Supplementary Table 1. Results of quality assessment*

First author, year [reference]	Abstract	Rationale	Study design	Problem statement	Hypothesis	Setting	Definition of measurement	Eligibility	Follow−up method	Study size	Recruitment	Nonparticipation	Characteristics of participants	Amount of missing data	Follow−up time	Outcomes	Handling loss to follow−up	Measurements	Handling missing data	Reported results	Precision of study results	Statistical methods
Geriatric assessment studied in a prospective observational study design																						
Aaldriks, 2011 [18]	+	+	−	+	−	+	+	+	+	−	−	−	+	+	+	+	NA	+	+/−	+	+	+
Aparicio, 2011 [19]	+/−	+	+	+	−	+/−	+/−	−	+/−	−	−	−	+	+	+	+	−	+/−	+	+	NA	−
Arnoldi, 2007 [20]	+/−	+	−	+/−	−	−	−	−	−	−	−	−	+	−	+	+	NA	+/−	−	−	?	−
Audisio, 2008 [21] †	+	+	+	+	+/−	+	+	+/−	+	−	−	−	+	−	+	+	−	+	−	+	+	+
Bailey, 2003 [22] ‡	+	+	+	+	−	−	+	−	−	−	+	−	+/−	−	−	+	NA	+	−	+	+	+
Bailey, 2004 [23] ‡	+	+	+	+	−	−	+	−	−	−	+	−	+/−	−	+/−	+	−	+	−	+	+	+
Bamias, 2007 [24]	+	+	+	+	−	−	+	−	+/−	+	−	−	+	+	+/−	+	+	+/−	+	+	+	+
Bylow 2008 [25] §	+/−	+	+	+	−	+/−	+	+	+	+	−	−	+	−	+	+	+	+	−	+	NA	+
Castagneto, 2004 [26]	+	+	+	+	−	+/−	+	+/−	+	+	−	−	+	+	+	+	+	+	+/−	+	+	+
Chaibi, 2011 [27]	+/−	+	−	+	−	+/−	+	+/−	−	−	−	−	+	−	−	+	NA	+/−	−	+	NA	+
Clough−Gorr, 2010 [73]	+	+	+	+	−	+	+	+	+	−	+	−	+	+	−	−	NA	+	+	+	+	+
Extermann, 2004 [74]	+	+	+	+	−	+/−	+	+/−	+	−	+/−	+/−	+	−	+	+	+	+/−	−	+/−	+	+
Freyer, 2004 [28]	+	+	+	+	−	+/−	+/−	+/−	+	+/−	−	−	+	+	+	+	−	+/−	+	+	NA	+
Freyer, 2005 [29]	+	+	+	+	−	+/−	+/−	+/−	+/−	+	−	−	+	NA	+	+	NA	+/−	NA	−	−	+
Fukuse, 2005 [100]	+	+	+	+	−	+	+/−	+	+	−	−	−	+	NA	−	+	NA	+/−	NA	+	−	+
Hurria, 2006 [30]	+	+	+/−	+	−	+/−	+	+/−	+/−	−	−	−	+	+	+/−	+	+	+	+	+	NA	+/−
Hurria, 2006 [31] ‖	+	+	+	+	−	+	+	+/−	+	−	−	−	+	NA	+	+	+	+	+	NA	+	NA
Hurria, 2006 [32] ‖	+	+	+	+	−	+	+	+	+	−	−	−	+/−	+	+	+	+	NA	+	NA	+	NA
Kothari 2011 [33]	+/−	+	+	+	+	−	+	+/−	−	−	−	−	+	−	−	+	NA	+/−	−	+	+	+
Kristjansson, 2010 [75] ¶	+	+	+	+	−	+	+	+	+	−	+	−	+	−	+	+	NA	+	−	+	+	+
Kristjansson, 2010 [71] ¶	+	+	−	+	−	+	+	+	+	+	+	−	+	−	+	+	+	+	−	+	+	+
Marenco, 2008 [34]	+	+	+	+	−	+	+	+	+	−	+/−	+/−	+	−	+	+	−	+/−	+	+	+	+
Marinello, 2009 [35]	+/−	+	+	+	−	+/−	+	+	−	−	−	−	+	−	−	+	−	+	NA	+	+	+
Massa, 2006 [36]	+	+	+/−	+	+	+/−	+	+/−	+/−	−	−	−	+	+	+/−	+/−	NA	+	NA	+/−	−	+
Massa, 2008 [76]	+/−	+	+	+	−	+/−	+/−	+/−	+/−	+	−	−	+	−	+/−	+	−	+/−	−	+/−	+/−	+/−
Presant, 2005 [37]	+	+	−	+/−	+	+/−	+/−	+/−	−	−	−	−	+/−	+	+/−	+	−	+	−	+	NA	−
Puts, 2011 [95] #	+	+	+	+	−	+	+	+	+	+/−	+	+	+	+	+/−	+	+	+	+	+	+	+
Puts 2010 [94] #	+	+	+	+	−	+	+	+	+	+	+	+	+	+	+/−	+	+	+	+	+	+	+
Rao 2005 [38]	+	+	+	+	+	+	+	+	+	+/−	+	+	+	−	+	+	NA	+	−	+	+	+
Tredan, 2007 [39]	+	+	+	+	+	+	+	+	−	−	−	−	+	−	−	+	+/−	+/−	−	+	+	+
Tucci 2009 [40]	+/−	+	+/−	+	−	+/−	+/−	+/−	−	−	−	−	+	−	+	+	−	+	−	+/−	NA	+/−
Wedding, 2007 [41] **	+	+	+/−	+	−	+/−	+	+/−	−	−	−	−	+	?	+/−	+	?	+	−	+	+	+
Geriatric assessment studied in a cross−sectional study design																						
Bearz, 2007 [42]	NA	+	−	−	−	−	−	−	−	−	−	−	+	−	+	+	NA	−	−	+	NA	−
Bylow, 2011 [43]	+	+	+	+	+/−	+	+	+/−	NA	−	−	−	+	−	NA	+	NA	+	−	+	−	+
Di Mauro, 2000 [44]	−	−	+/−	+/−	−	−	+/−	−	NA	−	−	−	+	−	NA	−	NA	+	−	−	−	+
Dujon, 2006 [45]	+	+	+	+	−	+	+	+	−	−	−	−	+	−	+	+	NA	−	−	+	−	+
Extermann, 1998 [46]	+	+	+	+	−	+	+	+	NA	−	−	NA	+	−	NA	+	NA	+	−	+	+	+
Girones, 2010 [47]	+/−	+	+	+	−	+	+/−	+	NA	−	−	−	+	−	NA	+	NA	+/−	−	+/−	NA	+
Girre, 2008 [48]	+	+	+	+	−	+	+/−	+	NA	−	−	NA	+	+	NA	+	NA	+/−	+	+	NA	+
Hurria, 2005 [88]	+	+	+/−	+	−	+/−	+	+/−	NA	−	−	+/−	+	+	NA	+	NA	+	+	+	+	+/−
Hurria, 2007 [89] ††	+	+	+/−	+	−	+/−	+	−	NA	−	−	−	+	−	NA	+	NA	+	+	+	NA	+/−
Hurria, 2009 [90] ††	+/−	+	+/−	+	−	+/−	+	−	NA	−	−	−	+	+	NA	+	NA	+	+	+	−	+

First author, year [reference]	Abstract	Rationale	Study design	Problem statement	Hypothesis	Setting	Definition of measurement	Eligibility	Follow–up method	Study size	Recruitment	Nonparticipation	Characteristics of participants	Amount of missing data	Follow–up time	Outcomes	Handling loss to follow–up	Measurements	Handling missing data	Reported results	Precision of study results	Statistical methods
Ingram, 2002 [85]	+	+	+/−	+	−	+	+	+	NA	−	+	−	+	?	NA	NA	NA	+	−	+	NA	+
Kellen, 2010 [49]	+/−	+	+/−	+	−	−	+	+/−	NA	−	−	−	+	−	NA	+	NA	+	−	+	+	+
Kim, 2011 [50]	+	+	+/−	+	−	+	+	+	NA	−	−	−	+	NA	NA	+	NA	+	NA	+	NA	+
Luciani, 2010 [51]	+	+	+/−	+	−	−	+	+/−	NA	−	−	−	+	−	NA	+	NA	+	−	+	+	+
Lynch, 2007 [52]	−	+	+/−	+	−	+/−	−	+	NA	−	−	−	+/−	NA	NA	+	NA	+/−	NA	+	NA	−
Mantovani, 2004 [53]	+/−	+	−	+	−	−	+	−	NA	−	−	−	+	−	NA	+	NA	+	−	+	NA	+
Mohile, 2007 [78] §	+	+	+	+	−	+	+	+	NA	−	NA	NA	+	−	NA	+	NA	+	−	+	+	+
Mohile, 2009 [54]	+	+	+	+	−	+/−	+	+	NA	+	−	−	+	−	NA	NA	NA	+	−	+	NA	+
Molina−Garrido, 2011 [55]	+	+	+	+	−	+	+	+	NA	+	+/−	NA	+	NA	NA	+	NA	+	NA	+	+	+
Molina−Garrido, 2011 [56]	+	+	+	+	−	+	+/−	+	NA	−	−	−	+	NA	NA	+	NA	+	NA	+	NA	+
Monfardini, 1996 [57]	+	+	−	+	−	+/−	+	−	NA	−	−	−	+	−	NA	+	NA	+	−	+	−	+
Overcash, 2007 [58]	+/−	+	+	+	−	+/−	+	+/−	NA	−	−	−	+	NA	NA	+	NA	+	−	+	+	+/−
Overcash, 2008 [77]	−	+	+/−	+	+	+/−	+	−	NA	−	−	−	+	−	−	−	−	+	−	+	−	+
Pignata 2008 [59]	+	+	+	+	−	+/−	+/−	+/−	+	+	−	−	+	+	+	+	NA	+/−	+/−	+	NA	−
Pope, 2006 [60]†	+	+	+	+	−	+	+	+	+	−	−	−	+	−	+	+	NA	+	−	+	+	+
Repetto, 2002 [61]	+	+	+	+	−	+	+	+/−	NA	−	−	−	+	−	NA	+	NA	+	−	+	+	+
Retornaz, 2008 [93]	+	+	+	+	−	+	+	+	NA	−	+	−	+	NA	NA	+	NA	+	NA	+	NA	+
Roche, 1997 [62]	+	+	+/−	+	+	+/−	+	+	NA	−	?	?	+	−	NA	+	NA	+/−	−	+	NA	+
Serraino, 2001 [63]	+/−	+	+/−	+	−	+/−	+	+	NA	−	−	−	+	−	NA	+	NA	+	−	−	−	+
Siegel, 2006 [64]	+/−	+	−	+	+	+/−	+	+	NA	−	−	−	+	NA	NA	NA	NA	+	−	+	+	+
Stauder, 2010 [65]	+	+	−	+	−	+/−	+	−	NA	−	−	−	+/−	+	NA	NA	NA	+	+	+	NA	+
To, 2010 [66]	+	+	+	+	−	+/−	+	+/−	NA	−	+/−	−	+	−	NA	+	NA	+/−	+	+	NA	+
Venturino, 2000 [67]	+	+	−	+	−	+/−	+	−	−	−	−	−	+	NA	+	+	+	+	NA	+	NA	−
Wedding, 2007 [68] **	+	+	+/−	+	−	+/−	+	+/−	NA	−	−	−	+	−	NA	+	NA	+	−	+	+	+
Wedding, 2007 [99]	+	+	+/−	+	−	+/−	+	+/−	NA	−	+/−	+/−	+	+	−	+	−	+	+	+	NA	+
Geriatric assessment studied in a retrospective studies and chart reviews																						
Barthelemy, 2011 [98]	+	+	+	+	−	+	+/−	+	NA	−	NA	NA	+	+	NA	+	NA	+/−	+	+	+	+
Basso, 2008 [79]	+	+	+	+	−	+/−	+	+/−	NA	−	NA	NA	+	−	NA	+	+	+	NA	+	−	+
Cudennec, 2007 [72]	NA	+/−	−	+/−	−	+/−	+/−	+	NA	−	NA	NA	+/−	+	NA	+	NA	+/−	−	+	NA	−
Cudennec, 2010 [84]	+/−	+	+/−	+	−	+/−	+	+/−	NA	−	−	−	+	−	NA	+	NA	+/−	−	+	NA	−
Flood, 2006 [92]	+	+	+	+	−	+	+	+	NA	−	NA	NA	+	+	NA	+	NA	+	+/−	+	NA	+/−
Fratino 1999 [69]	+/−	+	−	+	−	+/−	+/−	+/−	NA	−	−	−	+	−	NA	+	NA	+/−	−	+/−	+	−
Garman, 2004 [86]	+	+	+	+	−	+	+	+	NA	−	NA	NA	+/−	+/−	NA	+	NA	+	+	+	NA	−
Koroukian, 2006 [91] ‡‡	+	+	+	+	+	+	+	+	NA	−	NA	NA	+	+	NA	+	NA	+/−	+	+	NA	+/−
Koroukian, 2010 [80] ‡‡	+	+	+/−	+	−	+	+	+	NA	−	NA	NA	+	−	NA	+	NA	+	−	+	+	+
Overcash, 2005 [81] §§	+	+	+	+	+	+	+	+	NA	−	NA	NA	+/−	−	NA	NA	NA	+	−	+	NA	+
Overcash 2006 [83] §§	+	+	+	+	−	+/−	+	+/−	NA	−	NA	NA	+/−	−	NA	−	NA	+	−	+	NA	+
Retornaz, 2008 [82]	+	+	+	+	−	+	+	+	NA	−	NA	NA	+	−	NA	+	NA	+	−	+	NA	+
Rollot−Trad, 2008 [97]	+	+	+	+/−	−	+	+/−	+	+/−	NA	+	NA	+	+	+	NA	+/−	+/−	−	−	−	+/−
Sorio, 2006 [70]	−	+	+	+	−	−	+/−	+/−	+	+/−	−	−	+/−	−	+	+	NA	+/−	−	+	NA	+
Terret, 2004 [87]	+	+	+	+	−	+/−	+	+/−	−	−	−	−	+	−	NA	+	NA	+/−	−	+	NA	−
Yonnet, 2008 [96]	+	+	+	+	−	+	+	+	NA	NA	NA	NA	+	+/−	NA	NA	NA	+	−	+	NA	+

