 24-71 | 52-76 | --- | -- | --- | Average 43.3/average 44.7 |
| Ethnicity | Americans | Americans | Americans | Chinese | Chinese | Chinese | Indian |

Abbreviations: ABVD chemotherapy drug combination that includes adriamycin, bleomycin, vinblastine, and dacarbazine; AC doxorubicin and cyclophosphamide; BID two times a day; CR complete response; d day; HEC highly emetogenic chemotherapy; MEC moderately emetogenic chemotherapy; metoclo metoclopramide; N/A not available; ondansetron; palo palonosetron; PO oral intake.