



Guardant 360 Publications Summary

23 MAR 2021

Guardant360: 220 Peer-reviewed Publications

Best-in-Class comprehensive liquid biopsy with extensive published validation and outcome studies

Criteria	Guardant360	References
Number of peer-reviewed publications	220	1-220
Published comprehensive analytical validation	Yes (3)	4, 65, 128
Published blinded external validation (outside academic centers compare their genotyping results to Guardant360)	Yes (81)	1-3, 6-7, 10-12, 14, 17-19, 21-23, 27-32, 37-38, 40, 42-43, 48, 51, 53-54, 57-58, 61, 65-67, 69-70, 72-73, 78, 82-85, 87-88, 90-91, 95-97, 99, 102, 104-105, 107, 110, 114, 120-121, 124, 126-127, 133-135, 139-142, 144-145, 148, 150, 181, 188, 191, 196, 198, 201, 206, 213
Published outcomes (excludes single patient case reports)	Yes (82)	7, 9-13, 16, 18-19, 21, 23, 27, 29, 31, 35, 39-41, 51-52, 54-55, 58, 64, 67, 72, 74, 76, 79, 82, 83, 87, 92-94, 100-101, 103, 110-112, 114, 118-121, 123, 126-128, 133-135, 144-146, 149, 157, 173, 185, 187, 188, 191-193, 196, 199, 202, 203, 206, 213, 219
Outcomes studies for G360 copy number amplifications	Yes (14)	6,13, 23, 40, 51, 54, 72, 82,112, 121,127, 132, 144, 173

- Zill (Collisson) 2015 Cancer Discovery
- Ko (Korn) 2015 Clin Cancer Res
- Kim (Talasaz) 2015 Oncotarget
- Lanman (Talasaz) 2015 PLoS One
- Raghav (Kopetz) 2016 Oncotarget
- Liang (Rodriguez) 2015 Breast Ca Res Treat
- Schwaederlé (Kurzrock) 2016 Oncotarget
- Piotrowska (Sequist) 2016 Journal Thoracic Oncol
- Villaflor (Salgia) 2016 Oncotarget
- Schwaederlé (Kurzrock) 2016 Clin Cancer Res
- Hong (Kopetz) 2016 Cancer Discovery
- Thompson (Carpenter) 2016 Clin Cancer Res
- Rozenblum (Peled) 2016 Journal Thorac Oncol
- Chae (Giles) 2016 Oncotarget
- Lokhandwala (Carbone) 2016 Clin Lung Cancer
- Santos (Hunis) 2016 Clinics in Oncol
- Goyal (Zhu) 2016 Cancer Discovery
- Sandulache (Cabanillas) 2017 Thyroid
- Peled (Elkabetz) 2017 Journal Thorac Oncol
- Morris (Eng) 2017 Lancet Oncol
- Lu (Collisson) 2017 Cancer Res
- Hanker (Arteaga) 2017 Cancer Discovery
- Kim (Lee) 2017 JCO Precision Oncol
- Gutierrez (Goldberg) 2017 Clin Lung Cancer
- Pal (Choueiri) 2017 European Urology
- Kato (Kurzrock) 2017 Cancer Res
- Ma (Ellis) 2017 Clin Cancer Res
- Yang (Zhang) 2017 Journal Hematology & Oncol
- Schwaederlé (Kurzrock) 2017 Clin Cancer Res
- Maxwell (DeMichele) 2017 Breast Ca Res Treat