*Abstract = Does the abstract provide a structured summary?; Rationale = Is the rationale for the study described in context of what is already known?; Study design = Was an a priori design provided?; Problem statement = Is the problem of interest clearly defined?; Hypothesis= Is the hypothesis clearly stated?; Setting= Are the setting, locations, relevant dates, exposure, follow−up and data collection clearly described?; Definition measurements = Are all outcomes, exposures, predictors, potential confounders and effect modifiers clearly defined?; Eligibility = Are the eligibility criteria, sources, and

methods of selection of participants clearly described?; Follow−up method = Are methods of follow−up clearly described?; Study size = Is justification provided for study size?; Recruitment = Is the number of individuals at each stage of the study reported?; Nonparticipation = Are reasons for nonparticipation at each stage reported?; Characteristics of participants = Are the characteristics of study participants reported?; Amount of missing data = Is the number of participants with missing data for each variable of interest reported?; Follow−up time = Is average and total follow−up time reported?; Outcomes = Are numbers of outcome events or summary measures over time reported?; Handling loss to follow−up = Is the method for addressing loss to follow−up described?; Measurements = For each variable of interest, are sources of data and details of method of assessment described?; Handling missing data = Is the method for handling missing data described?; Reported results = Are unadjusted and, if applicable, confounder−adjusted estimates reported for main results?; Precision of study results = Are measures of precision reported for main results?; Statistical methods = Are the statistical methods used fully described?; NA = not applicable;; + = yes; +⁄− = partially; − = no; ? = unclear.

†Articles reporting on the same study.
‡Articles reporting on the same study.
§Articles reporting on the same study.
‖Articles reporting on the same study.
¶Articles reporting on the same study.
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**Articles reporting on the same study.
††Articles reporting on the same study.
‡‡Articles reporting on the same study.
§§Articles reporting on the same study.

Supplementary Table 2. Characteristics of included studies*

First author, year [reference]	Country	Study design	Aim of Study	Study duration	Sample size	Mean or median age, y (SD or range)	Response rate	Cancer type or site and stage
GA studied in a prospective observational study design								
Aaldriks, 2011 [18]	Netherlands	Prospective observational	To assess the prognostic value of GA with respect to the probability of completing chemotherapy and survival	12 mo	202	Mean 77.2 (71−92)	NR	Breast, lung, prostate, CRC, ovarian, upper GI, hematological, urothelial, unknown; stage NR
Aparicio, 2011 [19]	France	Prospective observational	To evaluate the feasibility of MGA in gastroenterology consultation or during hospitalization and its diagnostic accuracy compared to CGA	Until death; median survival 9.5 mo (range = 1−47 mo)	21	Median 80.5 (75−87)	NR	CRC, esophagus, pancreas, biliary tract, small bowel, anal; 11 patients had metastatic disease, stage for other patients was not reported
Arnoldi, 2007 [20]	Italy	Prospective observational	To apply CGA in elderly cancer patients to select which of them are eligible for oncological treatment	Until death; median survival 6 mo (range = 2−18 mo)	153	Mean 76 (70−91)	NR	Breast, lung, prostate, CRC, gastric, esophageal, pancreas, head and neck, mesothelioma, thymus, renal, ovarian; stage 1−4
Audisio, 2008 [21]†	United Kingdom, Italy, Netherlands, Belgium, Japan	Prospective observational	To investigate the value of an extended CGA in assessing the suitability of elderly patients for surgical intervention	30 d	460	Mean 76.9 (70−95)	NR	Breast, GI, GU ,other cancer sites not further specified; stage NR
Bailey, 2003 [22]‡	United Kingdom	Prospective observational	To investigate the role of age and multidimensional functional status in treatment decisions for older adults with CRC	NR	337	Mean 73.5 (58−95)	NR	CRC; stage NR
Bailey, 2004 [23]‡	United Kingdom	Prospective observational	To present a detailed picture of older patients' experiences of treatment for CRC	6 mo after surgery or 2 mo after completion of adjuvant treatment	337	Mean 73.5 (58−95)	NR	CRC; stage NR
Bamias, 2007 [24]	Greece	Phase II trial	To evaluate safety and efficacy of first-line gemcitabine plus carboplatin in unfit-for-cisplatin patients with advanced urothelial carcinoma and the effect on QOL and functional status of elderly patients	Until death; median survival 8 mo	34	Median 75.5 (57−84)	NR	Urothelial, transitional cell; stage 3 and 4
Bylow, 2008 [25]§	United States	Prospective observational	To estimate the prevalence of functional and physical impairment among older patients receiving ADT using a CGA and to better describe the prevalence of falls in older patients with prostate cancer receiving ADT	3 mo	50	Median 78 (70−92)	NR	Prostate; stage 80% had biochemical recurrence
Castagneto, 2004 [26]	Italy	Phase II trial	To determine response rate and toxicity of single-agent gemcitabine in previously untreated elderly patients with advanced bladder cancer and to evaluate the influence of the treatment on CGA parameters	Until death; median follow−up 13 mo	25	Median 76 (71−87)	NR	Transitional cell bladder; stage 3 and 4
Chaibi, 2011 [27]	France	Prospective observational	To analyze the change in initial multidisciplinary treatment decisions in cancer patients aged 75 years after use of a CGA, consultation with a geriatrician, and the interventions of the specific oncogeriatric	NR	161	Median 82.4 (73−97)	NR	Breast, lung, CRCl, gynecological, GI; stage 1−4

First author, year [reference]	Country	Study design	Aim of Study	Study duration	Sample size	Mean or median age, y (SD or range)	Response rate	Cancer type or site and stage
			board					
Clough−Gorr, 2010 [73]	United States	Prospective observational	To evaluate GA domains in relation to clinically important outcomes in older breast cancer survivors	NR	660	≥65, 56% 70−79	53%	Breast; stage 1−3
Extermann, 2004 [74]	United States	Prospective Observational	To assess the prevalence of geriatric problems amenable to intervention in older breast cancer patients, their incidence over 6 mo, and their interaction with cancer treatment	6 mo	15	Median 79 (72−87)	68%	Breast; stage 1 and 2
Freyer, 2004 [28]	France	Nonrandomized clinical trial	To study the feasibility of oral idarubicin for metastatic hormone-resistant breast cancer in patients older than 70 y and to perform an MGA to search for individual factors predictive of treatment tolerance	Study terminated early after 3 deaths	26	≥70	NR	Breast; stage 4
Freyer, 2005 [29]	France	Phase II trial	To evaluate the ability of some CGA parameters to predict efficacy and tolerance of the carboplatin + cyclophosphamide to identify which older patient can receive standard treatment vs dose-reduced vs treatment not considered to be beneficial for the older patient	40 mo after study entry, median survival 22 mo	83	Median 76 (70−90)	NR	Ovarian; stage 3 and 4
Fukuse, 2005 [100]	Japan	Prospective observational	To assess the prognostic value of CGA in the prediction of postoperative outcome for older patients undergoing thoracic surgery	90 days after surgery	120	Mean 70.3 (60−84)	100%	Lung, 29 study participants had no cancer; stage NR
Hurria, 2006 [30]	United States	Nonrandomized clinical trial	To evaluate the pharmacokinetics of weekly docetaxel in a cohort of older patients with metastatic cancer and to explore the relationship of pharmacokinetic variables, erythromycin breath test, GA variables, and toxicity to therapy	NA	20	Median 75 (66−84)	NR	Breast; stage 4
Hurria, 2006 [31]‖	United States	Prospective observational	To report on the longitudinal cognitive functioning of older women receiving adjuvant chemotherapy for breast cancer	6 mo after completion of chemotherapy	31	Mean 71 (65−84)	NR	Breast, GI, GU, gynecologic, lymphoma, other cancer sites not further specified; stage 1−3
Hurria, 2006 [32]‖	United States	Prospective observational	To examine the toxicity experienced by a cohort of older women receiving adjuvant chemotherapy for breast cancer and the longitudinal effect on their functional status and QOL	6 mo after treatment completion	49	Median 68 (65−84)	NR	Breast, GI, GU, lymphoma, other cancer sites not further specified; stage 1−3
Kothari, 2011 [33]	United States	Prospective observational	To determine if individual questions from the GDS and NSI NHC, and individual ADL and IADLs could successfully estimate surgical risk in geriatric patients	NR	60	Median 76 (IQR 72−80)	NR	Lung, esophageal, plural, thymus; stage NR
Kristjansson, 2010 [75]¶	Norway	Prospective observational	To examine the association between the outcomes of a pre-operative CGA and the risk of severe post-operative complications in elderly patients who underwent elective surgery for CRC	3 mo	182	Median 80 (70−94)	98%	CRC; stage 1−4
Kristjansson, 2010 [71]¶	Norway	Prospective observational	To identify independent predictors from a CGA and ECOG PS of postoperative complications and early mortality in elderly patients operated on for CRC	Median follow−up 20 mo	182	Median 80 (70−94)	98%	CRC; stage 1−4
Marenco, 2008 [34]	Italy	Prospective observational	To evaluate the role of MGA as an aid in treatment decision making	60 mo	571	Median 78	NR	Breast, lung, prostate, GI, kidney, bladder, other cancer sites not further specified; stage

