Table A. Risk of Bias assessment tool (QUIPS)

ASSESSMENT F	OR RISK OF BIAS			
First author Aoki	Year of publication 2000			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risl of bias
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN
1) STUDY PARTICIPATION	The study sample adequately represe	ents the population of interest		SUMMARY
a. Adequate participa (>80%)	tion in the study by eligible persons	The authors included all octogenarians surgically treated in their institution	Y	
b. Description of the source population or population of interest		Single institution centre	Y	
c. Description of the baseline study sample		Characteristic of the patients are partially reported	Р	Low
d. Adequate descrij recruitment.	otion of the sampling frame and	Retrospective study	Y	
e. Adequate description of the period and place of recruitment		Authors declared that enrolled patients underwent pulmonary resection for primary non-small cell lung cancer between 1981 and 1998	Y	
f. Adequate descriptio	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of attempts to collect information on participants who dropped out		Not applicable	NA	
c. Reasons for loss to follow-up are provided		Not applicable	NA	Low
d. Adequate description of participants lost to follow-up		Not applicable	NA	
e. There are no impo who completed the stu	rtant differences between participants udy and who did not	Not applicable	NA	

3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
a. A clear definition or	description of the PF is provided	PF were partially descripted	Р	
	asurement is adequately valid and certainment; secure record, hospital	PF measurement came from hospital records	Y	
c. Continuous variables are reported or appropriate cut points are used		Continuous data are reported	Y	Low
d. The method and setting of measurement of PF is the same for all study participants		Not reported, but medical records came from a single institution	U	
e. Adequate proportion of the study sample has complete data for the PF (> 80%)		Yes, data were available for all the participants	Y	
f. Appropriate methods of imputation are used for missing PF data		No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition of (including time of death	the outcome of interest is provided	Outcome of interest were considered the posytoperative complications	Y	
	e measurement used is adequately e. independent blind assessment, rd linkage)	Outcome measurement came from hospital records	Y	Low
c. The method and se same for all study parti	tting of outcome measurement is the cipants	Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY
a. Most important confe	ounders are measured	Not reported	U	
b. Clear definitions of are provided	the important confounders measured	Not reported	U	
c. Measurement of all valid and reliable	important confounders is adequately	Not reported	U	
d. The method and s are the same for all stu	etting of confounding measurement dy participants	Not applicable	NA	Unknown
e. Appropriate method missing confounder da	ls are used if imputation is used for ta	Not applicable	NA	
	confounders are accounted for in the ing the study to specific population	Not reported	U	
	confounders are accounted for in the on, multivariate regression)	Not reported	U	

6) STATISTICAL ANALYSIS AND PRESENTATION	The statistical analysis is appropriate, and all primary outcomes are reported			SUMMARY
a. Sufficient presentation the analytic strategy	on of data to assess the adequacy of	Lack of explicit p-value for non- significant factors	Ρ	
b. Strategy for model on a conceptual frame	building is appropriate and is based work or model	Not applicable	NA	Moderate
c. The selected statisti of the study	cal model is adequate for the design	The chi squared test and unpaired t test were used	Υ	
	re reporting of results (based on the ble, or on the method section)	No, even if statistical analysis is restricted to pulmonary complications	Ρ	

ASSESSMENT FOR RISK OF BIAS				
First author	Year of publication			
Berry	2011			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN
1) STUDY PARTICIPATION	The study sample adequately repres	ents the population of interest		SUMMARY
a. Adequate participation in the study by eligible persons (>80%)		The authors included all octogenarians surgically treated in their institution	Y	
b. Description of the source population or population of interest		Single institution centre	Y	
c. Description of the b	aseline study sample	Characteristic of the patients are well reported	Y	Low
d. Adequate descrij recruitment.	ption of the sampling frame and	Retrospective study	Y	
e. Adequate description of the period and place of recruitment		Authors declared that enrolled patients underwent thoracic surgery between 2000 and 2009	Y	
f. Adequate descriptio	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY

a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of a participants who dropp	ttempts to collect information on ed out	Not applicable	NA	
c. Reasons for loss to	follow-up are provided	Not applicable	NA	Low
d. Adequate descriptio	n of participants lost to follow-up	Not applicable	NA	
e. There are no impor who completed the stu	tant differences between participants dy and who did not	Not applicable	NA	
3) PROGNOSTIC				
FACTORS	The PE is measured in a similar way	for all participants		SUMMARY
MEASUREMENT	The PF is measured in a similar way			SUMMART
a. A clear definition or	description of the PF is provided	PF were partially descripted	Р	
	easurement is adequately valid and certainment; secure record, hospital	PF measurement came from hospital records	Y	
c. Continuous variable points are used	es are reported or appropriate cut	Continuous data are reported	Y	Low
d. The method and setting of measurement of PF is the same for all study participants		Not reported, but medical records came from a single institution	U	
e. Adequate proportion of the study sample has complete data for the PF (> 80%)		Yes, data were available for all the participants	Y	
f. Appropriate methods of imputation are used for missing PF data		No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition o (including time of deat	f the outcome of interest is provided n)	Outcome of interest were considered the postoperative complications	Y	
b. Method of outcome measurement used is adequately valid and reliable (i.e. independent blind assessment, hospital record or record linkage)		Outcome measurement came from a single centre hospital records	Y	Low
c. The method and setting of outcome measurement is the same for all study participants		Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY
a. Most important confounders are measured		Not reported	U	
b. Clear definitions of the important confounders measured are provided		Not reported	U	Unknown
		1	1	

d. The method and s are the same for all stu	etting of confounding measurement dy participants	Not applicable	NA	
e. Appropriate methods are used if imputation is used for missing confounder data		Not applicable	NA	
	confounders are accounted for in the ing the study to specific population)	Not reported	U	
g. Important potential confounders are accounted for in the analysis (by stratification, multivariate regression)		Not reported	U	
6) STATISTICAL ANALYSIS AND PRESENTATION	The statistical analysis is appropriate	, and all primary outcomes are reported		SUMMARY
a. Sufficient presentation the analytic strategy	on of data to assess the adequacy of	Yes	Υ	
b. Strategy for model building is appropriate and is based on a conceptual framework or model		Not applicable	NA	Low
c. The selected statisti of the study	cal model is adequate for the design	The chi squared test, Fisher exact test and unpaired t test were used	Y	
	re reporting of results (based on the ble, or on the method section)	No	Y	

