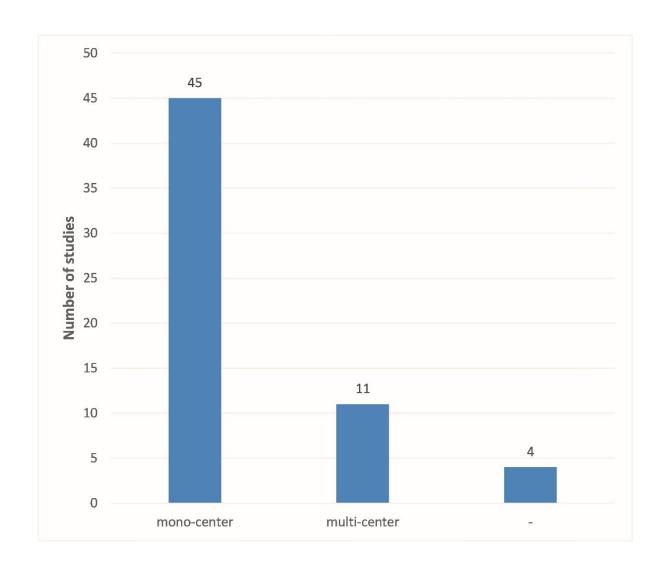
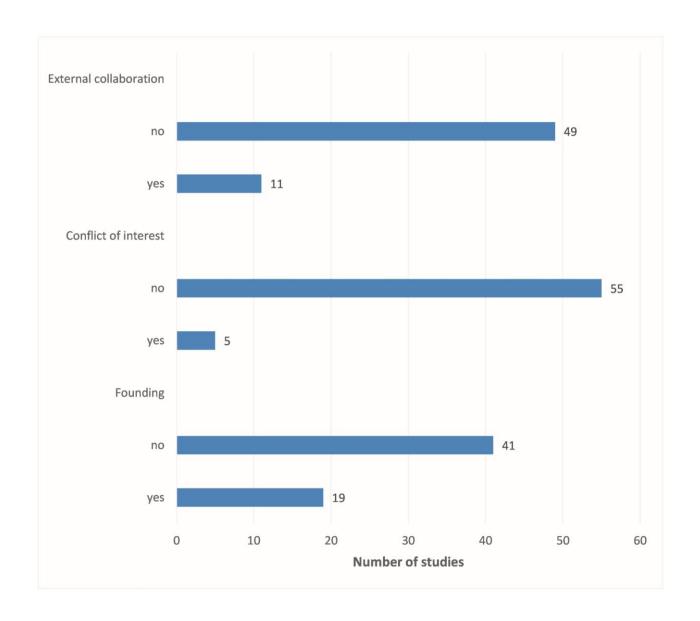


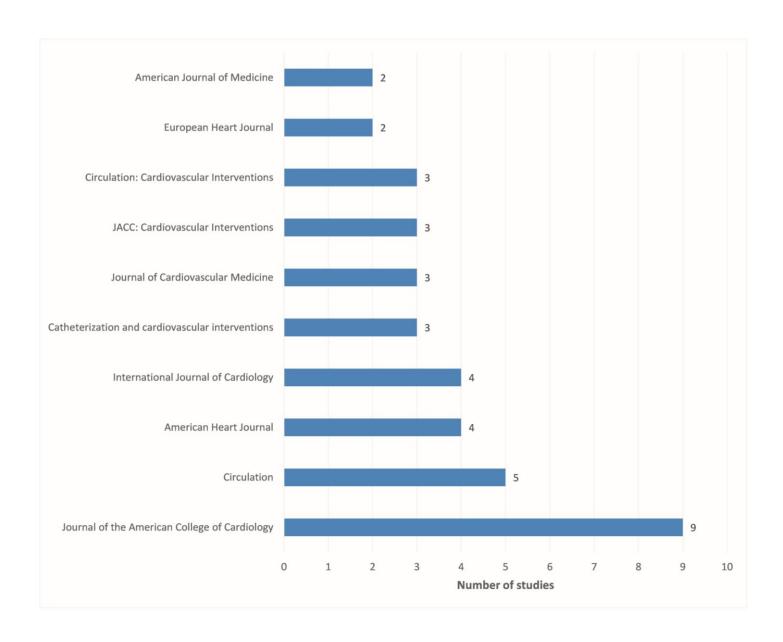
S1 Figure. Top five subject areas of the journals of publication found among the studies included.