First author, year [reference]	Country	Study design	Aim of Study	Study duration	Sample size	Mean or median age, y (SD or range)	Response rate	Cancer type or site and stage
								1−4
Marinello, 2009 [35]	Italy	Prospective observational	To analyze the role of CGA and KPS in predicting the occurrence of adverse events during chemotherapy in a cohort of elderly cancer patients	6 mo	110	Mean 75.1 (70−87)	NR	Breast, lung, CRC; stage 4
Massa, 2006 [36]	Italy	Prospective observational	To examine the relationship between changes in hemoglobin levels following rHuEPO treatment and changes in cognitive functioning in elderly cancer patients undergoing chemotherapy treatment and to assess the relationship between changes in hemoglobin levels following rHuEPO treatment and changes in functions studied by the CGA, such as ADL, IADL, GDS, and MNA	12 wk	10	Mean 71.4 (68−75)	NR	Breast, lung, CRC, stomach, ovarian, oral, endometrial; stage 4
Massa, 2008 [76]	Italy	Phase II trial	To examine the correlation between a specific MGA category and an appropriately preventively established treatment and clinical outcome in a population of elderly cancer patients	3 mo after treatment	75	Mean 73.1 (65−83)	80%	Breast, lung, CRC, head and neck, gynecologic; stage 3 and 4
Presant, 2005 [37]	United States	Prospective observational	A geriatric oncology module was developed that could be applied in oncology practice and tested in a weekly chemotherapy program	Overall median survival 23.5 mo	26	Median 75 (65−87)	NR	Breast, lung, prostate, ovarian, endometrium, lymphoma, GI, unknown primary; stage 4 or recurrence
Puts, 2011 [95]#	Canada	Prospective observational	To explore the association between frailty and functional status and treatment toxicity at 3 and 6 mo and mortality at 6 mo	6 mo	112	Median 74.1 (65−92)	72%	Breast, lung, CRC, lymphoma, MM; stage 1−4
Puts, 2010 [94]#	Canada	Prospective observational	To investigate whether frailty predicts hospitalization, emergency room visits, and visits to a general practitioner	12 mo	112	Mean 74.1 (65−92)	72%	Breast, lung, CRC, lymphoma, MM; stage 1−4
Rao, 2005 [38]	United States	Randomized controlled trial	To investigate whether frail elderly cancer patients have better QOL outcomes if cared for in a geriatric inpatient unit	1 y	99	Mean 74	NR	Lung, prostate, CRC, hematologic, head and neck, bladder, renal; stage NR
Tredan, 2007 [39]	France	Nonrandomized clinical trial	To analyze the results of two prospective trials to address whether CP has a favorable or unfavorable effect on tolerance and overall survival in elderly women with advanced ovarian cancer compared with CC	Median survival 23 mo	83 Trial I, 75 Trial II	Median trial I: 76 (70−90) Median trial II: 75 (70−89)	NR	Ovarian epithelial carcinoma; stage 3 and 4
Tucci, 2009 [40]	Italy	Prospective observational	To analyze if CGA could objectively identify elderly patients with DLCL who can be effectively treated with anthracycline-containing immunotherapy	Median survival unfit patients 8 mo; median survival fit patients not reached	84	Median 73 (66−89)	NR	Diffuse large cell lymphoma; stage 3 and 4
Wedding, 2007 [41]**	Germany	Prospective observational	To investigate whether age, severe comorbidity, and functional impairment independently contribute to poor survival	Median survival 34.2 mo	427	NR	NR	Breast, lung, carcinoma of unknown primary, sarcoma, MM, GI, lymphoma, acute leukemia, chronic leukemia, other cancer sites not further specified; stage 1−4
GA studied in a cross-sectional study design								

First author, year [reference]	Country	Study design	Aim of Study	Study duration	Sample size	Mean or median age, y (SD or range)	Response rate	Cancer type or site and stage
Bearz, 2007 [42]	Italy	NR	To describe the use of gefitinib in the treatment of elderly patients with advanced non-small cell lung cancer	14 mo	22	>70 (4 subjects ≥ 80)	NR	Lung; stage 3 and 4
Bylow, 2011 [43]	United States	Case−control	To measure the specific contribution of ADT to frailty, objective physical performance measures, and falls in older prostate cancer patients with biochemical recurrence	NA	134	Case patients: mean 72 (SD 7.0); Control subjects: 70.5 (SD 6.3)	NR	Prostate; stage biochemical recurrence
Di Mauro, 2000 [44]	Italy	Case−control	To evaluate the role of comorbidity and psychoaffective attitudes in elderly oncological patients compared with elderly subjects without cancer	NR	108	Mean 71.4 (SD 5.5)	NR	Breast, lung, prostate, CRC, hematologic, liver, brain, urinary system; stage 1−4
Dujon, 2006 [45]	France	Cross-sectional observational	To evaluate whether performance status correlates with the geriatric indices in elderly patients with lung cancer	NA	41	Mean 75.6 (65−90)	NR	Lung; stage 1−4
Extermann, 1998 [46]	United States	Cross-sectional observational	To compare the performance of the CCI and the CIRS−G in a cohort of elderly cancer patients who prospectively underwent CGA as part of their initial oncologic evaluation	NA	203	Median 75 (63−91)	NR	Breast, lung, GI, hematologic, other cancer sites not further specified; stage 1−4
Girones, 2010 [47]	Spain	Cross-sectional observational	To assess the prevalence of other comorbidities and of functional impairment in elderly patients on follow-up after curative treatment of early breast cancer and the feasibility of assessment in outpatient unit	NA	91	Mean 80 (71−95)	NR	Breast; stage 1−3
Girre, 2008 [48]	France	Cross-sectional observational	To describe the patient population and the treatment plan modification after a geriatric oncology clinic in older cancer patients referred to Institut Curie	NA	105	Median 79 (70−97)	NR	Breast, lung, prostate, CRC, cervical, endometrial, ovarian, choroidal, hematologic, other cancer sites not further specified; stage 4
Hurria, 2005 [88]	United States	Cross-sectional observational	To develop a brief cancer-specific GA measure and determine its feasibility by 1) the percentage of patients able to complete it on their own, 2) length of time to complete, and 3) patient satisfaction	NA	40	Mean 74 (65−87)	83%	Breast, lung, CRC; stage 1−4
Hurria, 2007 [89]††	United States	Cross-sectional observational	To integrate the principles of GA into the care of older adults with cancer to identify vulnerable older adults and develop interventions to optimize cancer treatment	NA	245	Mean 76 (SD 7, 65−95)	98%	Breast, lung, CRC, lymphoma; stage 1−4
Hurria, 2009 [90]††	United States	Cross-sectional observational	To determine predictors of distress in older patients with cancer	NA	245	Mean 76, (65−95)	98%	Breast, lung, CRC, lymphoma; stage 1−4
Ingram, 2002 [85]	United States	Cross-sectional observational	To assess the ability of cancer patients to complete a comprehensive assessment tool in their own homes and return the surveys during follow-up clinic appointments and to profile this population	NA	154	Mean 68 (42−87)	58%	Breast, lung, prostate, CRC, head and neck, lymphoma, leukemia, melanoma; stage 1−4
Kellen, 2010 [49]	Belgium, Netherlands	Cross-sectional observational	To compare the results of three selected prescreenings tools, currently insufficiently validated, using the results from the entire CGA as the gold standard	NA	113	Mean 77 (SD 4)	NR	Breast, lung, prostate, CRC, other cancer sites not further specified; stage NR
Kim, 2011 [50]	Korea	Cross-sectional observational	To analyze the baseline CGA and quality of life in Korean elderly cancer patients receiving systemic chemotherapy	NA	65	Median 71 (65−80)	NR	Lung, GI, gynecologic and GU, melanoma; stage 1−4
Luciani, 2010 [51]	Italy	Cross−sectional	To establish the accuracy of the VES−13 in	NA	419	Mean 76	NR	Solid or hematologic tumor;