ASSESSMENT FOR RISK OF BIAS					
First author Brock	Year of publication				
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias	
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN	
1) STUDY PARTICIPATION	The study sample adequately represents the population of interest			SUMMARY	
a. Adequate participation in the study by eligible persons (>80%)		The authors included all octogenarians surgically treated in their institution	Y	Low	
b. Description of the source population or population of interest		Single institution centre	Y		
c. Description of the ba	aseline study sample	Characteristic of the patients are well reported	Y		

d. Adequate descrip recruitment.	tion of the sampling frame and	Retrospective study	Y	
e. Adequate description of the period and place of		Authors declared that enrolled octogenarians underwent thoracic surgery between 1980 and 2002	Y	
f. Adequate description	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of a participants who dropp	ttempts to collect information on ed out	Not applicable	NA	
c. Reasons for loss to t	follow-up are provided	Not applicable	NA	Low
d. Adequate descriptio	n of participants lost to follow-up	Not applicable	NA	
e. There are no important differences between participants who completed the study and who did not		Not applicable	NA	
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
a. A clear definition or	description of the PF is provided	PF were accurately descripted	Y	
	asurement is adequately valid and certainment; secure record, hospital	PF measurement came from hospital records and database	Y	
c. Continuous variabl points are used	es are reported or appropriate cut	Continuous data are reported	Y	Low
d. The method and s same for all study parti	etting of measurement of PF is the cipants	Not reported, but medical records came from a single institution	U	
e. Adequate proportion data for the PF (> 80%	n of the study sample has complete	Yes, data were available for all the participants	Y	
f. Appropriate methods of imputation are used for missing PF data		No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition of the outcome of interest is provided (including time of death)		Y		
	e measurement used is adequately e. independent blind assessment, rd linkage)	Outcome measurement came from a single centre hospital records	Y	Low

c. The method and set same for all study parti	tting of outcome measurement is the cipants	Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY
a. Most important confo	ounders are measured	Not reported	U	
b. Clear definitions of t are provided	the important confounders measured	Not reported	U	
c. Measurement of all valid and reliable	important confounders is adequately	Not reported	U	
d. The method and s are the same for all stu	etting of confounding measurement dy participants	Not applicable	NA	Unknown
e. Appropriate methods are used if imputation is used for missing confounder data		Not applicable	NA	
f. Important potential confounders are accounted for in the study design (by limiting the study to specific population groups, or by matching)		Not reported	U	
g. Important potential confounders are accounted for in the analysis (by stratification, multivariate regression)		The authors declared a multivariable logistic regression model for postoperative complication analysis	Р	
6) STATISTICAL ANALYSIS AND PRESENTATION		, and all primary outcomes are reported		SUMMARY
a. Sufficient presentation of data to assess the adequacy of the analytic strategy		Lack of tables and explicit p-values	Р	
b. Strategy for model building is appropriate and is based on a conceptual framework or model		Not applicable	NA	Moderate
c. The selected statistical model is adequate for the design of the study		The chi squared test, Fisher exact test were used	Y	
	re reporting of results (based on the ble, or on the method section)	No	Y	

ASSESSMENT F	OR RISK OF BIAS			
First author Dell'Amore	Year of publication 2014			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias
			Y: yes N: no P: partial	HIGH MODERATE LOW

			U: unknown NA: not applicable	UNKNOWN
1) STUDY PARTICIPATION	The study sample adequately represe	ents the population of interest		SUMMARY
a. Adequate participat (>80%)	ion in the study by eligible persons	The authors included all octogenarians surgically treated in their institution	Y	
b. Description of the interest	source population or population of	Three thoracic surgery unit centres	Y	
c. Description of the ba	aseline study sample	Characteristic of the patients are well reported	Y	Low
d. Adequate description of the sampling frame and recruitment.		Retrospective study	Y	Low
e. Adequate descrip recruitment	tion of the period and place of	Authors declared that enrolled octogenarians underwent thoracic surgery with curative intent between 2000 and 2010	Y	
f. Adequate descriptior	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of a participants who dropp	ttempts to collect information on ed out	Not applicable	NA	
c. Reasons for loss to	follow-up are provided	Not applicable	NA	Low
d. Adequate descriptio	n of participants lost to follow-up	Not applicable	NA	
e. There are no impor who completed the stu	tant differences between participants dy and who did not	Not applicable	NA	
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
a. A clear definition or	description of the PF is provided	PF were accurately descripted	Y	
b. Method of PF measurement is adequately valid and reliable (i.e. direct ascertainment; secure record, hospital record)		PF measurement came from hospital records and database	Y	Low
c. Continuous variabl points are used	es are reported or appropriate cut	Continuous data are reported	Y	
d. The method and s	etting of measurement of PF is the	Not reported, but medical records	U	-