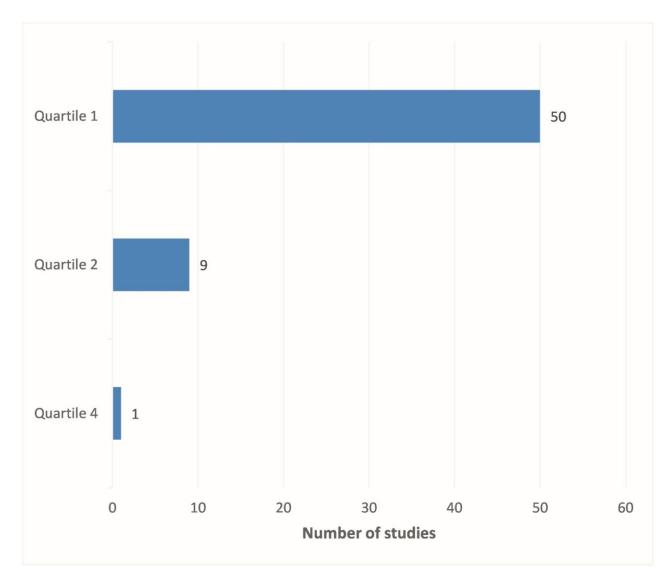
S2 Figure. Distribution by mono-multicenter design of studies included. The symbol "-" was used to denote meta-analysis.



S3 Figure. Distribution by the presence of external collaboration, conflict of interest and funding of studies included.



S4 Figure. Top ten journals found among studies included.



S5 Figure. Distribution by ranking of the subject area of the journal of publication of studies included. The symbol "-" was used for a journal not indexed in SciMago.

S1 Table. The research strategy developed for Ovid MEDLINE and adapted for the other databases.

Search	Query	Items found
Final	(((("1990/01/01"[Date - Publication] : "2017/01/18"[Date -	984
research	Publication])) AND ((italy OR italian))) AND ((((Toxicities, Drug	
block	OR Drug Toxicities OR Toxicity, Drug OR Drug Toxicity OR	
	Reactions, Adverse Drug OR Drug Reactions, Adverse OR Drug	
	Reaction, Adverse OR Adverse Drug Reactions OR Adverse Drug	
	Reaction OR Side Effects, Drug OR Side Effects, Drug OR Effects,	
	Drug Side OR Drug Side Effect OR Drug Side Effects OR Side	
	Effects of Drugs OR Drug Events, Adverse OR Drug Event, Adverse	
	OR Adverse Drug Events OR Drug Related Side Effects and Adverse Reactions OR Adverse Drug Event OR drug safety OR toxicity)) OR	
	(((((((hypersensitivity) OR allergy) OR nephotoxicity) OR allergic)	
	OR atopy) OR "hypersensitivity" [MeSH Major Topic]) OR "renal	
	insufficiency"[MeSH Major Topic])) OR (Electrocardiogram	
	abnormal OR Electrocardiogram ST segment elevation OR Thirst OR	
	Malaise OR Fatigue OR Coldness local OR Injection site reaction**	
	OR Renal failure OR Arthralgia OR Sweating increased OR Cold	
	sweat OR Angioedema OR Salivary gland enlargement OR	
	Dysphagia OR Salivary hypersecretion OR Abdominal pain OR	
	Diarrhoea OR Dysphonia OR Rhinitis OR Laryngeal discomfort OR	
	Pharynx discomfort OR Hyperventilation OR Cough OR Asthma OR	
	Bronchospasm OR Pharyngeal oedema OR Laryngeal oedema OR	
	Pulmonary oedema OR Acute respiratory distress syndrome (ARDS)	
	OR Respiratory arrest OR Pallor OR Flushing OR Hot flush OR	
	Circulatory collapse or shock OR Cyanosis OR Palpitations OR Atrioventricular block OR Ventricular or atrial fibrillation OR	
	Arrhythmia OR Angina pectoris OR Cardiac failure OR Myocardial	
	infarction OR Cardiac arrest OR Photopsia OR Lacrimation	
	increased OR Conjunctivitis OR Visual disturbance OR Blindness	
	transient OR Taste abnormality OR Somnolence OR Amnesia OR	
	Paraesthesia OR Dysarthria OR Loss of consciousness OR	
	Convulsion OR Syncope OR Paralysis OR Transient ischaemic	
	attack OR Coma OR Confusional state OR Anxiety OR	
	Anaphylactoid reaction))) AND ((MS-325 OR Gd-DOTA OR Gd-	
	BT-D03A OR Gd-EOB-DTPA OR Gd-DTPA-BMEA OR Gd-	
	DTPA-BMA OR Gd-BOPTA OR Gd-HP-D03A OR Gd-DTPA	
	Linear Ionic OR iopamidol OR iohexol OR iothalamate OR	
	diatrizoate OR barium sulfate OR ferrous-ferric oxide ferumoxsil OR	
	iohexol OR iohexol OR iohexol OR iodipamide OR diatrizoate OR	
	iopamidol OR ioxilan OR iohexol OR ioversol OR iodixanol OR ioversol OR ioxaglate meglumine OR iopromide OR ioxilan OR	
	ioversol OR ioxagiate megiumine OR iopromide OR ioxiian OR ioversol OR iohexol OR iopamidol OR iothalamate OR iodixanol OR	
	iopamidol OR iopromide OR ioversol OR iohexol OR iothalamate	
	OR iopamidol OR iohexol OR iopromide OR Iohexol OR	
	iothalamate OR contrast media OR iodate OR iodinate OR	
	gadolinium))	
<u> </u>	0	