First author, year [reference]	Country	Study design	Aim of Study	Study duration	Sample size	Mean or median age, y (SD or range)	Response rate	Cancer type or site and stage
		observational	predicting the presence of abnormalities at CGA			(70−97)		stage NR
Lynch, 2007 [52]	United States	Cross-sectional observational	To describe a clinical pilot program in a community cancer center	NA	85	41 subjects >75 y, 23 subjects 70−74 y, 21 subjects 65−69 y	NR	Breast, lung, prostate, bladder, GI, CLL, head and neck, melanoma, MM, NHL, ovarian, sarcoma, uterine, Other cancer sites not further specified; stage NR
Mantovani, 2004 [53]	Italy	Cross-sectional observational	To find whether any association exists between serum levels of proinflammatory cytokines and the most important CGA variables, such as functional status, cognitive functions, and nutrition	NA	84 older cancer patients, 59 adult cancer patients	Mean 72.8 (65−96)	NR	Breast, lung, prostate, head and neck, endometrium, NHL, GI, ovarian, other cancer sites not further specified; stage 1−4
Mohile, 2007 [78]§	United States	Cross-sectional observational	To evaluate the validity of the VES−13 for identifying impairment compared to CGA in older patients with prostate cancer in the oncology setting	1 mo	50	Median 78 (70−92)	NR	Prostate; stage 80% had no evidence of metastatic disease by imaging criteria
Mohile, 2009 [54]	United States	Cross-sectional observational	To evaluate whether cancer was independently associated with vulnerability and frailty	NA	12,480	Mean 76.2	NR	Breast, lung, prostate, CRC, cervical, uterine, bladder, ovarian, other cancer sites not further specified; stage NR
Molina−Garrido, 2011 [55]	Spain	Cross-sectional observational	To test two frailty screening tools to select patients who may benefit from CGA	NA	41	Mean 74.5 (66.5−87.5)	NR	Breast; stage 1 and 2
Molina−Garrido, 2011 [56]	Spain	Cross-sectional observational	To develop a brief cancer-specific CGA measure that would be primarily non−self-administered and to establish its feasibility	NA	99	Mean 78.65 (70.4−94.9)	NR	Breast, lung, colorectal, urologic, hematologic, digestive, other cancer sites not further specified; stage 1−4
Monfardini, 1996 [57]	Italy	Cross-sectional observational	To assess the reliability and validity of a MGA protocol	1 wk	30	Mean 70.2	NR	Breast, lung, prostrate, NHL, AML, MM, head and neck, bladder; stage NR
Overcash, 2007 [58]	United States	Cross-sectional observational	To determine the extent to which falls occur in older adults with cancer; to identify how falls relate to depression, age, functional status, and cognition, and to develop a model for predicting falls	NA	165	Mean 77.6	NR	Breast, prostate, colorectal, lymphoma, other cancer sites not further specified; stage 1−4
Overcash, 2008 [77]	United States	Cross−sectional observational	Of the multiple research questions, the most important was: What components of the CGA predict falls in three groups of older adults aged 70 y (group 1 included cancer patients receiving chemotherapy, group 2 included cancer patients not receiving chemotherapy and group 3 included older patients without cancer)?	NA	352	Mean age group 1 (cancer patients who were receiving chemotherapy) 76.9, mean age group 2 (cancer patients who were not receiving chemotherapy) 77.8, and mean age group 3 (older adults group without cancer	NA	Breast, prostate, lymphoma, leukemia, head and neck, cervical, GI, other cancer sites not further specified; stage NR

First author, year [reference]	Country	Study design	Aim of Study	Study duration	Sample size	Mean or median age, y (SD or range)	Response rate	Cancer type or site and stage
						treatments) 80.1		
Pignata, 2008 [59]	Italy	Phase II trial	To describe the safety of a weekly schedule of carboplatin (AUC2) and paclitaxcel (60 mg/m^2) in ovarian cancer patients older than 70 y	Median follow−up 34 mo (range = 24−52 mo)	26	Median 77 (70−84)	NR	Epithelial, ovarian; stage 1−4
Pope, 2006 [60]†	PACE countries	Cross-sectional observational	To describe the population, and present the association between components of PACE and number of comorbidities (defined according to SIC)	NA	460	Mean 76.9 (70−95)	NR	Breast, GI, GU, other cancer sites not further specified; stage 1−4
Repetto, 2002 [61]	Italy	Cross-sectional observational	To appraise the performance of a CGA in elderly cancer patients and to evaluate whether it could add further information with respect to the ECOG PS	NA	363	Median 72.9 (65−92)	NR	Breast, lung, CRC, hematologic, head and neck, other cancer sites not further specified; stage 1−4
Retornaz, 2008 [93]	Canada	Cross-sectional observational	To assess the prevalence of seven frailty markers in older cancer patients referred to oncology for chemotherapy and to classify patients in hierarchical groups based on functional status	NA	50	Mean 76.8, SD 5.2	94%	Breast, lung, prostate, CRC, leukemia, other cancer sites not further specified; stage 1−4
Roche, 1997 [62]	United States	Cross-sectional observational	To evaluate the role of cognitive, functional, and affective GA measures in elderly cancer patients, and to analyze the associations between these factors, stage of malignancy, and cancer treatment choices	NA	50	Mean 74.9 (65−93)	NR	Breast, lung, prostate, GI, hematologic, gynecologic, meningioma, head and neck, sarcoma, unknown primary, bladder, paraganglioma; stage 3 and 4
Serraino, 2001 [63]	Italy	Cross-sectional observational	To assess the prevalence of functional limitations and to identify factors associated with the presence of functional limitations	NA	303	Median 72 (65−94)	NR	Breast, lung, head and neck, HD, MM, MDS, acute and chronic leukemia, other cancers not further specified; stage NR
Siegel, 2006 [64]	United States	Cross-sectional observational	To establish the range of three tests (TUG, hand grip, and Tinetti gait and balance) in older patients with lymphoma	NA	25	Median 70 (60−85)	NR	Lymphoma; stage NR
Stauder, 2010 [65]	Austria	Cross-sectional observational	To assess the coverage of a large battery of GA instruments by determining the number of independent domains measured	NA	78	Median 72.5 (60−93)	NR	Breast, lung, DLBCL, MDS, AML, CML, renal cell, bladder, GI, mesothelioma, leiomyosarcoma, unknown primary; stage NR
To, 2010 [66]	Australia	Cross-sectional observational	To describe the characteristics of the first 200 patients seen at the geriatric oncology clinic	NA	200	Mean 76.7 (70−92)	NR	Breast, lung, GU, other cancer sites not further specified; stage 1−4
Venturino, 2000 [67]	Italy	Nonrandomized clinical trial	To examine formestane toxicity and activity in an elderly breast cancer population presenting with disability and comorbidity	NA	45	Median 74 (65−93)	NR	Breast; stage 4
Wedding, 2007[68]**	Germany	Cross-sectional observational	To investigate the independent contribution of functional impairment and comorbidity to QOL	NA	477	Group A Mean 70.2, SD 6.9; Group B: mean 46, SD 11.3; Group C: mean 71.4, SD 7.0	NR	Breast, lung, carcinoma of unknown primary, sarcoma, MM, lymphoma, acute leukemia, chronic leukemia, GI, other cancer sites not further specified; stage 1−4
Wedding, 2007 [99]	Germany	Randomized controlled trial	To examine whether CGA identifies more precisely subjects who are fit and frail compared with physicians judgment	NA	200	Mean 75.9 (70−94)	94%	Breast, lung, prostate, hematologic, GI, ovarian, bladder, skin, larynx; stage NR

First author, year [reference]	Country	Study design	Aim of Study	Study duration	Sample size	Mean or median age, y (SD or range)	Response rate	Cancer type or site and stage
GA studied in retrospective studies and chart reviews								
Barthelemy, 2011 [98]	France	Retrospective	To evaluate the impact of GA vs age and other prognostic factors on the tumor board proposal with regard to adjuvant chemotherapy for elderly breast cancer patient	NA	192, 93 underwent GA	Median 75.1 (70−98)	NA	Breast; stage 1 and 2
Basso, 2008 [79]	Italy	Retrospective	To evaluate management and outcome of patients aged 70 years or older admitted to a medical oncology ward and evaluated by MGA before treatment with standard or "elderly−friendly" chemotherapy regiments	Until death; median follow−up 19 mo	117	Median 75 (70−92)	NA	Breast, lung, CRC, ovarian, head and neck, other cancer sites not further specified; stage 1−4
Cudennec , 2007 [72]	France	Retrospective	To describe results from the GA	NA	124	Mean 79, SD 6	NA	GI; stage NR
Cudennec, 2010 [84]	France	Retrospective	To describe the SGE and its use in patients with thoracic cancer	NA	57	mean 80.8, SD 5.7	NA	Bronchial; stage NR
Fratino, 1999 [69]	Italy	Retrospective	To investigate physical, psychological and mental disabilities using a CGA, and to correlate the objective measurements with standard clinical parameters in older adults	NR	383	Median 72 (65−94)	NR	Breast, lung, CRC, hematologic, other cancer sites not further specified; stage 1−4
Flood, 2006 [92]	United States	Retrospective	To characterize an elderly population admitted to a novel Oncology−Acute Care for Elders Unit in terms of the prevalence of functional dependencies and geriatric syndromes, and examine the patient's suitability for an interdisciplinary model of care	NA	119	Mean 74.1 , SD 5.9	NA	Breast, lung, prostate, CRC, hematologic, carcinoid, glioblastoma multiforme, head and neck, bladder, melanoma, sarcoma, thyroid, renal cell, unknown primary; stage NR
Garman, 2004 [86]	United States	Retrospective	To describe patterns of functional status, symptoms, therapeutic goals, and outcomes among older adults with cancer diagnoses hospitalized on a Geriatric Evaluation and Management Unit	NA	102 admitted, 36 with cancer	Mean 80, SD 5	NA	Lung, Prostate, CRC, Skin, Gastric, Tonsilar, Lymphoma, MM, Pineal, stage NR
Koroukian, 2006 [91]‡‡	United States	Cross-sectional observational	To describe the rates and overlap of comorbidity, disability, and geriatric syndromes in a cohort of elderly cancer patients receiving home health care	NA	2552	Mean 76.6 for breast, 79.3 for prostate, and 77.9 for CRC	NA	Breast, Prostate, CRC, stage 1−4
Koroukian, 2010 [80] ‡‡	United States	Cross-sectional observational	To examine patterns of CRC treatment and survival in relation to comorbidities, functional limitations, and geriatric syndromes	Follow−up until death or December 2005	1009	≥65	NA	CRC, stage 1−4
Overcash, 2005 [81]§§	United States	Retrospective	To understand what items contained in the instruments that make up the CGA could be compiled to construct an abbreviated form of the CGA	NA	513	Mean 73 (70−92)	NA	Breast, prostate, lymphoma, leukemia, head and neck, cervical, GI, and other cancer sites not further specified; stage NR
Overcash, 2006 [83]§§	United States	Retrospective	To develop cut points for scoring the aCGA that are consistent with existing limitations as revealed by the full CGA	NA	500	Mean 73 (70−92)	NA	Breast, prostate, lymphoma, leukemia, GI, and other cancer sites not further specified; stage NR
Retornaz, 2008 [82]	France	Retrospective	To characterize the elderly population admitted to an Acute Care for Elders Unit and to determine their care and disease trajectory as well as the prevalence of functional dependencies	NA	186	Mean 79.5, SD 7.4	NA	Breast, lung, prostate, CRC, gynecologic, GI, urologic, and other cancer sites not further specified; 70 patients had stage 70 stage 4, for the other study participants stage was NR

First author, year [reference]	Country	Study design	Aim of Study	Study duration	Sample size	Mean or median age, y (SD or range)	Response rate	Cancer type or site and stage
Rollot−Trad, 2008 [97]	France	Retrospective	To describe a series of 54 patients with blood diseases who were followed up in an acute care geriatric department	0−60 mo (until death)	54	Mean 86 (75−99)	NA	NHL, MDS, AML, ALL, CLL, MM, HD, other cancer sites not further specified; stage 1−4
Sorio, 2006 [70]	Italy	Phase II trial	To evaluate response rate, toxicity, and feasibility of therapeutic drug monitoring in elderly patients with advanced NSCLC in a phase II trial of prolonged orally administered etoposide	Median survival 6 mo (range = 1−20 mo)	17	Median 70 (65−80)	NR	Lung; stage 3 and 4
Terret, 2004 [87]	France	Retrospective	To describe patient characteristics identified by a geriatric oncology program and to focus attention on elderly patients with prostate cancer who were prospectively evaluated through the program	NA	60	Median 78 (68−92)	NR	Prostate; stage 1−4
Yonnet, 2008 [96]	France	Retrospective	To evaluate the role of age in the management of patients diagnosed with primary lung cancer	NA	363	31.9% ≥70	NA	Lung; stage 3 and 4