of the study sample has complete	Ves data were available for all the		
or the study sample has complete	participants	Y	
of imputation are used for missing	No missing data are reported	NA	
The outcome of interest is measured	in a similar way for all participants		SUMMARY
he outcome of interest is provided	Yes	Y	
measurement used is adequately independent blind assessment, linkage)	Outcome measurement came from a single centre hospital records	Y	Low
ng of outcome measurement is the pants	Not reported, but medical records came from a single institution	U	
mportant potential confounders are a	appropriately accounted for		SUMMARY
inders are measured	Not reported	U	
e important confounders measured	Not reported	U	Unknown
nportant confounders is adequately	Not reported	U	
tting of confounding measurement y participants	Not applicable	NA	
are used if imputation is used for	Not applicable	NA	
nfounders are accounted for in the g the study to specific population	Not reported	U	
onfounders are accounted for in the n, multivariate regression)	The authors declared a multivariate analysis for postoperative complication analysis	Р	
The statistical analysis is appropriate	, and all primary outcomes are reported		SUMMARY
n of data to assess the adequacy of	Lack of tables and explicit p-values for non-significant results	Р	
uilding is appropriate and is based ork or model	Not applicable	NA	Moderate
al model is adequate for the design	The t-test and Fisher exact test were used	Y	
reporting of results (based on the le, or on the method section)	No	Y	
	The outcome of interest is measured he outcome of interest is provided measurement used is adequately independent blind assessment, linkage) ng of outcome measurement is the pants mportant potential confounders are a inders are measured e important confounders measured nportant confounders measured inportant confounders is adequately tring of confounding measurement y participants are used if imputation is used for infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the g the study to specific population infounders are accounted for in the study to specific population	participants of imputation are used for missing No missing data are reported The outcome of interest is measured in a similar way for all participants he outcome of interest is provided Yes measurement used is adequately independent blind assessment, linkage) Outcome measurement came from a single centre hospital records ng of outcome measurement is the pants Not reported, but medical records came from a single institution mortant potential confounders are appropriately accounted for inders are measured Not reported nportant confounders measured Not reported intig of confounding measurement y participants Not applicable are used if imputation is used for induders are accounted for in the g the study to specific population Not reported nofounders are accounted for in the g the study to specific population The authors declared a multivariate analysis for postoperative complication analysis nof data to assess the adequacy of the statistical analysis is appropriate, and all primary outcomes are reported Not applicable nort-significant results Not applicable nort data to assess the adequacy of tw or model Lack of tables and explicit p-values for non-significant results alloing is appropriate and is based prorting of results (<i>baseed on the</i> used Not applicable	participants Y of imputation are used for missing No missing data are reported NA The outcome of interest is measured in a similar way for all participants Y the outcome of interest is provided Yes Y measurement used is adequately independent blind assessment, inkage) Outcome measurement came from a single centre hospital records Y mototome measurement is the pants Not reported, but medical records U mototame measurement is the pants Not reported, but medical records U inders are measured Not reported U netrat confounders measured Not reported U ing of contounders is adequately participants Not reported U reportant confounders is adequately participants Not reported U are used if imputation is used for in the g the study to specific population Not reported U nfounders are accounted for in the g the study to specific population Not reported U not data to assess the adequacy of late primary outcomes are reported P nofdata to assess the adequacy of late primary outcomes are reported or on-significant results P niddata to assees

ASSESSMENT FOR RISK OF BIAS

First author	Year of publication			
Dominguez	2006			
Biases	Issues to consider for judging	Study Methods and Comments	Rating of	Rating of risk
	overall rating of "Risk of bias"	-	reporting	of bias
			Y: yes N: no	HIGH
			P: partial	MODERATE
			U: unknown	LOW
			NA: not applicable	UNKNOWN
1) STUDY PARTICIPATION	The study sample adequately represe	ents the population of interest		SUMMARY
a. Adequate participa	tion in the study by eligible persons	The authors included all octogenarians	Y	
(>80%)		surgically treated in their institution		
 Description of the interest 	source population or population of	Single institution centre	Υ	
c. Description of the baseline study sample		Characteristic of the patients are reported	Y	Low
d. Adequate description of the sampling frame and recruitment.		Retrospective study	Y	
e. Adequate description of the period and place of recruitment		Authors declared that enrolled patients underwent pulmonary resection for primary non-small cell lung cancer between 1985 and 2004	Y	
f. Adequate descriptio	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of attempts to collect information on participants who dropped out		Not applicable	NA	
c. Reasons for loss to follow-up are provided		Not applicable	NA	Low
d. Adequate description of participants lost to follow-up		Not applicable	NA	
who completed the stu	rtant differences between participants idy and who did not	Not applicable	NA	
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY

a. A clear definition or d	lescription of the PF is provided	PF were partially descripted	Р	
reliable (i.e. direct ascertainment; secure record, hospital		PF measurement came from hospital records	Y	
c. Continuous variable points are used	as are reported or appropriate cut	Appropriate cut-offs are used and continuous values are reported	Y	Low
d. The method and se same for all study partic	etting of measurement of PF is the cipants	Not reported, but medical records came from a single institution	U	
e. Adequate proportion data for the PF (> 80%)	of the study sample has complete	Yes, data were available for all the participants	Y	
f. Appropriate methods PF data	of imputation are used for missing	No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition of (including time of death)	the outcome of interest is provided	Outcome of interest were considered the posytoperative complications	Y	
	e measurement used is adequately e. independent blind assessment, d linkage)	Outcome measurement came from hospital records	Y	Low
c. The method and sett same for all study partic	ing of outcome measurement is the ipants	Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY
a. <i>Most</i> important confo	unders are measured	Not reported	U	
b. Clear definitions of th are provided	he important confounders measured	Not reported	U	
c. Measurement of all in valid and reliable	mportant confounders is adequately	Not reported	U	
d. The method and setting of confounding measurement are the same for all study participants		Not applicable	NA	Unknown
e. Appropriate methods are used if imputation is used for missing confounder data		Not applicable	NA	
f. Important potential confounders are accounted for in the study design (by limiting the study to specific population groups, or by matching)		Not reported	U	
g. Important potential confounders are accounted for in the analysis (by stratification, multivariate regression)		Not reported	U	
6) STATISTICAL ANALYSIS AND PRESENTATION	The statistical analysis is appropriate	, and all primary outcomes are reported		SUMMARY

a. Sufficient presentation of data to assess the adequacy of the analytic strategy	Yes	Y	
b. Strategy for model building is appropriate and is based on a conceptual framework or model	Not applicable	NA	Low
c. The selected statistical model is adequate for the design of the study	Logistic regression analysis was used	Y	
d. There is no selective reporting of results (based on the study protocol, if available, or on the method section)	No	Y	

