Table A. Risk of Bias assessment tool (QUIPS)

ASSESSMENT FOR 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 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 baseline study sample		Characteristic of the patients are partially reported	P	
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 1981 and 1998	Y	
f. Adequate description of inclusion and exclusion criteria		Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample			SUMMARY
a. Adequate response rate for study participants *(> 80%)*		*Operative data were available for all patients enrolled*	Y	Low
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	
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 partially descripted	P	Low
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	
c. Continuous variables are reported or appropriate cut points are used	Continuous data are reported	Y	
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)	Outcome of interest were considered the posytoperative complications	Y	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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	Lack of explicit p-value for non-significant factors	P	Moderate
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	The chi squared test and unpaired t 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, even if statistical analysis is restricted to pulmonary complications	P	

ASSESSMENT FOR RISK OF BIAS				
First author Berry	Year of publication 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 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 baseline study sample		Characteristic of the patients are well reported	Y	
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 thoracic surgery between 2000 and 2009	Y	
f. Adequate description of inclusion and exclusion criteria		Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample			SUMMARY

a. Adequate response rate for study participants *(> 80%)*	*Operative data were available for all patients enrolled*	Y	Low
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	
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 partially descripted	P	Low
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	
c. Continuous variables are reported or appropriate cut points are used	Continuous data are reported	Y	
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)	Outcome of interest were considered the postoperative complications	Y	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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	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	The chi squared test, Fisher exact test and unpaired t 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	Y	

ASSESSMENT FOR RISK OF BIAS				
First author Brock	Year of publication 2004			
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 baseline study sample		Characteristic of the patients are well reported	Y	

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 octogenarians underwent thoracic surgery between 1980 and 2002	Y	
f. Adequate description of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample		SUMMARY
a. Adequate response rate for study participants *(> 80%)*	*Operative data were available for all patients enrolled*	Y	Low
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	
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 accurately descripted	Y	Low
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	
c. Continuous variables are reported or appropriate cut points are used	Continuous data are reported	Y	
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	Low
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	

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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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	P	
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	Lack of tables and explicit p-values	P	Moderate
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	The chi squared test, Fisher exact 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	Y	

ASSESSMENT FOR RISK OF BIAS

First author	Year of publication
Dell'Amore	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 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		Three thoracic surgery unit centres	Y	
c. Description of the baseline study sample		Characteristic of the patients are well reported	Y	
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 octogenarians underwent thoracic surgery with curative intent between 2000 and 2010	Y	
f. Adequate description of inclusion and exclusion criteria		Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample			SUMMARY
a. Adequate response rate for study participants *(> 80%)*		*Operative data were available for all patients enrolled*	Y	Low
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	
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 accurately descripted	Y	Low
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	
c. Continuous variables are reported or appropriate cut points are used		Continuous data are reported	Y	
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	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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 multivariate analysis for postoperative complication analysis	P	
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	Lack of tables and explicit p-values for non-significant results	P	Moderate
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	The t-test and Fisher exact 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	Y	

ASSESSMENT FOR RISK OF BIAS				
First author Dominguez	Year of publication 2006			
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 baseline study sample		Characteristic of the patients are reported	Y	
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 description of inclusion and exclusion criteria		Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample			SUMMARY
a. Adequate response rate for study participants *(> 80%)*		*Operative data were available for all patients enrolled*	Y	Low
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	
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 partially descripted	P	Low
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	
c. Continuous variables are reported or appropriate cut points are used	Appropriate cut-offs are used and continuous values are reported	Y	
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)	Outcome of interest were considered the posytoperative complications	Y	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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	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	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 FOR RISK OF BIAS				
First author Fanucchi	Year of publication 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 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 baseline study sample		Characteristic of the patients are reported	Y	
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 2001 and 2009	Y	
f. Adequate description of inclusion and exclusion criteria		Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample			SUMMARY
a. Adequate response rate for study participants *(> 80%)*		*Operative data were available for all patients enrolled*	Y	Low

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	
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 partially descripted	P	Low
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	
c. Continuous variables are reported or appropriate cut points are used	Appropriate cut-offs are used and continuous values are reported	Y	
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	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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 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 of data to assess the adequacy of the analytic strategy	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	Y	
d. There is no selective reporting of results (*based on the study protocol, if available, 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 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 baseline study sample		Characteristic of the patients are reported, only stage I patients were included	Y	

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 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. participants not lost to follow-up) adequately represent the study sample		SUMMARY
a. Adequate response rate for study participants *(> 80%)*	*Operative data were available for all patients enrolled*	Y	Low
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	
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	Low
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	
c. Continuous variables are reported or appropriate cut points are used	Appropriate cut-offs are used and continuous values are reported	Y	
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	Low
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	

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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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	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	Y	
d. There is no selective reporting of results (*based on the study protocol, if available, or on the method section*)	No	Y	

ASSESSMENT FOR RISK OF BIAS

First author	Year of publication
Naunheim	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 N: no P: partial U: unknown	HIGH MODERATE LOW UNKNOWN

			NA: not applicable	
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 the institutions	Y	Low
b. Description of the source population or population of interest		Double institution centre study	Y	
c. Description of the baseline study sample		Characteristic of the patients are reported, only stage I patients were included	Y	
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 between 1980 and 1991	Y	
f. Adequate description of inclusion and exclusion criteria		Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample			SUMMARY
a. Adequate response rate for study participants *(> 80%)*		Operative data were available for all patients enrolled	Y	Low
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	
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 partially well descripted	P	Low
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	
c. Continuous variables are reported or appropriate cut points are used		Appropriate cut-offs are used and continuous values are reported	Y	
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	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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	Partial, lack of table and specified p-value for non-significant factors	P	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	Y	
d. There is no selective reporting of results (*based on the study protocol, if available, or on the method section*)	No	Y	