*NR = not reported; NA = not applicable; aCGA = abbreviated geriatric assessment; ADL = activities of daily living; ADT = androgen deprivation therapy; ALL= Acute Lymphoblastic Leukemia; AML= Acute Myeloid Leukemia; AUC2= Area Under the Curve for Carboplatin according to the Calvert Formula; CGA = comprehensive geriatric assessment; CC = carboplatin plus cyclophosphamide; CLL= Chronic Lymphoblastic Leukemia; CML= Chronic Myeloid Leukemia; CP = carboplatin plus paclitaxel; CIRS−G = Cumulative Illness Rating Scale−Geriatric; CRC=Colorectal Cancer DLCL = diffuse large cell lymphoma; ECOG PS= Eastern Collaborative Group Oncology performance status; GA= geriatric assessment; GDS = Geriatric Depression Scale; GI = gastrointestinal cancer; GU = genitourinary cancer; HD=Hodgkin Disease; IADL = instrumental activities of daily living; IQR= interquartile range; KPS= Karnofsky Performance Status; MDS= Myelodysplastic Syndrome; MGA = multidimensional geriatric assessment; MM= Multiple Myeloma; MNA= Mini Nutritional Assessment; MO= months; NHL=non-Hodgkin Lymphoma; NSCLC = non−small cell lung cancer; NSI NHC= Nutrition Screening Initiative Nutritional Health Checklist; PACE = Pre-operative Assessment of Cancer in the Elderly; QOL = quality of life; rHuEPO= Recombinant Human Erythropoietin; SIC = Satariano Index for comorbidities ;TUG = timed up and go test; SGE= Simplified Geriatric Evaluation; VES−13 = Vulnerable Elder Survey 13 items.

†Articles reporting on the same study.
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§§Articles reporting on the same study.

Supplementary Table 3. Detailed content and domains of the geriatric assessment instruments used in each study*

First author, year [reference]	Name of assessment(s)	ADL	IADL	Comorbidity	Cognitive functioning	Mood	Nutrition	Other instruments and/or domains	Summary score
Geriatric assessment studied in prospective observational studies									
Aaldriks, 2011 [18]	CGA, geriatric assessment	Yes, included in GFI	Yes, included in GFI	No	Yes, MMSE and IQCODE	No	Yes, nutritional assessment (MNA)	GFI	Yes, using GFI
Aparicio, 2011 [19]	CGA, minimal CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, CIRS−G	Yes, MMSE	Yes, GDS (1 item)	Yes, nutritional assessment (MNA)	Social Support (tool not specified), medications (tool not specified), fall assessment (history of falls, stand on one leg test)	No
Arnoldi, 2007 [20]	CGA	Yes, Barthel Index	Yes, Lawton Scale	Yes, CCI	Yes, MMSE	Yes, GDS (version NR)	Yes, nutritional assessment (BMI)	PS (ECOG, Karnofsky)	Yes, Balducci classification of frail or vulnerable vs fit
Audisio, 2008 [21]†	PACE, CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, SIC	Yes, MMSE	Yes, GDS (15 items)	No	Fatigue (Brief Fatigue inventory), PS (ECOG), ASA Scale	No
Bailey, 2003 [22]‡ Bailey, 2004 [23]‡	Functional status	Yes, included in OARS	Yes, OARS and Reuben exercise scale	Yes, OARS physical health section	No	Yes, Mental Health (OARS)	No	Social support (OARS), QOL (Rotterdam Symptom Checklist), economics resources (OARS), activity level (Rotterdam Symptom Checklist)	No
Bamias, 2007 [24]	Geriatric assessment	Yes, Katz Index	Yes, Lawton Scale	Yes, CCI	No	No	No	PS (ECOG), VES−13	Yes, Balducci classification of frail or vulnerable vs fit
Bylow, 2008 [25]§	CGA	Yes, Katz Index	Yes, Lawton Scale	Yes, CCI	Yes, SPMSQ	No	Yes, nutritional assessment (MNA)	Social support (MOS), medications (number), fall assessment (history of falls), gait speed (SPPB), fatigue (SF36), VES−13	Yes Balducci classification of frail or vulnerable vs fit
Castagneto, 2004 [26]	CGA	Yes, Katz Index	Yes, Lawton Scale	No	No	Yes, GDS (30 items)	No	No	Yes, increase, no change, or improvement in the number of positive CGA parameters
Chaibi, 2011 [27]	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, CIRS−G	Yes MMSE, clock−drawing test, and five-word screening test	Yes, GDS (15−items)	Yes, nutritional assessment (MNA)	No	No
Clough−Gorr, 2010 [73]	Geriatric assessment	No	No	Yes, CCI	No	Yes, Depression (5−items MOS)	No	Age, sex, social support (8-items, MOS), functional limitations (10-items, MOS), self-rated health prior to cancer diagnosis, self-reported treatment tolerance, financial needs	Yes, number of geriatric assessment deficits, dichotomized as ≤2 or ≥ 3
Extermann, 2004 [74]	CGA	Yes, Katz Index	Yes, Lawton Scale	Yes, CCI and CIRS−G	Yes, MMSE	Yes, GDS (15 items)	Yes, nutritional assessment (MNA)	QOL (FACT−B), PS (ECOG)	Yes, each assessments categorized as no risk, low risk, moderate risk, or high risk
Freyer, 2004 [28]	CGA	Yes, tool not specified	Yes, tool not specified	Yes, tool not specified	Yes, MMSE	Yes, Depression (tool not specified)	Yes, nutritional assessment (BMI, protidemia, albuminemia, total cholesterol levels)	Living arrangements (tool not specified), medications (tool not specified)	No
Freyer, 2005 [29]	MGA	Yes, tool	No	Yes, tool not	Yes, MMSE	Yes, Anxiety	Yes, nutritional	Medications (number at baseline),	No

First author, year [reference]	Name of assessment(s)	ADL	IADL	Comorbidity	Cognitive functioning	Mood	Nutrition	Other instruments and/or domains	Summary score
		not specified		specified		(HADS), Depression (HADS),	assessment (PINI)	gait speed (TUG)	
Fukuse, 2005 [100]	CGA	Yes, Barthel Index	No	Yes, tool not specified	Yes, MMSE	No	Yes, nutritional assessment (height, weight, triceps skinfold, mid-arm muscle circumference, levels of serum albumin, transferrin, and cholinesterase levels)	Age, sex, PS (ECOG), lymphocyte count, hemoglobin, sodium, potassium, BUN, serum creatinine	No
Hurria, 2006 [30]	Geriatric assessment	Yes, Katz Index	Yes, Lawton Scale	Yes, CCI (age−adjusted)	No	Yes, GDS (15 items)	No	PS (Karnofsky)	No
Hurria, 2006 [31]‖	Geriatric assessment	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, CCI	Yes, MMSE	Yes, GDS (15 items)	No	QOL (FACT−B), PS (Karnofsky)	No
Hurria, 2006 [32]‖	Geriatric assessment	Yes, MOS physical health subscale	Yes, OARS and Reuben exercise scale	Yes, OARS physical health section	No	Yes, GDS (15 items)	Yes, nutritional assessment (BMI)	Functional limitations (FACT−B), QOL(FACT−B)	No
Kothari, 2011 [33]	CGA, geriatric assessment	Yes, tool not specified	Yes, tool not specified	No	No	Yes, GDS (15 items)	Yes, nutritional assessment (Nutrition Screening Initiative Nutritional Health Checklist)	Age, sex	No
Kristjansson, 2010 [75]¶	CGA	Yes, Barthel Index	Yes, NEADL	Yes, CIRS	Yes, MMSE	Yes, Depression (30−items GDS)	Yes, nutritional assessment (MNA)	Medications (number), PS (ECOG)	Yes, modified Balducci classification of fit or intermediate vs frail
Kristjansson, 2010 [71]¶	CGA	Yes, Barthel Index	Yes, NEADL	Yes, CIRS	Yes, MMSE	Yes, Depression (30−items GDS)	Yes, nutritional assessment (MNA)	Medications (number), PS (ECOG),	No
Marenco, 2008 [34]	MGA	Yes, Katz Index	Yes, Lawton Scale	Yes, CIRS	Yes, SPMSQ	No	Yes, nutritional assessment (BMI)	PS (Karnofsky)	Yes, unclear how categorized
Marinello, 2009 [35]	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, CIRS	Yes, SPMSQ	No	Yes, nutritional assessment (BMI)	PS (Karnofsky)	No
Massa, 2006 [36]	CGA	Yes, tool not specified	Yes, tool not specified	No	Yes, MMSE	Yes, GDS (not clear which version was used)	Yes, nutritional assessment (MNA)	No	No
Massa, 2008 [76]	MGA	Yes, Katz Index	Yes, Lawton−Brody	Yes, CIRS−G	Yes, MMSE	Yes, GDS (30 items)	Yes, nutritional assessment	Geriatric syndromes: dementia, depression, delirium, falls,	Yes, patients were classified as fit,

First author, year [reference]	Name of assessment(s)	ADL	IADL	Comorbidity	Cognitive functioning	Mood	Nutrition	Other instruments and/or domains	Summary score
			Scale				(MNA)	osteoporosis, neglect and abuse, and failure to thrive	intermediate, or frail, but how this was done NR
Presant, 2005 [37]	Geriatric Oncology Module	Yes, 7−item tool previously developed by team	Yes, 8−item tool previously developed by team	No	No	No	No	QOL 5-point scale (tool not specified), fatigue (5-point scale, tool not specified), pain (5-point scale, tool not specified)	No
Puts, 2010 [94]# Puts, 2011 [95]#	Frailty assessment using frailty markers	Yes, Katz Index	Yes, OARS items	Yes, FCI	Yes, MMSE and MOCA	Yes, Anxiety (HADS), Depression (HADS)	Yes, weight and weight loss (BMI)	Functional limitations (items developed by Nagi), gait speed (4 m), fall assessment, grip strength, fatigue (EORTC), PS (ECOG), physical inactivity (CSHA Risk Factor Questionnaire)	Yes, count of frailty markers
Rao, 2005 [38]	Geriatric evaluation	Yes, Katz Index	Yes, Fillenbaum IADL	Yes, CCI	Yes, tool not specified	No	Yes, nutritional assessment (tool not specified)	Social support (tool not specified), fall assessment (PPT), SF−36, complete medical history and physical examination, screening for geriatric syndromes	No
Tredan, 2007 [39]	CGA	Yes, tool not specified	Yes, Lawton−Brody Scale	Yes, medical history	Yes, MMSE	Yes, Depression (HADS) and anxiety (HADS)	Yes, nutritional assessment (BMI, total protein, albumin, pre-albumin, CRP levels)	Medications (number), PS (ECOG), blood chemistry, hematology	No
Tucci, 2009 [40]	CGA	Yes, Katz Index	No	Yes, CIRS−G	No	No	No	Age, geriatric syndromes	Yes Balducci classification of frail or vulnerable vs fit
Wedding, 2007 [41]**	Functional status	Yes, Barthel Index	Yes, Lawton−Brody Scale	Yes, CIRS−G	No	No	No	PS (WHO)	No
Geriatric assessment studied in a cross-sectional study design									
Bearz, 2007 [42]	Frailty assessment using frailty markers, geriatric assessment	Yes, tool not specified	No	Yes, CIRS−G	No	Yes, depression, not clear how assessed	No	Geriatric comorbidities: dementia, delirium, incontinence, osteoporosis, anemia, neglect and abuse, failure to thrive, more than three tumbles in the last month	Yes, frail defined as patients aged ≥80 y, or those ≥70 y with ≥ 3 comorbidities or 1 grade 4 comorbidity, or patients needing help with ADL or those who had one geriatric syndrome, how unfit was defined NR
Bylow, 2011[43]	Frailty assessment using frailty markers	No	No	Yes, OARS Comorbidity Scale	No	No	Yes, weight and weight loss (self−reported unintentional weight loss)	Self-reported number of falls, gait speed (SPPB, 15-ft timed walk), grip strength, fatigue (2-items CES−D)	Yes, Fried Frailty score and modified Fried Frailty score
Di Mauro, 2000 [44]	MGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, SIC	Yes, MMSE	Yes, GDS (4−items)	No	PS (ECOG)	No
Dujon 2006 [45]	Geriatric assessment	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, CCI	Yes, MMSE	No	Yes, weight and weight loss (BMI,	Fall assessment (TUG), gait speed, PS (ECOG, Karnofsky)	No