ASSESSMENT F	OR RISK OF BIAS			
First author	Year of publication			
Fanucchi	2011			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN
1) STUDY PARTICIPATION	The study sample adequately represe	ents the population of interest		SUMMARY
a. Adequate participa (>80%)	tion in the study by eligible persons	The authors included all octogenarians surgically treated in their institution	Y	
b. Description of the interest	source population or population of	Single institution centre	Y	
c. Description of the ba	aseline study sample	Characteristic of the patients are reported	Y	Low
d. Adequate descrip recruitment.	ption of the sampling frame and	Retrospective study	Y	
e. Adequate descrip recruitment	tion of the period and place of	Authors declared that enrolled patients underwent pulmonary resection for primary non-small cell lung cancer between 2001 and 2009	Y	
f. Adequate description	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	Low

ttempts to collect information on bed out	Not applicable	NA	
follow-up are provided	Not applicable	NA	
n of participants lost to follow-up	Not applicable	NA	
tant differences between participants dy and who did not	Not applicable	NA	
The PF is measured in a similar way	for all participants		SUMMARY
description of the PF is provided	PF were partially descripted	Р	
easurement is adequately valid and certainment; secure record, hospital	PF measurement came from hospital records	Y	
les are reported or appropriate cut	Appropriate cut-offs are used and continuous values are reported	Y	Low
etting of measurement of PF is the icipants	Not reported, but medical records came from a single institution	U	
n of the study sample has complete	Yes, data were available for all the participants	Y	
s of imputation are used for missing	No missing data are reported	NA	
The outcome of interest is measured	in a similar way for all participants		SUMMARY
f the outcome of interest is provided	Yes	Y	
e measurement used is adequately .e. independent blind assessment, rd linkage)	Outcome measurement came from hospital records	Y	Low
tting of outcome measurement is the icipants	Not reported, but medical records came from a single institution	U	
Important potential confounders are a	appropriately accounted for		SUMMARY
ounders are measured	Not reported	U	
the important confounders measured	Not reported	U	Unknown
	ed out follow-up are provided n of participants lost to follow-up tant differences between participants dy and who did not The PF is measured in a similar way description of the PF is provided assurement is adequately valid and certainment; secure record, hospital es are reported or appropriate cut etting of measurement of PF is the icipants n of the study sample has complete (j) s of imputation are used for missing The outcome of interest is measured f the outcome of interest is provided n) e measurement used is adequately .e. independent blind assessment, rd linkage) tting of outcome measurement is the icipants	ed out Not applicable follow-up are provided Not applicable n of participants lost to follow-up Not applicable tant differences between participants Not applicable tant differences between participants Not applicable The PF is measured in a similar way for all participants PF were partially descripted description of the PF is provided PF measurement came from hospital records easurement is adequately valid and certainment; secure record, hospital records PF measurement caue from hospital records es are reported or appropriate cut Appropriate cut-offs are used and continuous values are reported etting of measurement of PF is the participants Not reported, but medical records came from a single institution n of the study sample has complete Yes, data were available for all the participants s of imputation are used for missing No missing data are reported The outcome of interest is provided not interest is adequately accounted for months hospital records came from hospital records in a similar way for all participants f the outcome of interest is provided not interest is provided not interest is provided in a similar way for all participants Yes e measurement used is adequately noutcome measurement came	ed out NA ed out Not applicable NA follow-up are provided Not applicable NA n of participants lost to follow-up Not applicable NA tant differences between participants Not applicable NA The PF is measured in a similar way for all participants NA description of the PF is provided PF were partially descripted P assurement is adequately valid and certainment; secure record, hospital records PF measurement came from hospital records Y es are reported or appropriate cut Appropriate cut-offs are used and continuous values are reported Y etting of measurement of PF is the icipants Not reported, but medical records U n of the study sample has complete Yes, data were available for all the participants Y s of imputation are used for missing No missing data are reported NA The outcome of interest is measured in a similar way for all participants Y t the outcome of interest is provided yes Yes Y e measurement used is adequately ecounds Outcome measurement came from hospital records Y e measurement used is adequately ecounds Cutcome measurement came

d. The method and setting of confounding measurement are the same for all study participants		Not applicable	NA	
e. Appropriate method missing confounder da	Is are used if imputation is used for ta	Not applicable	NA	
	confounders are accounted for in the ing the study to specific population)	Not reported	U	
° · · ·	confounders are accounted for in the on, multivariate regression)	Cox proportional regression model for multivariate analysis	Y	
6) STATISTICAL ANALYSIS AND PRESENTATION	The statistical analysis is appropriate	, and all primary outcomes are reported		SUMMARY
a. Sufficient presentation the analytic strategy	on of data to assess the adequacy of	Yes	Υ	
b. Strategy for model building is appropriate and is based on a conceptual framework or model		Not applicable	NA	Low
c. The selected statistical model is adequate for the design of the study		Student t-test and chi2 test were used	Y	
	re reporting of results (based on the ble, or on the method section)	No	Y	

ASSESSMENT FOR RISK OF BIAS				
First author	Year of publication			
Ito	2015			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN
1) STUDY PARTICIPATION	The study sample adequately represe	ents the population of interest		SUMMARY
a. Adequate participat (>80%)	tion in the study by eligible persons	The authors included all octogenarians surgically treated in their institution	Y	Low
b. Description of the interest	source population or population of	Single institution centre	Y	
c. Description of the ba	aseline study sample	Characteristic of the patients are reported, only stage I patients were included	Y	