ASSESSMENT FOR RISK OF BIAS				
First author Okami	Year of publication 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 represents the population of interest			SUMMARY
a. Adequate participation in the study by eligible persons (>80%)		Not reported	U	Low
b. Description of the source population or population of interest		National Japanese registry	Y	
c. Description of the baseline study sample		Characteristic of the patients are reported	Y	
d. Adequate description of the sampling frame and recruitment.		National registry from 387 Japanese hospitals	Y	
e. Adequate description of the period and place of recruitment		patients with primary stage I lung cancer surgically treated in 1999	Y	
f. Adequate description of inclusion and exclusion criteria		Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample			SUMMARY
a. Adequate response rate for study participants *(> 80%)*		Operative data were available for all patients enrolled	Y	Low
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	
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 partially well descripted	P	Low

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	
c. Continuous variables are reported or appropriate cut points are used	Appropriate cut-offs are used and continuous values are reported	Y	
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 setting of outcome measurement is the same for all study participants	Not reported	U	
5) STUDY CONFOUNDING	Important potential confounders are 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)*	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 of data to assess the adequacy of the analytic strategy	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	Y	
d. There is no selective reporting of results (*based on the study protocol, if available, or on the method section*)	No	Y	

ASSESSMENT FOR RISK OF BIAS				
First author Port	Year of publication 2004			
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 baseline study sample		Characteristic of the patients are reported	Y	
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 curative resection for non-small cell lung cancer from 1990 to January 2003	Y	
f. Adequate description of inclusion and exclusion criteria		Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample			SUMMARY
a. Adequate response rate for study participants *(> 80%)*		*Operative data were available for all patients enrolled*	Y	Low
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	
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 partially descripted	P	Low
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	
c. Continuous variables are reported or appropriate cut points are used	Appropriate cut-offs are used and continuous values are reported	Y	
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	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	

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	Partially, not reported specified values for non-significant predictors	P	Moderate
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	Y	
d. There is no selective reporting of results (*based on the study protocol, if available, or on the method section*)	No	Y	

ASSESSMENT FOR 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 represents the population of interest			SUMMARY
a. Adequate participation in the study by eligible persons (>80%)		Not reported	U	Low
b. Description of the source population or population of interest		National registry	Y	
c. Description of the baseline study sample		Characteristic of the patients are reported	Y	
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 lobectomy from 2005 to 2010	Y	
f. Adequate description of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample		SUMMARY
a. Adequate response rate for study participants *(> 80%)*	*Operative data were available for all patients enrolled*	Y	Low
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	
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	Prognostic Factors were descripted	Y	Low
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 variables are reported or appropriate cut points are used	Appropriate cut-offs are used and continuous values are reported	Y	
d. The method and setting of measurement of PF is the same for all study participants	Not reported	U	
e. Adequate proportion of the study sample has complete data for the PF *(> 80%)*	Yes	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	Low
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	
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 appropriately accounted for		SUMMARY

a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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)*	Logistic regression	Y	
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	Partially, not reported specified values for non-significant predictors	P	Moderate
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	Y	
d. There is no selective reporting of results (*based on the study protocol, if available, or on the method section*)	No	Y	

ASSESSMENT FOR RISK OF BIAS

First author	Year of publication
Saji	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 PARTICIPATION	The study sample adequately represents the population of interest			SUMMARY

a. Adequate participation in the study by eligible persons (>80%)	Yes	Y	Low
b. Description of the source population or population of interest	Yes	Y	
c. Description of the baseline study sample	Characteristic of the patients are reported	Y	
d. Adequate description of the sampling frame and recruitment.	yes	Y	
e. Adequate description of the period and place of recruitment	From april 2015 and December 2016	Y	
f. Adequate description of inclusion and exclusion criteria	Declared	Y	
2) STUDY ATTRITION	The study data available (i.e. participants not lost to follow-up) adequately represent the study sample		SUMMARY
a. Adequate response rate for study participants *(> 80%)*	*Yes*	Y	Low
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	
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 partially descripted	P	Low
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	
c. Continuous variables are reported or appropriate cut points are used	Appropriate cut-offs are used and continuous values are reported	Y	
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	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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	Partially, not reported specified values for non-significant predictors	P	Moderate
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	Y	
d. There is no selective reporting of results (*based on the study protocol, if available, or on the method section*)	No	Y	

ASSESSMENT FOR RISK OF BIAS	
First author Voltolini	Year of publication 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 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 baseline study sample		Characteristic of the patients are reported	Y	
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 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. participants not lost to follow-up) adequately represent the study sample			SUMMARY
a. Adequate response rate for study participants *(> 80%)*		*Operative data were available for all patients enrolled*	Y	Low
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	
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	Low
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	
c. Continuous variables are reported or appropriate cut points are used		Appropriate cut-offs are used and continuous values are reported	Y	

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	Low
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	
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 appropriately accounted for		SUMMARY
a. *Most* important confounders are measured	Not reported	U	Unknown
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	
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	Y
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	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	

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

Number of domains out of the total 6 domains in each category			OVERALL RISK OF BIAS
Low	Moderate/Unknown	High	
6 4 or 5	0 1 or 2	0 0	LOW RISK
3	3 1	0 1	MODERATE RISK
	4 or more	2 or more	HIGH RISK