First author, year [reference]	Name of assessment(s)	ADL	IADL	Comorbidity	Cognitive functioning	Mood	Nutrition	Other instruments and/or domains	Summary score
							MNA, PINI),		
Extermann, 1998 [46]	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, CCI and CIRS−G	No	No	No	PS (ECOG)	No
Girones, 2010 [47]	CGA	Yes, Katz Index	Yes, Lawton Scale	Yes, CCI	Yes, previous dementia diagnosis	Yes, GDS (5−items)	Yes, nutritional assessment (BMI)	Age, medications (number), PS (ECOG), geriatric syndromes: dementia, delirium, depression, falls, neglect and abuse, spontaneous bone fractures	Yes, Balducci classification of frail or vulnerable vs fit
Girre, 2008 [48]	Geriatric assessment, geriatric oncology consultation	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, number of comorbidities, chart review	No	Yes, GDS (4−items)	Yes, weight and weight loss (self−reported weight loss in past 3 mo), nutritional assessment (BMI)	Age, sex, living arrangements (tool not specified), social support (tool not specified), medications (number), fall assessment (number of falls in past 2 y), PS (ECOG); serum albumin, CRP, hemoglobin, and creatinine; cancer treatment plan proposed and modifications to treatment plan	No
Hurria, 2005 [88]	Cancer−specific geriatric assessment	Yes, MOS physical health subscale	Yes, OARS and Reuben exercise scale	No	Yes, BOMC	Yes, Anxiety (HADS), Depression (HADS)	Yes, nutritional assessment (BMI, self−reported weight loss)	Social support (MOS), fall assessment (TUG, number of self-reported falls), gait speed (TUG), PS (Karnofsky)	No
Hurria, 2007 [89]†† Hurria, 2009 [90]††	Geriatric assessment	Yes, MOS physical health subscale	Yes, OARS and Reuben exercise scale	Yes, OARS physical health section	No	Yes, Distress thermometer	Yes, weight and weight loss (BMI and percent unintentional weight loss in past 6 mo)	Social support (MOS), , fall assessment (number of falls in past 6 mo), PS (Karnofsky)	No
Ingram, 2002 [85]	CGA	Yes, EORTC QLQ-C30	Yes, OARS and Reuben exercise scale	Yes, OARS Co−morbidity Scale	No	Yes, Anxiety (HADS), Depression (HADS)	No	Social support (MOS), medications (number), QOL (EORTC QLQ-C30), fatigue (EORTC QLQ C−30), pain (VAS), symptom assessment (EORTC QLQ-C30), financial well-being, spiritual well-being (SOBI)	No
Kellen, 2010 [49]	CGA, aCGA	Yes, Barthel Index	Yes, Lawton Scale	No	Yes, full CGA 30 items, aCGA 4 items, MMSE	Yes, GDS (15 items)	No	VES−13, GFI	Yes, risk of vulnerability was defined as having a MMSE<24, ADL or IADL impairment in ≥2 domains for full CGA, andfor pre-screening tools examined scores of ≥ 3 for VES−13 or ≥4 for GFI
Kim, 2011 [50]	CGA	Yes Mahoney and Barthel index	Yes, Lawton−Brody Scale	Yes, CCI	Yes, MMSE	Yes Depression (SGDS)	Yes, weight and weight loss (BMI), nutritional assessment (MNA)	Social support (tool not specified), medications (tool not specified), fall assessment (TUG, falls in past 6 mo), QOL (EORTC QLQ C30), PS (ECOG), geriatric syndromes	Yes Balducci classification of frail or vulnerable vs fit
Luciani, 2010 [51]	CGA	Yes, tool not specified	Yes, tool not specified	Yes, CIRS−G	Yes, MMSE	No	Yes, nutritional assessment (MNA−SF)	Age, living arrangements (living situation, safety), social support (caregiver availability), medications (number, type), PS (ECOG)	Yes, those with VES-13 score ≥ 3 were considered vulnerable

First author, year [reference]	Name of assessment(s)	ADL	IADL	Comorbidity	Cognitive functioning	Mood	Nutrition	Other instruments and/or domains	Summary score
Lynch, 2007 [52]	Geriatric evaluation	No	Yes, tool not specified	No	Yes, tool not specified	Depression (2 questions, not further specified)	No	Age, living arrangements (living alone), medications (current), fall assessment (TUG), gait speed (TUG), uncontrolled geriatric syndromes: incontinence, falls, dementia, need for referrals to other disciplines	No
Mantovani, 2004 [53]	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	No	Yes, MMSE	Yes, Depression (BDI−I)	Yes, nutritional assessment (MNA)	PS (ECOG)	No
Mohile, 2007 [78]§	Frailty assessment using frailty markers, vulnerability assessment	Yes, Katz Index	Yes, Lawton−Brody Scale	No	No	No	No	Social support (MOS), medications (number), fall assessment (self-reported history of falls), gait speed (SPPB), VES-13	Yes, VES-13 score ≥ 3 or deficits on ≥ 2 tests of the CGA
Mohile, 2009 [54]	CGA	Yes, Katz Index	Yes, Lawton Scale	Yes, CCI	Yes, SPMSQ	No	No	Low self-rated health, VES−13, Balducci Frailty Score, Self-reported geriatric syndromes: memory, osteoporosis, depression, falls, incontinence	Yes, Balducci classification of frail or vulnerable vs fit
Molina−Garrido, 2011 [55]	CGA, frailty assessment using frailty markers	Yes, Barthel Index	Yes, Lawton−Brody Scale	Yes, CCI	Yes, Pfeiffer Test	No	Yes, nutritional assessment (NSI)	Age, living arrangements (tool not specified), social support (Gijon Social Scale modified), medications (tool not specified), PS (ECOG), VES−13, Barber Questionnaire	Yes, VES-13 score ≥3 or deficits on ≥2 tests of the CGA or score >0 on Barber Questionnaire
Molina−Garrido, 2011 [56]	CGA	Yes, Barthel Index	Yes, Lawton−Brody Scale	Yes, CCI	No	No	Yes, nutritional assessment (Malnutrition Risk Scale)	Age, social support (Gijon Social Scale modified), medications (tool not specified), PS (ECOG), geriatric syndromes, Barber Questionnaire	No
Monfardini, 1996 [57]	Multidimensional Assessment Protocol for Cancer in the Elderly	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, tool not specified	Yes, MMSE	Yes, GDS (30 items)	No	Age, sex, social support (tool not specified), fall assessment (PPT, FICSIT balance scale), QOL (SIP), symptom assessment (tool not specified), use of services, household composition, characteristics of neoplasm	No
Overcash, 2007 [58]	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	No	Yes, MMSE	Yes, GDS (15 items)	No	Fall assessment (AGS guidelines)	No
Overcash, 2008 [77]	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, tool not specified	Yes, MMSE	Yes, GDS (15 items)	No	Age, sex, fall assessment (AGS guidelines), diagnosis, medical history	No
Pignata, 2008 [59]	Geriatric assessment, geriatric evaluation	Yes, Katz Index	Yes, tool not specified	Yes, tool not specified	No	No	No	No	No
Pope, 2006 [60]†	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, SIC	Yes, MMSE	Yes, GDS (15 items)	No	Fatigue (Brief Fatigue inventory), PS (ECOG), ASA Scale	No
Repetto, 2002 [61]	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, Modified SIC	Yes, MMSE	Yes, GDS (30 items)	No	Age, sex, fall assessment (FISCIT balance scale), gait speed (PPT), PS (ECOG), Monfardini Assessment Instrument	No
Retornaz, 2008	Frailty	Yes, Katz	Yes, OARS	Yes,	Yes, MMSE	Yes, Anxiety	Yes, weight	Age, sex, living arrangements (tool	Yes, four hierarchical