- Engstrom (Christiansen) 2017 Clin Cancer Res
- Chae (Cristofanilli) 2017 Molec Cancer Ther
- Maia (Pal) 2017 Kidney Cancer
- Dizman (Pal) 2017 European J Urology
- Sarfaty (Peled) 2017 Clin Lung Cancer
- Schwaederlé (Kurzrock) 2017 Cancer Res
- Hu (Oxnard) 2017 Clin Cancer Res
- Ramalingam (Jänne) 2017 Journal Clin Oncol
- Pereira (Morris) 2017 PLoS One
- Pectasides (Catenacci) 2017 Cancer Discovery
- Khagi (Kurzrock) 2017 Clin Cancer Res
- Blakely (Bivona) 2017 Nature Genetics
- Mooradian (Sequist) 2017 JCO Precision Oncol
- Rossi (Cristofanilli) 2017 Clin Canc Res
- Strickler (Kopetz) 2017 Cancer Discovery
- Condorelli (Bardia) 2017 Annals of Oncol
- Croessman (Arteaga) 2017 Clin Cancer Res
- Kato (Kurzrock) 2017 The Oncologist
- Ikeda (Kurzrock) 2018 The Oncologist
- Choi (Kurzrock) 2018 Cancer Biology & Therapy
- Kim (Lee) 2018 Annals of Oncol
- Montagut (Taberero) 2018 JAMA Oncol
- Carneiro (Giles) 2018 JCO Precision Oncol
- Maron (Catenacci) 2018 Cancer Discovery
- Drilon (Hyman) 2018 New England J of Medicine
- Bergerot (Pal) 2018 Current Treat Options Oncol
- Lin (Hoon) 2018 JCO Precision Oncol
- McCoach (Doebele) 2018 Clin Cancer Res
- Agarwal (Grivas) 2018 Cancer
- Loree (Raghav) 2018 Journal of the NCI

- Riviere (Kurzrock) 2018 Molec Cancer Therapeut
- Ikeda (Kurzrock) 2018 Molec Cancer Therapeut
- Carneiro (Abdulkadir) 2018 Clin Cancer Res
- Kim (Kang) 2018 Nature Medicine
- Odegaard (Talasaz) 2018 Clin Cancer Res
- Zill (Talasaz) 2018 Clin Cancer Res
- Jacobs (Patel) 2018 JCO Precision Oncol
- Loong (Mok) 2018 Clin Lung Cancer
- Piotrowska (Sequist) 2018 JCO Precision Oncol
- Baumgartner (Kurzrock) 2018 Annals Surg Oncol
- Nakamura and Yoshino 2018 The Oncologist
- Siravegna (Bardelli) 2018 Cancer Cell
- Ikeda (Kurzrock) 2018 *J Hematology & Oncology*
- Laufer-Geva (Peled) 2018 Journal Thor Oncol
- Aguirre (Wolpin) 2018 Cancer Discovery
- Helman (Simmons) 2018 Clin Lung Cancer
- Jia (Strickler) 2018 Frontiers in Oncol
- Dudnik (Bar) 2018 Journal Thor Oncol
- Raja (Ranade) 2018 Clin Cancer Res
- Bahcall (Jänne) 2018 Clin Cancer Res
- Slavin (Weitzel) 2018 J Clin Oncol
- Kato (Kurzrock) 2019 JCO Precision Oncol
- Lam (Zhang) 2018 Clin Lung Cancer
- Sonpavde (Lilly) 2018 Cancer
- Piotrowska (Sequist) 2018 Cancer Discovery
- Veyseh (Barzi) 2018 Frontiers in Oncol
- Aggarwal (Carpenter) 2018 JAMA Oncol
- Sanchez-Vega (Janjigian) 2018 Cancer Discovery
- Croessman (Arteaga) 2018 Clin Cancer Res
- Stetson (Dougherty) 2019 JCO Precision Oncol

- Dagogo-Jack (Gainor) 2018 Journal Thor Oncol
- Lin (Swisher) 2018 Cancer Discovery
- Zugazagoitia (Paz Ares) 2018 Annals of Oncol
- Parseghian (Kopetz) 2018 Annals of Oncol
- Ghatalia (EhDeiry) 2019 Frontiers in Oncol
- Kato (Kurzrock) 2018 Clin Cancer Res
- Le (Heymach) 2018 Clin Cancer Res
- Mody (Borad) 2019 JCO Precision Oncol
- Qiu (Leviton) 2019 Scientific Reports
- Siravegna (Bardelli) 2019 Clin Cancer Res
- Hong (Doebele) 2019 Annals of Oncol
- Dagogo-Jack (Shaw) 2019 Journal Thor Oncol
- Piccioni (Kesari) 2019 CNS Oncology
- Formisano (Arteaga) 2019 Nature Commun
- Hahn (Agarwal) 2019 Canc Treat Res Comm
- Grivas (Sonpavde) 2019 European Urol Oncol
- Hannigan (Roy-Chowdhuri) 2019 Annals Oncol
- Lee (Lanman) 2019 Frontiers Oncol
- Chae (Giles) 2019 The Oncologist
- Shaw (Martini) 2019 J Clin Oncol
- Leighl (Papadimitrakopoulou) 2019 Clin Ca Res
- Kato (Kurzrock) 2019 JCO Precision Oncol
- Dudnik (Lanman) 2018 JCO Precision Oncol
- Goyal (Bardeesy) 2019 Cancer Discovery
- Rich (Gautschi) 2019 Clin Cancer Res
- Devarakonda (Morgensztern) 2019 Clin Ca Res
- Kaseb (Kurzrock) 2019 Clin Canc Res
- Makarov (Dudnik) 2019 J Israel Med Assn
- Kato (Kurzrock) 2019 Clin Cancer Res
- Taavitsainen (Wyatt) 2019 JCO Prec Oncol

