

Appendix 1: search strategy

Database	Period of search	Search strategy
PubMed	1987 to March 11, 2016	("breast neoplasms"[MeSH Terms] OR ("breast"[All Fields] AND "neoplasms"[All Fields]) OR "breast neoplasms"[All Fields] OR ("breast"[All Fields] AND "cancer"[All Fields]) OR "breast cancer"[All Fields]) AND ("lapatinib"[Supplementary Concept] OR "lapatinib"[All Fields]) AND ("trastuzumab"[MeSH Terms] OR "trastuzumab"[All Fields])
Embase (OvidSP)	1987 to March 11, 2016	<p>1 (breast neoplasms* or or breast cancer* or breast tumors*, breast carcinoma*, tumors breast*, mammary cancer*, mammary carcinoma*).af.</p> <p>2 exp breast neoplasms / or exp breast neoplasms/ or exp breast carcinoma/ or exp mammary cancer/ or exp mammary carcinoma</p> <p>3 1 or 2</p> <p>4 (lapatinib * or lapatinib ditosylate* or GW 282974X* or GW-282974X* or GW572016* or GW-572016).af.</p> <p>5 exp lapatinib / or exp lapatinib ditosylate / or exp GW 282974X or exp GW572016</p> <p>6 4 or 5</p> <p>7 3 and 6</p> <p>8 (trastuzumab*).af.</p>

		<p>9 exp trastuzumab /</p> <p>10 8 or 9</p> <p>11 7 and 10</p>
Web of Science	1987 to March 11, 2016	<p>#1 TS= (breast neoplasms* OR breast cancer* OR breast tumors*, OR breast carcinoma*, OR tumors breast*, OR mammary cancer*, OR mammary carcinoma*)</p> <p>#2 TS= (lapatinib * OR lapatinib ditosylate* OR GW 282974X* or GW-282974X* OR GW572016* OR GW-572016)</p> <p>#3 TS=(trastuzumab*)</p> <p>#4 #3 AND #2 AND #1</p>