d. Adequate descrip recruitment.	tion of the sampling frame and	Retrospective study	Y	
e. Adequate descript recruitment	tion of the period and place of	Authors declared that enrolled patients underwent pulmonary resection for stage I lung cancer between 2001 and 2008	Y	
f. Adequate description	of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of at participants who dropp	tempts to collect information on ed out	Not applicable	NA	
c. Reasons for loss to f	ollow-up are provided	Not applicable	NA	Low
d. Adequate description	n of participants lost to follow-up	Not applicable	NA	
e. There are no import who completed the stud	tant differences between participants dy and who did not	Not applicable	NA	
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
a. A clear definition or o	description of the PF is provided	PF were well descripted	Y	
	asurement is adequately valid and certainment; secure record, hospital	PF measurement came from hospital records	Y	Low
c. Continuous variable points are used	es are reported or appropriate cut	Appropriate cut-offs are used and continuous values are reported	Y	
d. The method and so same for all study parti	etting of measurement of PF is the cipants	Not reported, but medical records came from a single institution	U	
e. Adequate proportion of the study sample has complete data for the PF (> 80%)		Yes, data were available for all the participants	Y	
f. Appropriate methods PF data	s of imputation are used for missing	No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition of (including time of death	the outcome of interest is provided	Yes	Y	
	e measurement used is adequately e. independent blind assessment, rd linkage)	Outcome measurement came from hospital records	Y	Low

c. The method and setting of outcome measurement is the same for all study participants	Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING	appropriately accounted for		SUMMARY
a. Most important confounders are measured	Not reported	U	
b. Clear definitions of the important confounders measured are provided	Not reported	U	
c. Measurement of all important confounders is adequately valid and reliable	Not reported	U	
d. The method and setting of confounding measurement are the same for all study participants	Not applicable	NA	Unknown
e. Appropriate methods are used if imputation is used for missing confounder data	Not applicable	NA	
f. Important potential confounders are accounted for in the study design (by limiting the study to specific population groups, or by matching)	Not reported	U	
g. Important potential confounders are accounted for in the analysis (by stratification, multivariate regression)	Not reported	U	
6) STATISTICAL ANALYSIS AND PRESENTATION			SUMMARY
a. Sufficient presentation of data to assess the adequacy of the analytic strategy	Yes	Y	
b. Strategy for model building is appropriate and is based on a conceptual framework or model	Not applicable	NA	Low
c. The selected statistical model is adequate for the design of the study	Student t-test and chi2 test were used	Y	
d. There is no selective reporting of results (based on the study protocol, if available, or on the method section)	No	Υ	

ASSESSMENT	FOR RISK OF BIAS			
First author Naunheim	Year of publication 1994			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias
			Y: yes	HIGH
			N: no	MODERATE
			P: partial	LOW
			U: unknown	UNKNOWN

			NA: not applicable	
1) STUDY PARTICIPATION	The study sample adequately represe	ents the population of interest		SUMMARY
a. Adequate participat (>80%)	ion in the study by eligible persons	The authors included all octogenarians surgically treated in the institutions	Y	
b. Description of the interest	source population or population of	Double institution centre study	Y	
c. Description of the ba	aseline study sample	Characteristic of the patients are reported, only stage I patients were included	Y	Low
d. Adequate descrip recruitment.	tion of the sampling frame and	Retrospective study	Y	
e. Adequate descrip recruitment	tion of the period and place of	Authors declared that enrolled patients underwent pulmonary resection between 1980 and 1991	Y	
f. Adequate descriptior	o of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of a participants who dropp	ttempts to collect information on ed out	Not applicable	NA	•
c. Reasons for loss to t	follow-up are provided	Not applicable	NA	Low
d. Adequate descriptio	n of participants lost to follow-up	Not applicable	NA	
e. There are no impor who completed the stu	tant differences between participants dy and who did not	Not applicable	NA	
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
a. A clear definition or	description of the PF is provided	PF partially well descripted	Р	
	asurement is adequately valid and certainment; secure record, hospital	PF measurement came from hospital records	Y	Low
c. Continuous variabl points are used	es are reported or appropriate cut	Appropriate cut-offs are used and continuous values are reported	Y	
d. The method and s same for all study parti	etting of measurement of PF is the	Not reported, but medical records came from a single institution	U	

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e. Adequate proportion data for the PF (> 80%	n of the study sample has complete)	Yes, data were available for all the participants	Y	
f. Appropriate methods PF data	s of imputation are used for missing	No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition of (including time of death	the outcome of interest is provided	Yes	Y	
	e measurement used is adequately e. independent blind assessment, rd linkage)	Outcome measurement came from hospital records	Y	Low
c. The method and set same for all study parti	ting of outcome measurement is the cipants	Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY
a. <i>Most</i> important confo	ounders are measured	Not reported	U	
b. Clear definitions of the important confounders measured are provided		Not reported	U	
c. Measurement of all important confounders is adequately valid and reliable		Not reported	U	
d. The method and s are the same for all stu	etting of confounding measurement dy participants	Not applicable	NA	Unknown
e. Appropriate method missing confounder da	s are used if imputation is used for ta	Not applicable	NA	
f. Important potential confounders are accounted for in the study design (by limiting the study to specific population groups, or by matching)		Not reported	U	
	confounders are accounted for in the on, multivariate regression)	Not reported	U	
6) STATISTICAL ANALYSIS AND PRESENTATION	The statistical analysis is appropriate	, and all primary outcomes are reported		SUMMARY
a. Sufficient presentation the analytic strategy	on of data to assess the adequacy of	Partial, lack of table and specified p- value for non-significant factors	Р	
b. Strategy for model building is appropriate and is based on a conceptual framework or model		Not applicable	NA	Low
c. The selected statistical model is adequate for the design of the study		Student t-test and chi2 test were used	Y	
	e reporting of results (based on the ble, or on the method section)	No	Y	