First author, year [reference]	Name of assessment(s)	ADL	IADL	Comorbidity	Cognitive functioning	Mood	Nutrition	Other instruments and/or domains	Summary score
[93]	assessment using frailty markers	Index		CIRS–G	and MOCA	(HADS), Depression (HADS)	and weight loss (self-reported), nutritional assessment (BMI and self–reported decrease in food intake)	not specified), social support (tool not specified), fall assessment (TUG, self-reported history of falls), gait speed (TUG), grip strength, fatigue (Visual Analogue Scale)	groups based on functional status
Roche, 1997 [62]	Geriatric assessment	Yes, Katz Index	Yes, Lawton–Brody Scale	No	Yes, MMSE	Yes, GDS (30 items)	No	Functional limitations (tool not specified), PS (Karnofsky)	No
Serraino, 2001 [63]	CGA, functional status	Yes, Katz Index	Yes, Lawton–Brody Scale	Yes, medical history	No	Yes, GDS (not reported which version used)	Yes, nutritional assessment (tool not specified)	Age, sex, social support (tool not specified), medications (number), fall assessment, PS (ECOG)	No
Siegel, 2006 [64]	Geriatric functional assessment	No	No	No	Yes, MMSE	Yes, GDS (30 items)	No	Gait speed (Tinetti Gait and Balance test, TUG), grip strength, PS (ECOG)	No
Stauder, 2010 [65]	Geriatric assessment	Yes, Barthel Index	Yes, Lawton–Brody Scale	Yes, CCI and CIRS–G	Yes, MMSE	Yes, GDS (30 items)	Yes, nutritional assessment (MNA)	Social support (F-sozU), gait speed (7–items PPT, TUG), QOL (FACT–G), PS (Karnofsky, WHO), VES–13	No
To, 2010 [66]	Geriatric assessment	Yes OARS	Yes, Fillenbaum IADL and SF–36 physical functioning scale	Yes, CCI	Yes, self–reported forgetfulness	Yes, Depression (tool unspecified)	Yes, weight and weight loss (unintentional weight loss in past 6 mo)	Social support (5 items MOS), Medications (number), Pain 11-point numerical scale, not fall assessment (number of falls in past 6 mo), Distress, 11-point numerical scale, PS (Karnofsky), vision, hearing, exhaustion, current support services, caregiver concerns	Yes, 4–5 concerns in functional status was considered frail, 1–3 concerns was vulnerable, and no concerns was fit
Venturino, 2000 [67]	CGA	Yes, Katz Index	Yes, tool not specified	Yes, SIC	Yes, MMSE	Yes, GDS (not clear which version used)	No	Age, PS (ECOG)	No
Wedding, 2007 [68]**	Functional status	No	Yes, Lawton–Brody Scale	Yes, CIRS–G	No	No	No	QOL (EORTC QLQ C30), PS (Karnofsky)	No
Wedding, 2007 [99]	CGA	Yes, Barthel Index	Yes, Lawton–Brody Scale	Yes, CCI	Yes, MMSE	No	Yes, nutritional assessment (MNA)	Age, fall assessment (Tinetti test), number of deficits	Yes Balducci classification of frail or vulnerable vs fit and judgment of the physician in these categories
Geriatric assessment studied in retrospective studies and chart reviews									
Barthelemy, 2011 [98]	CGA	Yes, Katz Index	Yes, Lawton–Brody Scale	Yes, CIRS–G	Yes, MMSE	Yes, GDS (15 items)	No	Age, sex, living arrangements (tool not specified), medications (tool not specified), fall assessment (falls in last year), PS (ECOG), geriatric syndromes	Yes, Balducci classification of frail or vulnerable vs fit
Basso, 2008 [79]	MGA	Yes, Katz Index	Yes, Lawton Scale	Yes, CIRS–G	Yes, MMSE	Yes, GDS (30 items)	Yes, nutritional assessment	Creatinine clearance	Yes, Balducci classification of frail or

First author, year [reference]	Name of assessment(s)	ADL	IADL	Comorbidity	Cognitive functioning	Mood	Nutrition	Other instruments and/or domains	Summary score
							(BMI)		vulnerable vs fit
Cudennec, 2007 [72]	CGA	Yes, Katz Index	Yes, Lawton−Brody Scale	Yes, tool unspecified	Yes, MMSE	Yes, GDS (4−items)	No	Living arrangements (type of residence), social support (assistance in residence), medications (tool not specified), fall assessment (TUG), gait speed (TUG), sensory capacities	Yes, group 1 fit defined as functionally independent, no comorbidities; group 3 frail defined as severe comorbidities and/or not independent in ADL and ambulatory and group 2 in-between (ambulatory but with comorbidities and ADL dependence.
Cudennec, 2010 [84]	Simplified geriatric evaluation	No	Yes, Lawton−Brody Scale	Yes, number of comorbidities, tool not specified	Yes, MMSE and clock−drawing test	Yes, GDS (4−items)	Yes, nutritional assessment (MNA)	Living arrangements (tool not specified), social support (tool not specified), medications (number, drug interactions, adverse effects, patient compliance), fall assessment (TUG), gait speed (TUG)	Yes, Balducci classification of frail (group 3) or vulnerable (group 2) vs fit (group 1). The vulnerable group (group 2) was split into 2 groups named 2+ and 2−, 2− had non-stabilized comorbidities and 2+ had stabilized comorbidities (stabilized and non-stabilized comorbidities not defined by the authors).
Fratino, 1999 [69]	CGA	Yes, Katz Index	Yes, Lawton Scale	No	Yes, MMSE	Yes GDS (15 items)	No	PS (tool not specified)	No
Flood, 2006 [92]	Functional status, geriatric syndromes	Yes, Katz Index	Yes, Lawton Scale	No	Yes, Short BOMC and the clock−drawing test, dementia and delirium based on chart notes	Yes GDS (30 items)	Yes, weight and weight loss (weight loss or poor nutrition or malnutrition noted in the chart)	Age, sex, medications (number, class), fall assessment (tool not specified), Braden Scale for pressure ulcers, use of restraints	No
Garman, 2004 [86]	CGA	Functional status was abstracted from chart	functional status was abstracted from chart	Yes, list of co−morbid conditions, chart review	Yes, MMSE or chart notes	No	No	Age, sex, social support (tool not specified), PS (Karnofsky), goals of admission, goals of care, goals met or not	No
Koroukian, 2006 [91]‡‡	CGA	Yes, OASIS	Yes, OASIS	Yes, List of co−morbid conditions developed by NIA/NCI	Yes, dementia and delirium, OASIS	Yes, Depression (depressive feelings OASIS)	No	Geriatric syndromes: dementia, delirium, depression, osteoporosis, incontinence, failure to thrive, and falls	No
Koroukian, 2010 [80] ‡‡	NR	Yes, OASIS	Yes, OASIS	Yes, List of co−morbid conditions developed by NIA/NCI	Yes, dementia and delirium OASIS	Yes, Depression (depressive feelings OASIS)	No	Geriatric syndromes: dementia, delirium, depression, osteoporosis, incontinence, and falls	No
Overcash, 2005 [81]§§ Overcash, 2006 [83]§§	aCGA	Yes, tool unclear	Yes, Lawton Scale	No	MMSE items attention and calculation, reading, writing,	Yes, GDS (4−items)	No	No	No

First author, year [reference]	Name of assessment(s)	ADL	IADL	Comorbidity	Cognitive functioning copying	Mood	Nutrition	Other instruments and/or domains	Summary score
Retornaz, 2008 [82]	Geriatric assessment	Yes, Katz Index	Yes, 4−items Barberger−Gateau questionnaire	Yes, ICD−10, French version	Yes, MMSE	Yes, GDS (4−items)	Yes, nutritional assessment (MNA−SF)	Medications (number), fall assessment (self-reported history of falls), gait speed (one-leg balance test), trouble hearing or seeing	No
Rollot−Trad, 2008 [97]	NR	Yes, tool not specified	Yes, tool not specified	Yes, CCI	Yes, MMSE	Yes, Depression (tool unspecified)	Yes, weight and weight loss (weight loss of ≥3 kg), nutritional assessment (albumin, pre-albumin, folate, vitamin B12 levels)	Age, sex, living arrangements (tool not specified), PS (tool not specified), home help from professionals or family members	No
Sorio, 2006 [70]	Geriatric risk assessment	Yes, tool not specified	Yes, tool not specified	No	No	No	No	PS (ECOG), concomitant treatment	Yes, geriatric risk score
Terret, 2004 [87]	Minimal CGA	Yes, Katz Index	Yes, Lawton Scale	Yes, CIRS−G	Yes, MMSE	Yes, GDS (30 items)	Yes, nutritional assessment (MNA)	Grip strength Performance-Oriented Assessment of Mobility, PS (Karnofsky), hemoglobin, WBC, differential count, creatinine clearance, serum albumin level	No
Yonnet, 2008 [96]	Évaluation Gériatrique Standardisée	Yes, Katz Index	No	Yes, CCI	No	No	Yes, weight and weight loss (BMI)	Age, fall assessment , PS (ECOG), creatinine clearance	Yes Balducci classification of frail or vulnerable vs fit

Supplementary Table 4. Predictive validity of geriatric assessment for use-of-care outcome and other outcomes studied*

First author, year [reference]	Type of statistical analysis	Was multivariable analysis conducted and were adjustments appropriate?	Use of care	Other outcomes studied
Geriatric assessment studied in a prospective observational study design				
Aaldriks, 2011 [18]	Paired sample *t* test to compare changes in geriatric assessment over time	NA	NA	Mean MMSE score worsened statistically significantly over time (mean change score = −0.86).
Arnoldi, 2007 [20]	NR	Unclear	NA	72% of non-frail patients were treated, compared with 19% of borderline and 9% of frail patients.
Bailey, 2003 [22]†	Logistic regression	Yes, multivariable analysis was conducted. The adjustments were appropriate, the variables that were statistically significant in univariate analyses were kept in the multivariable analysis, including age and comorbidity	NA	Factors associated with receipt of surgery plus chemotherapy: age >85 y vs <65 y, OR = 0.10, 95% CI = 0.01 to 0.94
Bailey, 2004 [23]†	Logistic regression	Yes, multivariable analysis was conducted. Yes the adjustments were appropriate, the variables that were statistically significant in univariate analyses were kept in the multivariable analysis, including age and comorbidity)	Factors associated with the use of social resources: Age >85 y vs <65 y, OR = 7.50 (95% CI = 1.57 to 35.78), mild/total impairment OMFAQ (poor mental health) vs excellent mental health, OR = 4.48 (95% CI = 1.70 to 11.80).	Factors associated with change in post-treatment functional status: age >85 y vs <65 y, OR = 5.20, 95% CI = 1.17 to 23.05), morbidity score >5, OR = 10.01, 95% CI = 4.84 to 20.70
Bamias, 2007 [24]	Cox regression	It is not stated if multivariable analysis was conducted and if yes, what adjustments were done	NA	VES−13 score not associated with response, PFS, or OS.
Bylow, 2008 [25]	Logistic regression	No multivariable analysis	NA	Factors statistically significant associated with abnormal physical performance: age, ADL, IADL, SPMSQ score, VES−13 score, use of assistive device (cane or walker); Factors statistically significant associated with falls: ADL, use of assistive device, VES−13 score.