Block 4	Search ("1990/01/01"[Date - Publication] : "2017/01/18"[Date - Publication])	17922109
Block 3	Search (Italy OR Italian)	896641
Block 2	(((Toxicities, Drug OR Drug Toxicities OR Toxicity, Drug OR Drug Toxicity OR Reactions, Adverse Drug OR Drug Reactions, Adverse OR Drug Reactions, Adverse OR Drug Reaction, Adverse OR Adverse Drug Reaction OR Side Effects, Drug OR Side Effects, Drug OR Effects, Drug Side OR Drug Side Effects, Drug OR Effects, Drug Side OR Drug Side Effects OR Drug Side Effects OR Side Effects of Drugs OR Drug Events, Adverse OR Drug Event, Adverse OR Adverse Drug Events OR Drug Related Side Effects and Adverse Reactions OR Adverse Drug Event OR drug safety OR toxicity)) OR ((((((((((((((((((((((((((((((((((	3098793
Block 1	(MS-325 OR Gd-DOTA OR Gd-BT-D03A OR Gd-EOB-DTPA OR Gd-DTPA-BMEA OR Gd-DTPA-BMA OR Gd-BOPTA OR Gd-HP-D03A OR Gd-DTPA Linear Ionic OR iopamidol OR iohexol OR	143949
	iothalamate OR diatrizoate OR barium sulfate OR ferrous-ferric oxide ferumoxsil OR iohexol OR iohexol OR iohexol OR iohexol OR iodipamide OR diatrizoate OR iopamidol OR ioxilan OR iohexol OR ioversol OR iodixanol OR ioversol OR ioxaglate meglumine OR iopromide OR ioxilan OR ioversol OR iohexol OR iopamidol OR iopamidol OR iothalamate OR iodixanol OR iopamidol OR iopromide OR iothalamate OR iothalamate OR iopamidol OR iohexol OR iopromide OR Iohexol OR iothalamate OR contrast media OR iodate OR iodinate OR gadolinium)	

#### S2 Table. PRISMA checklist.



### PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	3
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	NA
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	4
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	4
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	4 + S1 Table
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	5
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	5
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	5
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	NA
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	5
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency $(e.g., l^2)$ for each meta-analysis.	5



### PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	NA
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	NA
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	5
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	S1 app.
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	NA
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	S1 app.
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	6-23
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	NA
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	NA
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	24
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	24
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	26
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	NA

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

S1 Appendix. Meta-analyses, observational studies, and clinical trials assessing contrast-induced nephropathy as clinical outcome for which were involved Italian researchers among those published in the scientific literature from January 1990 to January 2017.