ASSESSMENT FOR RISK OF BIAS

First author	Year of publication			
Okami	2009			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN
1) STUDY PARTICIPATION	The study sample adequately repres	ents the population of interest		SUMMARY
a. Adequate participa (>80%)	tion in the study by eligible persons	Not reported	U	
 Description of the interest 	source population or population of	National Japanese registry	Y	•
c. Description of the b	aseline study sample	Characteristic of the patients are reported	Y	Low
d. Adequate description of the sampling frame and recruitment.		National registry from 387 Japanese hospitals	Y	
e. Adequate descrip recruitment	tion of the period and place of	patients with primary stage I lung cancer surgically treated in 1999	Y	
f. Adequate descriptio	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of a participants who dropp	ttempts to collect information on bed out	Not applicable	NA	
c. Reasons for loss to	follow-up are provided	Not applicable	NA	Low
d. Adequate description of participants lost to follow-up		Not applicable	NA	
e. There are no important differences between participants who completed the study and who did not		Not applicable	NA	
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
	description of the PF is provided	PF partially well descripted	Р	

h Method of PE ma	asurement is adequately valid and			
	certainment; secure record, hospital	PF measurement came from hospital records	Y	
		Appropriate cut-offs are used and continuous values are reported	Y	
d. The method and se same for all study parti	etting of measurement of PF is the cipants	Not reported, but medical records came from a single institution	U	
e. Adequate proportion data for the PF (> 80%	n of the study sample has complete)	Yes, data were available for all the participants	Y	
f. Appropriate methods PF data	s of imputation are used for missing	No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition of (including time of death	the outcome of interest is provided	Yes	Y	
	e measurement used is adequately e. independent blind assessment, rd linkage)	Outcome measurement came from hospital records	Y	Low
c. The method and setting of outcome measurement is the same for all study participants		Not reported	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY
a. Most important confo	ounders are measured	Not reported	U	
b. Clear definitions of t are provided	he important confounders measured	Not reported	U	
c. Measurement of all valid and reliable	important confounders is adequately	Not reported	U	
d. The method and s are the same for all stu	etting of confounding measurement dy participants	Not applicable	NA	Unknown
e. Appropriate methods are used if imputation is used for missing confounder data		Not applicable	NA	
f. Important potential confounders are accounted for in the study design (by limiting the study to specific population groups, or by matching)		Not reported	U	
g. Important potential confounders are accounted for in the analysis (by stratification, multivariate regression)		Cox Proportional Hazard Model was performed	Y	
6) STATISTICAL ANALYSIS AND PRESENTATION	The statistical analysis is appropriate	, and all primary outcomes are reported		SUMMARY
a. Sufficient presentation the analytic strategy	on of data to assess the adequacy of	Yes	Y	Low

b. Strategy for model building is appropriate and is based on a conceptual framework or model	Not applicable	NA	
c. The selected statistical model is adequate for the design of the study	Student t-test and chi2 test were used for univariate. Logistic regression model for multivariate	Υ	
d. There is no selective reporting of results (based on the study protocol, if available, or on the method section)	No	Y	

OR RISK OF BIAS			
Year of publication			
2004			
Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of ris of bias
		Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN
The study sample adequately represe	ents the population of interest		SUMMARY
tion in the study by eligible persons	The authors included all octogenarians surgically treated in their institution	Y	
source population or population of	Single institution centre	Y	
aseline study sample	Characteristic of the patients are reported	Y	Low
tion of the sampling frame and	Retrospective study	Y	
tion of the period and place of	Authors declared that enrolled patients underwent curative resection for non- small cell lung cancer from 1990 to January 2003	Y	
n of inclusion and exclusion criteria	Declared	Y	
The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	1
ttempts to collect information on bed out	Not applicable	NA	Low
	2004 Issues to consider for judging overall rating of "Risk of bias" The study sample adequately repres tion in the study by eligible persons source population or population of aseline study sample otion of the sampling frame and otion of the period and place of n of inclusion and exclusion criteria The study data available (i.e. partic represent the study sample rate for study participants (> 80%) ttempts to collect information on	Year of publication 2004 Issues to consider for judging overall rating of "Risk of bias" Study Methods and Comments The study sample adequately represents the population of interest Interest The study sample adequately represents the population of interest The authors included all octogenarians surgically treated in their institution source population or population of single institution centre Single institution centre aseline study sample Characteristic of the patients are reported ation of the sampling frame and thiors declared that enrolled patients underwent curative resection for non-small cell lung cancer from 1990 to January 2003 Authors declared that enrolled patients ation of the period and place of the study data available (i.e. participants not lost to follow-up) adequately represent the study sample Declared The study data available (i.e. participants not lost to follow-up) adequately represent the study sample Operative data were available for all patients enrolled trate for study participants (> 80%) Operative data were available for all patients enrolled ttempts to collect information on Not applicable	Year of publication 2004 Issues to consider for judging overall rating of "Risk of bias" Study Methods and Comments Rating of reporting Y: yes N: no P: partial U: unknown NA: not applicable The study sample adequately represents the population of interest V tion in the study by eligible persons The authors included all octogenarians surgically treated in their institution Y source population or population of source population or population of the sampling frame and reported Retrospective study Y Authors declared that enrolled patients underwent curative resection for non- small cell lung cancer from 1990 to January 2003 Y Authors declared Y Y The study data available (i.e. participants not lost to follow-up) adequately represent the study sample Operative data were available for all patients enrolled Y

c. Reasons for loss to f	ollow-up are provided	Not applicable	NA	
d. Adequate description of participants lost to follow-up		Not applicable	NA	
e. There are no import who completed the stud	ant differences between participants dy and who did not	Not applicable	NA	
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
a. A clear definition or o	description of the PF is provided	PF were partially descripted	Р	
	asurement is adequately valid and certainment; secure record, hospital	PF measurement came from hospital records	Y	
c. Continuous variable points are used	es are reported or appropriate cut	Appropriate cut-offs are used and continuous values are reported	Y	Low
d. The method and so same for all study partic	etting of measurement of PF is the cipants	Not reported, but medical records came from a single institution	U	
e. Adequate proportion data for the PF (> 80%	n of the study sample has complete	Yes, data were available for all the participants	Y	
f. Appropriate methods of imputation are used for missing PF data		No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition of (including time of death	the outcome of interest is provided	Yes	Y	
	e measurement used is adequately e. independent blind assessment, d linkage)	Outcome measurement came from hospital records	Y	Low
c. The method and set same for all study partie	ting of outcome measurement is the cipants	Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING Important potential confounders are appropriately accounted for		appropriately accounted for		SUMMARY
a. <i>Most</i> important confounders are measured Not reported		Not reported	U	
b. Clear definitions of the important confounders measured are provided		Not reported	U	Unknown
c. Measurement of all important confounders is adequately valid and reliable		Not reported	U	GIRIOWI
d. The method and s are the same for all stu	etting of confounding measurement dy participants	Not applicable	NA	