First author, year [reference]	Type of statistical analysis	Was multivariable analysis conducted and were adjustments appropriate?	Use of care	Other outcomes studied
Kothari, 2011 [33]	Correlation analysis, Fisher exact test, and Wilcoxon rank sum test	NA	NA	Which preoperative geriatric screens were associated with a discharge location other than home: IADL shopping disability ($r = $ .39, $P = $ .002), GDS Question 12 (do you feel pretty worthless the way you are now?) ($r = $ .355, $P = $ .037; OR = 11.67, 95% CI = 0.68 to 202.86, $P = $ .047); What preoperative geriatric screens were associated with a longer hospital stay: Questions 1, 9, and 10 of NSI NHC (ie, condition made me change type of food I eat; lost or gained 10 lbs in last 6 mo; not always able to physically shop, cook, feed myself).
Massa, 2006 [36]	Spearman rank correlation, Student t tests	NA	NA	An increase in rHuEPO was correlated with an increase in cognitive functioning by MMSE ($r = $ .639, $P = $ .049). There was no correlation between changes in hemoglobin level and changes in CGA domains.
Massa, 2008 [76]	ANOVA and regression analysis, not further specified, Spearman correlation	No, not mentioned if the regression was multivariable or not, no results provided other than P values	NA	Better clinical response observed in fit vs intermediate or frail patients ($P<$.001), in intermediate vs frail patients ($P =$.008); MGA score correlated with clinical response ($r = $ .55, $P<$.002), in regression analysis MGA was predictive of clinical treatment response ($P < $ .001). The MGA category did not change over time.
Puts, 2010 [94]	Logistic and multinomial logistic regression	Yes, models were adjusted for age, sex, comorbidity, extensive treatment received, stage of disease, and diagnosis	None of the frailty markers predicted hospitalization or visits to the GP. Cognitive impairment predicted ED visits (OR = 4.97, 95% CI = 1.14 to 21.69)	NA
Rao, 2005 [38]	ANOVA and Cox proportional hazard regression analysis	Unclear, Cox proportional hazard regression analysis was univariate, ANOVA was adjusted for baseline health variables, but unclear which exactly	NA	The effects of the four different treatment arms on several outcomes were compared. A positive effect of geriatric inpatient care was found for SF−36 bodily pain,

First author, year [reference]	Type of statistical analysis	Was multivariable analysis conducted and were adjustments appropriate?	Use of care	Other outcomes studied
				emotional limitation, and mental health at discharge and at 6 mo. Only the effect on bodily pain was sustained at 1 y. No effect of geriatric outpatient care on the study outcomes, no effect of all treatment arms on functional status, no difference in costs.
Tucci, 2009 [40]	Fisher exact test, Student t test, log-rank test	NA	NA	Patients classified as fit according to the Balducci classification were younger than those classified as unfit ($P<.001$), had less frequent systemic symptoms ($P=.03$), and higher response rates (92.5% vs 48.8%, $P<.001$).
Geriatric assessment studied in a cross−sectional study design				
Basso, 2008 [79]	Kaplan–Meier analysis, log-rank test	No multivariable analysis	NA	No statistically significant difference in the use of elderly-adapted regiments between geriatric assessment groups; 58.7% of participants with adapted treatment protocols had grade 3 or 4 toxicity and 54.9% of participants with standard protocols had grade 3 or 4 toxicity. The frail and non-frail did not differ in terms of toxicities. The incidence of treatment interruption was higher in frail patients, and frail patients had less benefit in terms of tumor response and clinical benefit.
Bylow, 2011 [43]	Logistic and ordinal logistic regression	Yes, multivariable analysis was conducted. Yes the adjustments were appropriate, the models were adjusted for age, PSA, Gleason score, radiation, comorbidity, and ADT	NA	Factors statistically significant associated with frailty: OARS comorbidity (B statistic = 0.38, P = .01); Falls: OARS comorbidity (OR = 2.02, P = .01); no variable was associated with SPPB score <10.
Di Mauro, 2000 [44]	Linear regression, non-parametric correlations	No, multivariable analysis results not reported	NA	Control subjects differed from cancer patients with respect to following geriatric assessment domains: number of comorbidities, GDS score, ADL score, and ECOG PS score.
Dujon, 2006 [45]	T test and Spearman correlation	NA	NA	There was a correlation between ECOG PS and ADL, IADL; there was no correlation between PS and comorbidity

First author, year [reference]	Type of statistical analysis	Was multivariable analysis conducted and were adjustments appropriate?	Use of care	Other outcomes studied
				nor between PS and TUG
Girones, 2010 [47]	Descriptive statistics	NA	NA	There were statistically significant correlations between: age and PS, age and ADL, age and IADL, and comorbidity and polypharmacy (correlation coefficients NR).
Hurria, 2009 [90]	Logistic regression	Yes, multivariable analysis was conducted. No, the adjustments were insufficient, the models were only adjusted for age, physical function, and medications	NA	Requiring assistance with IADL (P = .015) and a lower score on MOS physical function scale (P = .018) were associated with higher distress score. ORs and correlation coefficients NR.
Mantovani, 2004 [53]	T test, Mann−Whitney U test; χ^2 test; Spearman rank correlation	NA	NA	Elderly cancer patients had statistically significantly higher IL−6 and CRP levels compared with adult cancer patients, and the strongest associations were observed between IL−6 and ADL, IL−6 and IADL, and IL−6 and nutrition.
Mohile, 2009 [54]	Logistic regression	Yes, multivariable analysis was conducted. Yes, the adjustments were appropriate; the models were adjusted for, age, sex, comorbidity, and cancer type.	NA	A cancer diagnosis was associated with low self-rated health (OR =1.46, 95% CI = 1.3 to 1.64), limitations in ADL (OR = 1.19, 95% CI = 1.06 to 1.33), limitations in IADL (OR = 1.25, 95% CI = 1.13 to 1.38), having a geriatric syndrome (OR = 1.27, 95% CI = 1.15 to 1.41), a VES−13 score ≥3 (OR =1.26, 95% CI = 1.13 to 1.41), and frailty (OR = 1.46, 95% CI = 1.29 to 1.65).
Pope, 2006 [60]	Logistic regression	Yes, multivariable analysis was conducted. Yes, the adjustments were appropriate, the models were adjusted for age, sex, and type and stage of cancer.	NA	Factors associated with comorbidity: IADL dependent vs independent (OR = 1.97, 95% CI = 1.31 to 2.92), BFI moderate or severe vs none or mild (OR = 1.63, 95% CI = 1.01 to 2.66), ASA moderate or severe vs normal or mild (OR = 1.89, 95% CI = 1.19 to 2.99).
Repetto, 2002 [61]	Logistic regression	Yes, multivariable analysis was conducted. No, the adjustments were insufficient, the models were only adjusted for age and sex	NA	Association between modified SIC and CGA; ADL dependent vs independent (OR = 1.7, 95% CI = 1.0 to 3.1), IADL dependent vs independent (OR = 1.7, 95% CI = 1.1 to 2.5), GDS depressed vs nondepressed (OR = 0.7, 95% CI = 0.4 to

First author, year [reference]	Type of statistical analysis	Was multivariable analysis conducted and were adjustments appropriate?	Use of care	Other outcomes studied
				1.0).
Overcash, 2007 [58]	Logistic regression	Yes, multivariable analysis was conducted. No the adjustments were insufficient, the models were only adjusted for age and sex	NA	Factors associated with falls: IADL (OR = 1.18, 95% CI = 1.09 to 1.28).
Overcash, 2008 [77]	Logistic regression	Yes, multivariable analysis was conducted. No, the adjustments were insufficient, the models were only adjusted for age and sex,	NA	Factors associated with falls in entire sample: ADL (OR = 0.72, 95% CI = 0.64 to 0.80); Factors associated with falls in no treatment group: ADL (OR = 1.45, 95% CI = 1.23 to 1.71), GDS (OR = 0.93, 95% CI = 0.88 to 0.99), MMSE (OR = 1.12, 95% CI = 1.03 to 1.21); Factors associated with falls in treatment group: ADL (OR = 3.40, 95% CI = 2.10 to 5.49).
Geriatric assessment studied in retrospective studies and chart reviews				
Fratino, 1999 [69]	Logistic regression	Yes, multivariable analysis was conducted. Yes, the adjustments were appropriate, the models were adjusted for age, sex, PS, type of tumor, and comorbidity	NA	Factors associated with ADL disability: females vs males (OR = 2.1, 95% CI = 1.5 to 2.8), comorbidity (OR = 2.3, 95% CI = 1.6 to 3.1), ECOG PS ≥2 vs 0−1 (OR = 17.3, 95% CI = 16.5 to 18.2); Factors associated with IADL disability: comorbidity (OR = 1.6, 95% CI = 1.1 to 2.1), PS ≥2 vs 0−1 (OR = 4.4, 95% CI = 3.8 to 4.9), hematological vs solid tumor (OR = 2.1, 95% CI = 1.6 to 2.6).
Garman, 2004 [86]	NR	NR	NA	Goals for admission (success rates for obtaining these goals): 25% of patients had as a goal to receive a diagnosis (78%), 92% had as a goal to obtain symptom relief (73%), 81% had as a goal to obtain functional improvement (79%), 50% had as a goal to prepare comprehensive discharge plan and arrange caregiver support (100%).
Wedding, 2007 [68]	Linear regression	Yes, multivariable analysis was conducted. Yes, the adjustments were appropriate; the variables were selected based on P values.	NA	Factors associated with global QOL in elderly cancer patients: KPS (B statistic = −6.5, P<.001), comorbidity (B statistic = −7.3, P = .0327);

First author, year [reference]	Type of statistical analysis	Was multivariable analysis conducted and were adjustments appropriate?	Use of care	Other outcomes studied
		However, age was not statistically significant but was included in all the models		Factors associated with global QOL in younger cancer patients: IADL (B statistic = −11.3, P = .0251), KPS (B statistic = −6.6, P < .001); Factors associated with global QOL in elderly non-cancer patients: age (B statistic =0.6, P = .016), IADL (B statistic = −17.6, P = .048), KPS (B statistic = −6.9, P < .001).
Wedding, 2007 [99]	A classification and regression tree was used to identify variables of CGA that contribute to physicians' judgment	NA	NA	Correlations within CGA: comorbidity and ADL (r = .023), number of medications and ADL (r =−0.23; P< .05); CGA was more sensitive than physicians' judgment to classifying patients as fit, frail, or vulnerable.

*NA = not applicable; NR = not reported; HR = hazard ratio; RR = relative risk; OR = odds ratio; CI = confidence interval; ADL= Activities of Daily Living; ADT= Androgen Deprivation Therapy; ANOVA= Analysis of Variance; ASA=American Society of Anesthesiology; B= regression coefficient linear regression analysis; BDI = Beck Depression Inventory; BFI = Brief Fatigue Inventory; BMI = body mass index; CGA = comprehensive geriatric assessment; CCI = Charlson Comorbidity Index; CRP = C−reactive protein; CIRS−G = Cumulative Illness Rating Scale−Geriatric; DLCL= diffuse large cell lymphoma; ECOG PS = Eastern Collaborative Group Oncology performance status; ED= Emergency Department; FACT = Functional assessment Cancer treatment; FIGO = International Federation of Gynecology and Obstetrics; GDS = Geriatric Depression Scale; GFI = Groningen Frailty Indicator; GP= general practitioner; HADS = Hospital Anxiety and Depression Scale; IADL = instrumental activities of daily living; IQCODE = Informant Questionnaire on Cognitive Decline in the Elderly; IL−6 = interleukin 6; KPS = Karnofsky performance status; MGA = Multidimensional Geriatric Assessment; MHI 5 = Mental Health Index 5 items; MMSE = Mini Mental State Examination; MNA = Mini Nutritional Assessment; MOS = Medical Outcome Survey; NPV = negative predictive value; NSI = Nutritional Risk Screening; NSI NHC = Nutrition Screening Initiative Nutritional Health Checklist; OARS = Older Americans Resources and Services; OASIS = Outcome Assessment Information Set database; OMFAQ= OARS Multidimensional Functional Assessment Questionnaire; OS = overall survival; PFS = progression-free survival; PINI = Prognostic Inflammatory and Nutritional Index; PPV = positive predictive value; PSA = prostate-specific antigen; QOL = quality of life; rHuEPO= recombinant human erythropoietin; SF-36= 36-Item Short Form Health Survey; SIC = Satariano Comorbidity Index; SPMSQ = Short Portable Mental screening Questionnaire; SPPB = Short Physical Performance Battery; TUG =Timed Up and Go test; VES−13 = Vulnerable Elder Survey 13 items.

†These articles report on the same study.