#### **Valente 2006**<sup>67</sup>

ID:	1
Year of publication:	2006
Italian Region/s	Toscana
involved:	
The title of the	Contrast-induced nephropathy in urgent coronary interventions
manuscript:	
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External	No
collaboration:	
Journal:	Journal of Cardiovascular Medicine
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	134

## **Ranucci 2008**<sup>55</sup>

ID:	2
Year of publication:	2008
Italian Region/s	Lombardia, Campania
involved:	
The title of the	Influence of the timing of cardiac catheterization and the amount of contrast
manuscript:	media on acute renal failure after cardiac surgery
Study design:	Cohort study
Mono-/Multi-center:	Multi-center
The level of evidence:	III-2
Funding:	Yes
Conflict of interest:	No
External	Yes
collaboration:	
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

## **Marenzi 2004**<sup>62</sup>

ID:	3
Year of publication:	2004
Italian Region/s	Lombardia
involved:	
The title of the	Contrast-induced nephropathy in patients undergoing primary angioplasty
manuscript:	for acute myocardial infarction
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External	No
collaboration:	
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

## **Marenzi 2010**<sup>56</sup>

ID:	4
Year of publication:	2010
Italian Region/s	Lombardia
involved:	
The title of the	Acute hyperglycemia and contrast-induced nephropathy in primary
manuscript:	percutaneous coronary intervention
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External	No
collaboration:	
Journal:	American Heart Journal
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	19

## **Marenzi 2009**<sup>53</sup>

ID:	5
Year of publication:	2009
Italian Region/s	Lombardia
involved:	
The title of the	Contrast volume during primary percutaneous coronary intervention and
manuscript:	subsequent contrast-induced nephropathy and mortality
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	Yes
Conflict of interest:	No
External	No
collaboration:	
Journal:	Annals of Internal Medicine
Topic:	Internal Medicine
Ranking:	4

## **Maioli 2012**<sup>68</sup>

ID:	6
Year of publication:	2012
Italian Region/s	Toscana
involved:	
The title of the	Persistent renal damage after contrast-induced acute kidney injury:
manuscript:	incidence, evolution, risk factors, and prognosis
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External	No
collaboration:	
Journal:	Circulation
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	2

#### **Maioli 2010**<sup>76</sup>

ID:	7
Year of publication:	2010
Italian Region/s	Toscana
involved:	
The title of the	Preprocedural score for risk of contrast-induced nephropathy in elective
manuscript:	coronary angiography and intervention
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External	No
collaboration:	
Journal:	Journal of Cardiovascular Medicine
Topic:	Medicine (miscellaneous)
Ranking:	831

### Lucreziotti 2014<sup>59</sup>

ID:	8
Year of publication:	2014
Italian Region/s	Lombardia
involved:	
The title of the	Female gender and contrast-induced nephropathy in primary percutaneous
manuscript:	intervention for ST-segment elevation myocardial infarction
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External	No
collaboration:	
Journal:	International Journal of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	81

# **La Manna 2010**<sup>41</sup>

ID:	9
Year of publication:	2010
Italian Region/s	Emilia Romagna
involved:	
The title of the	Risk for contrast nephropathy in patients undergoing coronarography
manuscript:	
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	Yes
Conflict of interest:	No
External	No
collaboration:	
Journal:	Artificial Organs
Topic:	Medicine (miscellaneous)
Ranking:	132

# **Russo 1995**<sup>65</sup>

ID:	10
Year of publication:	1995
Italian Region/s	Campania
involved:	
The title of the	Early effects of contrast media on renal hemodynamics and tubular
manuscript:	function in chronic renal failure
Study design:	Cohort study
Mono-/Multi-center:	Multi-center
The level of evidence:	III-2
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of Americal Society of Nephrology
Topic:	Medicine (miscellaneous)
Ranking:	34

# **Quintavalle 2012**<sup>22</sup>

ID:	11
Year of publication:	2012
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	Impact of a high loading dose of atorvastatin on contrast-induced
	acute kidney injury
Study design:	Post-hoc Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	II
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	Circulation
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	2