- Lee (Kang) 2019 Cancer Discovery
- Choi (Kurzrock) 2019 Molec Cancer Ther
- Zugazagoitia (Garrido) 2019 Lung Cancer
- Shatsky (Kurzrock) 2019 Molec Cancer Ther
- Janku (Kurzrock) 2019 Molec Cancer Ther
- Dagogo-Jack (Shaw) 2019 Clin Canc Res
- Maron (Catenacci) 2019 Clin Canc Res
- Willis (Odegaard) 2019 Clin Canc Res
- Clifton (Morris) 2019 JCO Precision Oncology
- Rotow (Blakely) 2019 Clin Canc Res
- Robichaux (Heymach) 2019 Cancer Cell
- Sanchez (Meric-Bernstam) 2019 JCO Prec Oncol
- Abraham (Jacobs) et al. 2019 Journal Clin Oncol
- Cocco (Scaltriti) 2019 Nature Med
- Parikh (Corcoran) 2019 Nature Med
- Fairclough (Nagy) 2019 Exp Hematol & Oncol
- Bracht (Rosell) 2019 Cancers
- Gutierrez (Goldberg) 2019 JCO Precision Oncology
- Shaw (Ou) 2019 Lancet Oncology
- Choi (Kurzrock) 2019 J Hematology & Oncology
- Patel (Kurzrock) 2019 J Hematology & Oncology
- Bagley (Carpenter) 2019 Clin Canc Res
- Porter (Cohen) 2019 Transl Canc Res
- Dumbrava (Meric-Bernstam) 2019 JCO Prec Oncol
- Smyth (Hyman) 2019 Cancer Discovery
- Mack (Gandara) 2020 Cancer
- Ledet (Sartor) 2019 The Oncologist
- Gupta (Fakih) 2019 The Oncologist
- Papadimitrakopoulou (Moke) 2019 Cancer
- Parikh (Corcoran) 2019 Nature Medicine

Guardant360: 200+ Peer-reviewed Publications, cont'd

151. Pairawan (Meric-Bernstam) 2020 Clin Cancer Res
152. Recondo (Awad) 2020 Clin Cancer Res
153. Vidula (Cristofanilli) 2020 Clin Cancer Res
154. Zheng (Chang) 2020 Cancer Cell
155. Dagogo-Jack (Hata) 2020 Clin Cancer Res
156. Aggarwal (Carpenter) 2020 Clin Cancer Res
157. Arshad (Trent) 2020 JCO PO
158. Jacob (Chae) 2020 Heliyon
159. Chapman (Sartor) 2019 Clin Genitourin Cancer
160. Shaib (El-Reyes) 2019 The Oncologist
161. Ding (Sahin) 2019 Human Pathology
162. Supplee (Paweletz) 2019 Lung Cancer
163. Moses (Barata) 2020 Oncotarget
164. Solomon (Rothenberg) 2020 Journal Thorac Oncol
165. Oxnard (Ahn) 2020 Annals of Oncology
166. Razavi (Chandarlapaty) 2020 Nature Cancer
167. Rizvi (Peters) 2020 JAMA Oncol
168. Larson (Mahadevan) 2020 Cancers
169. Starrett (Politi) 2020 Cancer Research
170. Merino (Allen) 2020 Journal Immunotherapy Cancer
171. Wang (Fakih) 2020 The Oncologist
172. Zakka (Shaib) 2020 Oncotarget
173. Janjigian (Hechtman) 2020 The Lancet Oncology
174. Chen (O'Callaghan) 2020 JAMA Oncology
175. Paik (Le) 2020 NEJM
176. Reckamp (Baik) 2020 Clin Lung Cancer
177. Vidula (Bardia) 2020 Clin Cancer Res
178. Bonanno (Conte) 2020 The Oncologist
179. Catenacci (Bang) 2020 The Lancet Oncology
180. Okamura (Sicklick) 2020 Int J Cancer
181. Davis (Cristofanilli) 2020 EBioMedicine
182. Arshad (Trent) 2020 J Immuno Precision Onc
183. Baumgarten (Kurzrock) 2020 Annals Surgical Oncology
184. Macias (Gonzalez) 2020 Clin Chem Lab Med
185. Barata (Sartor) 2020 J Immunother Cancer
186. Negrao (McCoach) 2020 Journal Thorac Oncol
187. Zhang (Hellmann) 2020 Cancer Discovery
188. Charo (Kurzrock) 2020 Mol Oncol
189. Barzi (Lenz) 2020 JAYAO
190. Liao (Yang) 2020 J Thor Oncol Clin & Res Reports