e. Appropriate methods are used if imputation is used for missing confounder data		Not applicable	NA	
	confounders are accounted for in the ing the study to specific population	Not reported	U	
	confounders are accounted for in the on, multivariate regression)	Not reported	U	
6) STATISTICAL ANALYSIS AND PRESENTATION	The statistical analysis is appropriate	, and all primary outcomes are reported		SUMMARY
a. Sufficient presentati the analytic strategy	on of data to assess the adequacy of	Partially, not reported specified values for non-significant predictors	Р	
b. Strategy for model building is appropriate and is based on a conceptual framework or model		Not applicable	NA	Moderate
c. The selected statistical model is adequate for the design of the study		Student t-test and chi2 test were used	Y	
	re reporting of results (based on the ble, or on the method section)	No	Y	

ASSESSMENT F	OR RISK OF BIAS			
First author	Year of publication			
Saha	2013			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN
1) STUDY PARTICIPATION	The study sample adequately represe	ents the population of interest		SUMMARY
a. Adequate participa (>80%)	tion in the study by eligible persons	Not reported	U	
b. Description of the interest	source population or population of	National registry	Y	Low
c. Description of the ba	aseline study sample	Characteristic of the patients are reported	Y	
d. Adequate descrip recruitment.	tion of the sampling frame and	Retrospective study	Y	

e. Adequate descrip recruitment	tion of the period and place of	Authors declared that enrolled patients underwent pulmonary lobectomy from 2005 to 2010	Y	
f. Adequate descriptior	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y	
b. Description of a participants who dropp	ttempts to collect information on ed out	Not applicable	NA	
c. Reasons for loss to	follow-up are provided	Not applicable	NA	Low
d. Adequate descriptio	n of participants lost to follow-up	Not applicable	NA	
e. There are no impor who completed the stu	tant differences between participants dy and who did not	Not applicable	NA	
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
a. A clear definition or	description of the PF is provided	Prognostic Factors were descripted	Y	
b. Method of PF measurement is adequately valid and reliable (i.e. direct ascertainment; secure record, hospital record)		PF measurement came from registry records	Y	
 c. Continuous variabl points are used 	es are reported or appropriate cut	Appropriate cut-offs are used and continuous values are reported	Y	Low
d. The method and s same for all study part	etting of measurement of PF is the icipants	Not reported	U	
e. Adequate proportio data for the PF (> 80%	n of the study sample has complete	Yes	Y	
f. Appropriate method PF data	s of imputation are used for missing	No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY
a. A clear definition o (including time of deat	f the outcome of interest is provided n)	Yes	Y	
b. Method of outcome measurement used is adequately valid and reliable (i.e. independent blind assessment, hospital record or record linkage)		Outcome measurement came from hospital records	Y	Low
c. The method and se same for all study part	tting of outcome measurement is the icipants	Not reported	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY

a. <i>Most</i> important confounders are measured	Not reported	U	
b. Clear definitions of the important confounders meas are provided	Not reported	U	
c. Measurement of all important confounders is adequ valid and reliable	ately Not reported	U	
d. The method and setting of confounding measured are the same for all study participants	nent Not applicable	NA	Unknown
e. Appropriate methods are used if imputation is use missing confounder data	d for Not applicable	NA	
f. Important potential confounders are accounted for in study design (by limiting the study to specific popul- groups, or by matching)		U	
g. Important potential confounders are accounted for in analysis (by stratification, multivariate regression)	h the Logistic regression	Y	
6) STATISTICAL ANALYSIS AND PRESENTATION	priate, and all primary outcomes are reported		SUMMARY
a. Sufficient presentation of data to assess the adequative analytic strategy	cy of Partially, not reported specified values for non-significant predictors	Р	
b. Strategy for model building is appropriate and is b on a conceptual framework or model	Ased Not applicable	NA	Moderate
c. The selected statistical model is adequate for the de of the study	Student t-test and chi2 test were used	Y	1
d. There is no selective reporting of results (based or study protocol, if available, or on the method section)	n the No	Y	

ASSESSMEN	T FOR RISK OF BIAS			
First author Saji	Year of publication 2018			
Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN
1) STUDY PARTICIPATIO	N The study sample adequately represe	ents the population of interest		SUMMARY

a. Adequate participat (>80%)	tion in the study by eligible persons	Yes	Y	
b. Description of the interest	source population or population of	Yes	Y	
c. Description of the baseline study sample		Characteristic of the patients are reported	Y	Low
d. Adequate descrip recruitment.	tion of the sampling frame and	yes	Y	
e. Adequate descrip recruitment	tion of the period and place of	From april 2015 and December 2016	Y	
f. Adequate description	n of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY
a. Adequate response	rate for study participants (> 80%)	Yes	Y	
b. Description of a participants who dropp	ttempts to collect information on ed out	Not applicable	NA	
c. Reasons for loss to follow-up are provided		Not applicable	NA	Low
d. Adequate description of participants lost to follow-up		Not applicable	NA	
e. There are no impor who completed the stu	tant differences between participants dy and who did not	Not applicable	NA	•
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY
a. A clear definition or	description of the PF is provided	PF were partially descripted	Ρ	
	asurement is adequately valid and certainment; secure record, hospital	PF measurement came from hospital records	Y	
c. Continuous variables are reported or appropriate cut points are used		Appropriate cut-offs are used and continuous values are reported	Y	Low
d. The method and setting of measurement of PF is the same for all study participants		Not reported, but medical records came from a single institution	U	
e. Adequate proportion of the study sample has complete data for the PF (> 80%)		Yes, data were available for all the participants	Y	
f. Appropriate methods of imputation are used for missing PF data		No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured	in a similar way for all participants		SUMMARY