## **Tropeano 2015**<sup>25</sup>

ID:	12
Year of publication:	2015
Italian Region/s involved:	Toscana
The title of the manuscript:	Impact of rosuvastatin in contrast-induced acute kidney injury in the
	elderly: post hoc analysis of the prato-acs trial
Study design:	Post-hoc Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of Cardiovascular Pharmacology and Therapeutics
Topic:	Cardiology and Cardiovascular Medicine Pharmacology (medical)
Ranking:	79

## **Toso 2010**<sup>26</sup>

ID:	13
Year of publication:	2010
Italian Region/s involved:	Toscana
The title of the manuscript:	Usefulness of atorvastatin (80 mg) in prevention of contrast-induced
	nephropathy in patients with chronic renal disease
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	П
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

### **Toso 2014**<sup>24</sup>

ID:	14
Year of publication:	2014
Italian Region/s involved:	Toscana, Lombardia
The title of the manuscript:	Relationship between inflammation and benefits of early high-dose
	rosuvastatin on contrast-induced nephropathy in patients with acute
	coronary syndrome
Study design:	Post-hoc Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	JACC: Cardiovascular Interventions
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	5

## **Marenzi 2015**<sup>29</sup>

ID:	15
Year of publication:	2015
Italian Region/s involved:	Lombardia
The title of the manuscript:	A meta-analysis of randomized controlled trials of statins for the
	prevention of contrast-induced acute kidney injury in patients with
	and without acute coronary syndromes
Study design:	Meta-analysis
Mono-/Multi-center:	-
The level of evidence:	I
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	International Journal of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	81

## **Quintavalle 2015**<sup>72</sup>

ID:	16
Year of publication:	2015
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	Neutrophil gelatinase-associated lipocalin and contrast-induced
	acute kidney injury
Study design:	Post-hoc Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	II
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	Circulation: Cardiovascular Interventions
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	8

## Ribichini 2010<sup>77</sup>

ID:	17
Year of publication:	2010
Italian Region/s involved:	Veneto, Lazio, Piemonte
The title of the manuscript:	Early creatinine shifts predict contrast-induced nephropathy and
	persistent renal damage after angiography
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External collaboration:	Yes
Journal:	American Journal of Medicine
Topic:	Medicine (miscellaneous)
Ranking:	115

# Guagliumi 2014<sup>70</sup>

ID:	18
Year of publication:	2014
Italian Region/s involved:	Lombardia
The title of the manuscript:	Contrast-induced acute kidney injury after primary percutaneous
	coronary intervention: results from the HORIZONS-AMI substudy
Study design:	Post-hoc Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	II
Funding:	Yes
Conflict of interest:	Yes
External collaboration:	Yes
Journal:	European Heart Journal
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	3

### **Preda 2011**<sup>66</sup>

ID:	19
Year of publication:	2011
Italian Region/s involved:	Lombardia
The title of the manuscript:	Effect on renal function of an iso-osmolar contrast agent in patients
	with monoclonal gammopathies
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	European Radiology
Topic:	Radiology, Nuclear Medicine, and Imaging
Ranking:	17

## **Marenzi 2003**<sup>50</sup>

ID:	20
Year of publication:	2003
Italian Region/s involved:	Lombardia
The title of the manuscript:	Continuous veno-venous hemofiltration for the treatment of
	contrast-induced acute renal failure after percutaneous coronary
	interventions
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Catheterization and cardiovascular interventions
Topic:	Cardiology and Cardiovascular Medicine Radiology, Nuclear
	Medicine and Imaging
Ranking:	63

### **Marenzi 2012**<sup>42</sup>

ID:	21
Year of publication:	2012
Italian Region/s involved:	Lombardia
The title of the manuscript:	Prevention of contrast nephropathy by furosemide with matched
	hydration
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	JACC: Cardiovascular Interventions
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	5

### **Maioli 2011**<sup>40</sup>

ID:	22
Year of publication:	2011
Italian Region/s involved:	Toscana
The title of the manuscript:	Effects of hydration in contrast-induced acute kidney injury after
	primary angioplasty
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Circulation: Cardiovascular Interventions
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	8

## **Limbruno 2014**<sup>75</sup>

ID:	23
Year of publication:	2014
Italian Region/s involved:	Abruzzo
The title of the manuscript:	Refining the assessment of contrast-induced acute kidney injury: the
	load-to-damage relationship
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	Yes
External collaboration:	No
Journal:	Journal of Cardiovascular Medicine
Topic:	Medicine (miscellaneous)
Ranking:	831