191. Turner (Ring) 2020 Lancet Oncology
192. Nakamura (Yoshino) 2020 Nature Medicine
193. Yu (Planchard) 2020 Clinical Cancer Research
194. Rosenberg (Kurzrock) 2020 Mol Can Ther
195. Clifton (Ma) 2020 Br Cancer Res Treat
196. Algazi (Ribas) 2020 Nat Med
197. Gerrattana (Cristofanilli) 2020 Eur J Cancer
198. Jacob (Cristofanilli) 2020 Clin Can Res
199. Si (Raja) 2020 Clin Can Res
200. Kopetz (Hochster) 2020 J Clin Onc
201. Peled (Amir Onn) 2020 IMAJ
202. Kobayashi (Yoshino) 2021 Surg Onc
203. Rosell (Palmero) 2021 JCO Precision Oncology
204. Catenacci (Polite) 2020 Cancer Discov
205. Martinez-Saez (Prat) 2021 Nature Breast Cancer
206. Vidula (Bardia) 2021 Clin Can Res
207. Dagogo-Jack (Heist) Journal of Thoracic Oncology
208. Botrus (Bekaii-Saab) 2021 The Oncologist
209. Bardia (Kabos) 2021 JCO
210. Dvir (Rodriguez) 2021 J Immunother Preci Oncol
211. Pavan (Bonanno) 2021 Transl Lung Cancer Res
212. Duran (Sanchez-Escribano) Journal of Medical Case Report
213. Bustamante Alvarez (Otterson) 2020. Clin Lung Cancer
214. Lam (Heymach) 2020 Journal Thorac Oncol
215. Lee (Oxnard) 2021 JCO PO
216. Fuchs (Peled) 2021 Lung Cancer
217. Okamura (Kurzrock) 2021 Int J Cancer
218. Vidal (Montagut) 2021 CCR
219. Thompson (Aggarwal) 2021 JCO PO
220. Grivas (Vogelzang) 2021 Bladder Cancer
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Column 3 placeholder

Column 4 placeholder

Column 5 placeholder

Guardant360: 80+ Published Outcomes Studies

All outcomes studies for NCCN Guideline Recommended Targets demonstrate expected response rates

Cancer	# Guardant360 Publications by Cancer
Pan-Cancer outcomes studies	6
NSCLC (<i>EGFR</i> , <i>ALK</i> , <i>ROS1</i> , <i>MET</i> exon 14, <i>RET</i> , <i>TMB</i>)	32
Colorectal cancer (<i>BRAF</i> V600E, overall utility)	9
Gastric cancer (<i>ERBB2</i> (HER2) amp, MSI)	8
Breast Ca (<i>ERBB2</i> (HER2) amp, <i>ERBB2</i> mutation)	7
Other advanced cancer outcomes studies*	7
Total published outcomes studies (excludes single patient case reports)	69