a. A clear definition of the outcome of interest is provided (including time of death)		Yes	Y	
b. Method of outcome measurement used is adequately valid and reliable (i.e. independent blind assessment, hospital record or record linkage)		Outcome measurement came from hospital records	Y	Low
c. The method and se same for all study part	tting of outcome measurement is the icipants	Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY
a. Most important conf	ounders are measured	Not reported	U	
b. Clear definitions of are provided	the important confounders measured	Not reported	U	
c. Measurement of all valid and reliable	important confounders is adequately	Not reported	U	
d. The method and setting of confounding measurement are the same for all study participants		Not applicable	NA	Unknown
e. Appropriate methods are used if imputation is used for missing confounder data		Not applicable	NA	
f. Important potential confounders are accounted for in the study design (by limiting the study to specific population groups, or by matching)		Not reported	U	
	confounders are accounted for in the on, multivariate regression)	Not reported	U	
6) STATISTICAL ANALYSIS AND PRESENTATION		, and all primary outcomes are reported		SUMMARY
a. Sufficient presentati the analytic strategy	on of data to assess the adequacy of	Partially, not reported specified values for non-significant predictors	Р	
b. Strategy for model building is appropriate and is based on a conceptual framework or model		Not applicable	NA	Moderate
c. The selected statistical model is adequate for the design of the study		Student t-test and chi2 test were used	Y	
	ve reporting of results (based on the able, or on the method section)	No	Y	
-				

ASSESSMENT FOR RISK OF BIAS				
First author	Year of publication			
Voltolini	2009			

Biases	Issues to consider for judging overall rating of "Risk of bias"	Study Methods and Comments	Rating of reporting	Rating of risk of bias	
			Y: yes N: no P: partial U: unknown NA: not applicable	HIGH MODERATE LOW UNKNOWN	
1) STUDY PARTICIPATION	The study sample adequately represe	ents the population of interest		SUMMARY	
a. Adequate participat (>80%)	ion in the study by eligible persons	The authors included all octogenarians surgically treated in their institution	Y		
b. Description of the source population or population of interest		Single institution centre	Y		
c. Description of the baseline study sample		Characteristic of the patients are reported	Y	Low	
d. Adequate description of the sampling frame and recruitment.		Retrospective study	Υ		
e. Adequate description of the period and place of recruitment		Authors declared that enrolled patients underwent curative resection for non- small cell lung cancer from 1990 to January 2005	Y		
f. Adequate description of inclusion and exclusion criteria		Declared	Y		
2) STUDY ATTRITION	The study data available (i.e. partic represent the study sample	ipants not lost to follow-up) adequately		SUMMARY	
a. Adequate response	rate for study participants (> 80%)	Operative data were available for all patients enrolled	Y		
b. Description of attempts to collect information on participants who dropped out		Not applicable	NA		
c. Reasons for loss to follow-up are provided		Not applicable	NA	Low	
d. Adequate description of participants lost to follow-up		Not applicable	NA		
e. There are no important differences between participants who completed the study and who did not		Not applicable	NA		
3) PROGNOSTIC FACTORS MEASUREMENT	The PF is measured in a similar way	for all participants		SUMMARY	
a. A clear definition or description of the PF is provided		PF were well descripted	Y		
b. Method of PF measurement is adequately valid and reliable (i.e. direct ascertainment; secure record, hospital record)		PF measurement came from hospital records	Y	Low	
c. Continuous variables are reported or appropriate cut points are used		Appropriate cut-offs are used and continuous values are reported	Υ		

d. The method and so same for all study partic	etting of measurement of PF is the cipants	Not reported, but medical records came from a single institution	U	
e. Adequate proportion of the study sample has complete data for the PF (> 80%)		Yes, data were available for all the participants	Y	
f. Appropriate methods of imputation are used for missing PF data		No missing data are reported	NA	
4) OUTCOME MEASUREMENT	The outcome of interest is measured in a similar way for all participants			SUMMARY
a. A clear definition of the outcome of interest is provided (including time of death)		Yes	Y	
b. Method of outcome measurement used is adequately valid and reliable (i.e. independent blind assessment, hospital record or record linkage)		Outcome measurement came from hospital records	Y	Low
c. The method and setting of outcome measurement is the same for all study participants		Not reported, but medical records came from a single institution	U	
5) STUDY CONFOUNDING	Important potential confounders are a	appropriately accounted for		SUMMARY
a. Most important confo	ounders are measured	Not reported	U	
b. Clear definitions of the important confounders measured are provided		Not reported	U	Unknown
c. Measurement of all important confounders is adequately valid and reliable		Not reported	U	
d. The method and setting of confounding measurement are the same for all study participants		Not applicable	NA	
e. Appropriate methods are used if imputation is used for missing confounder data		Not applicable	NA	
f. Important potential confounders are accounted for in the study design (by limiting the study to specific population groups, or by matching)		Not reported	U	
g. Important potential confounders are accounted for in the analysis (by stratification, multivariate regression)		Not reported	U	
6) STATISTICAL ANALYSIS AND PRESENTATION	The statistical analysis is appropriate	, and all primary outcomes are reported		SUMMARY
a. Sufficient presentation of data to assess the adequacy of the analytic strategy		Yes	Y	
b. Strategy for model building is appropriate and is based on a conceptual framework or model		Not applicable	NA	Y
c. The selected statistical model is adequate for the design of the study		Binary logistic regression	Y	-
d. There is no selective reporting of results (based on the study protocol, if available, or on the method section)		No	Y	

Number of dom	OVERALL RISK OF BIAS		
Low	Moderate/Unknown	High	
6	0	0	LOW RISK
4 or 5	1 or 2	0	
3	3	0	MODERATE RISK
	1	1	
	4 or more	2 or more	HIGH RISK

Table B. Assessment of the overall risk of bias for each single study