### **Leoncini 2014**<sup>23</sup>

ID:	24
Year of publication:	2014
Italian Region/s involved:	Toscana, Lombardia
The title of the manuscript:	Early high-dose rosuvastatin for contrast-induced nephropathy
	prevention in acute coronary syndrome: Results from the PRATO-
	ACS Study (Protective Effect of Rosuvastatin and Antiplatelet
	Therapy On contrast-induced acute kidney injury and myocardial
	damage
Study design:	Post-hoc Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	American Heart Journal
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	19

# **La Manna 2008**<sup>44</sup>

ID:	25
Year of publication:	2008
Italian Region/s involved:	Emilia Romagna
The title of the manuscript:	Post-coronarography application of continuous veno-venous
	hemofiltration in the prevention of contrast nephropathy in patients
	with complex multisystem deficiency
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	In Vivo
Topic:	Medicine (miscellaneous)
Ranking:	752

### **Guastoni 2014**<sup>45</sup>

ID:	26
Year of publication:	2014
Italian Region/s involved:	Lombardia
The title of the manuscript:	Continuous venovenous hemofiltration after coronary procedures
	for the prevention of contrast-induced acute kidney injury in patients
	with severe chronic renal failure
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

## **Marenzi 2003**<sup>46</sup>

ID:	27
Year of publication:	2003
Italian Region/s involved:	Lombardia
The title of the manuscript:	The prevention of radiocontrast-agent-induced nephropathy by
	hemofiltration
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	The New England Journal of Medicine
Topic:	Medicine (miscellaneous)
Ranking:	4

# Marraccini 2010<sup>63</sup>

ID:	28
Year of publication:	2010
Italian Region/s involved:	Toscana
The title of the manuscript:	Contrast medium nephrotoxicity after renal artery and coronary
	angioplasty
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Acta Radiologica
Topic:	Radiology, Nuclear Medicine, and Imaging
Ranking:	83

# **Briguori 2011**<sup>49</sup>

ID:	29
Year of publication:	2011
Italian Region/s involved:	Campania, Lombardia, Emilia Romagna
The title of the manuscript:	Renal Insufficiency After Contrast Media Administration Trial II
	(REMEDIAL II): RenalGuard System in high-risk patients for
	contrast-induced acute kidney injury
Study design:	Post-hoc Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Circulation
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	2

# **Briguori 2010**<sup>73</sup>

ID:	30
Year of publication:	2010
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	Cystatin C and contrast-induced acute kidney injury
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Circulation
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	2

#### **Centola 2016**<sup>71</sup>

ID:	31
Year of publication:	2016
Italian Region/s involved:	Lombardia
The title of the manuscript:	A comparison between two different definitions of contrast-induced acute kidney injury in patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	International Journal of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	81

# **Donahue 2015**<sup>60</sup>

ID:	32
Year of publication:	2015
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	Acute kidney injury in patients with chronic kidney disease
	undergoing internal carotid artery stent implantation
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	JACC: Cardiovascular Interventions
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	5

#### **Bianchi 2013**<sup>52</sup>

ID:	33
Year of publication:	2013
Italian Region/s involved:	Lombardia
The title of the manuscript:	Cardiac catheterization and postoperative acute kidney failure in
	congenital heart pediatric patients
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	Anesthesia and Analgesia
Topic:	Anesthesiology and Pain Medicine
Ranking:	11

# **Andò 2014**<sup>54</sup>

ID:	34
Year of publication:	2014
Italian Region/s involved:	Sicilia
The title of the manuscript:	Renal function-adjusted contrast volume redefines the baseline
	estimation of contrast-induced acute kidney injury risk in patients
	undergoing primary percutaneous coronary intervention
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	Circulation: Cardiovascular Interventions
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	8

# **Bolognese 2012**<sup>78</sup>

ID:	35
Year of publication:	2012
Italian Region/s involved:	Toscana
The title of the manuscript:	Impact of iso-osmolar versus low-osmolar contrast agents on
	contrast-induced nephropathy and tissue reperfusion in unselected
	patients with ST-segment elevation myocardial infarction
	undergoing primary percutaneous coronary intervention
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	Yes
External collaboration:	Yes
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