NSCLC	
1. Villalbar (Salgia) 2016 Oncotarget	21. Leigh (Papadimitrakopoulou) 2019 CCR
2. Thompson (Carpenter) 2016 Clin Canc Res	22. Shaw (Martini) 2019 J Clin Oncol
3. Rozenblum (Peled) 2016 J Thoracic Oncol	23. Makarov (Dudnik) 2019 J Israel Med Assn
4. Santos (Hunis) 2016 Clinics in Oncol	24. Zugazagoitia (Garrido) 2019 Lung Cancer
5. Peled (Elkabetz) 2017 J Thoracic Oncol	25. Dagogo-Jack (Shaw) 2019 Clin Canc Res
6. Kim (Lee) 2017 JCO Precision Oncol	26. Mack (Gandara) 2020 Cancer
7. Gutierrez (Goldberg) 2017 Clin Lung Canc	27. Papadimitrakopoulou (Mok) 2019 Cancer
8. Schwaederlé (Kurzrock) 2017 Canc Re	28. Aggarwal (Carpenter) 2020 Clin Cancer Res
9. Schwaederlé (Kurzrock) 2017 Clin Ca Res	29. Paik (Le) 2020 NEJM
10. Engstrom (Christiansen) 2017 Clin Ca Res	30. Reckamp (Baik) 2020 Clin Lung Cancer
11. Sarfaty (Peled) 2017 Clin Lung Canc	31. Rosell (Palmero) 2021 JCO Precision Oncology
12. McCoach (Doebele) 2018 Clin Canc Res	32. Pavan (Bonanno) 2021 Transl Lung Cancer Res
13. Jacobs (Patel) 2018 JCO Precision Oncol	33. Thompson (Aggarwal) 2021 JCO Precision Oncology
14. Laufer-Geva (Peled) 2018 J Thorac Oncol	
15. Helman (Simmons) 2018 Clin Lung Canc	
16. Raja (Ranade) 2018 Clin Canc Res	
17. Lam (Zhang) 2018 Clin Lung Canc	
18. Aggarwal (Carpenter) 2018 JAMA Oncol	
19. Zugazagoitia (Paz Ares) 2018 Ann Oncol	
20. Le (Heymach) 2018 Clin Canc Res	

Colorectal Cancer	Gastroesophageal Cancer	Breast Ca	Other Cancers*
1. Hong (Kopetz) 2016 Cancer Discovery	1. Kim (Lee) 2017 JCO Precision Oncol	1. Liang (Rodriguez) 2015 Breast Ca Res Treat	1. Lin (Swisher) 2018 Cancer Discovery
2. Lima Pereira (Morris) 2017 PLoS One	2. Pectasides (Catenacci) 2017 Canc Discov	2. Ma (Ellis) 2017 Clin Canc Res	2. Sandulache (Cabanillas) 2017 Thyroid
3. Montagut (Tabernero) 2018 JAMA Oncol	3. Kim (Lee) 2018 Annals of Oncol	3. Abraham (Jacobs) 2019 J Clin Oncol	3. Piccioni (Kesari) 2019 CNS Oncology
4. Siravegna (Bardelli) 2018 Canc Cell	4. Maron (Catenacci) 2018 Canc Discov	4. Dumbrava (Meric-Bernstam) 2019 JCO PO	4. Goyal (Bardeesy) 2019 Cancer Discovery
5. Siravegna (Bardelli) 2019 Clin Canc Res	5. Kim (Kang) 2018 Nature Medicine	5. Smyth (Hyman) 2019 Cancer Discovery	5. Barata (Sartor) 2020 J Immunother Cancer
6. Kato (Kurzrock) 2019 JCO Prec Oncol	6. Lee (Kang) 2019 Cancer Discovery	6. Tuner (Ring) 2020 Lancet Oncol	6. Charo (Kurzrock) 2020 Mol Oncol
7. Parikh (Corcoran) 2019 Nature Med	7. Maron (Catenacci) 2019 Clin Canc Res	7. Vidula (Bardia) 2021 Clin Can Res	7. Algazi (Ribas) 2020 Nat Med
8. Nakamura (Yoshino) 2020 Nature Med	8. Catenacci (Polite) 2020 Cancer Discov		
9. Kopetz (Hochster) 2020 J Clin Onc			

*Pan-Cancer Published Outcomes Studies	References
1. Willis (Odegaard) 2019 <i>Clin Cancer Res</i>	MSI Pan-cancer
2. Schwaederlé (Kurzrock) 2016 <i>Clin Cancer Res</i>	Pan-cancer
3. Drlon (Hyman) 2018 <i>New Engl J Med</i>	<i>NTRK</i> Pan-cancer
4. Kato (Kurzrock) 2018 <i>JCO Precision Oncol</i>	Pan-cancer
5. Hong (Doebele) 2019 <i>Annals of Oncol</i>	<i>NTRK</i> Pan-cancer
6. Kato (Kurzrock) 2019 <i>JCO Precision Oncol</i>	Pan-cancer
7. Zhang (Hellmann) 2021 <i>Cancer Discovery</i>	Molecular Response Pan-cancer