#### **Andò 2015**<sup>51</sup>

ID:	36
Year of publication:	2015
Italian Region/s involved:	Sicilia, Piemonte, Lombardia, Emilia Romagna, Lombardia, Liguria
The title of the manuscript:	Acute kidney injury after percutaneous coronary intervention
Study design:	Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	II
Funding:	Yes
Conflict of interest:	Yes
External collaboration:	Yes
Journal:	Catheterization and cardiovascular interventions
Topic:	Cardiology and Cardiovascular Medicine Radiology, Nuclear
	Medicine and Imaging
Ranking:	63

# **Barbieri 2015**<sup>57</sup>

ID:	37
Year of publication:	2015
Italian Region/s involved:	Piemonte, Campania
The title of the manuscript:	Elevated homocysteine and the risk of contrast-induced nephropathy: a cohort study
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	Yes
Journal:	Angiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	143

# **Budano 2011**<sup>69</sup>

ID:	38
Year of publication:	2011
Italian Region/s involved:	Piemonte, Lombardia
The title of the manuscript:	Impact of contrast-induced acute kidney injury definition on clinical
	outcomes
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	American Heart Journal
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	19

# **Crimi 2015**<sup>64</sup>

ID:	39
Year of publication:	2015
Italian Region/s involved:	Lombardia, Emilia Romagna
The title of the manuscript:	Incidence, prognostic impact, and optimal definition of contrast-
	induced acute kidney injury in consecutive patients with stable or
	unstable coronary artery disease undergoing percutaneous coronary
	intervention insights from the all-comer PRODIGY trial
Study design:	Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	Yes
Journal:	Catheterization and cardiovascular interventions
Topic:	Cardiology and Cardiovascular Medicine Radiology, Nuclear
	Medicine and Imaging
Ranking:	63

#### Alessandri 2013<sup>33</sup>

ID:	40
Year of publication:	2013
Italian Region/s involved:	Lazio
The title of the manuscript:	Prevention of acute renal failure post-contrast imaging in
	cardiology: a randomized study
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	European Review for Medical and Pharmacological Sciences
Topic:	Medicine (miscellaneous)
Ranking:	121

# Briguori 2004<sup>35</sup>

ID:	41
Year of publication:	2004
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	Standard vs double dose of N-acetylcysteine to prevent contrast
	agent-associated nephrotoxicity
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	European Heart Journal
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	3

# Briguori 2005<sup>38</sup>

ID:	42
Year of publication:	2005
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	Nephrotoxicity of low-osmolality versus iso-osmolality contrast
	agents: impact of N-acetylcysteine
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Kidney International
Topic:	Nephrology
Ranking:	17

# **Briguori 2007**<sup>37</sup>

ID:	43
Year of publication:	2007
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	Renal insufficiency following contrast media administration trial
	(REMEDIAL)
Study design:	Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Circulation
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	2

# **Briguori 2002**<sup>31</sup>

ID:	44
Year of publication:	2002
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	Acetylcysteine and contrast agent-associated nephrotoxicity
Study design:	Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

# **Briguori 2015**<sup>43</sup>

ID:	45
Year of publication:	2015
Italian Region/s involved:	Campania
The title of the manuscript:	RenalGuard system in high-risk patients for contrast-induced acute
	kidney injury
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	American Heart Journal
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	19

#### **Calabrò 2011**<sup>30</sup>

ID:	46
Year of publication:	2011
Italian Region/s involved:	Campania
The title of the manuscript:	Use and efficacy of saline hydration and N-acetyl cysteine to prevent
	contrast-induced nephropathy in low-risk populations undergoing
	coronary artery angiography
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Internal and emergency medicine
Topic:	Emergency Medicine
Ranking:	11

# **Carraro 1998**<sup>79</sup>

ID:	47
Year of publication:	1998
Italian Region/s involved:	Friuli-Venezia Giulia
The title of the manuscript:	Effects of a dimeric vs a monomeric nonionic contrast medium on
	renal function in patients with mild to moderate renal insufficiency:
	a double-blind, randomized clinical trial
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	Yes
Journal:	European Radiology
Topic:	Radiology, Nuclear Medicine, and Imaging
Ranking:	17

# Briguori 2004<sup>36</sup>

ID:	48
Year of publication:	2004
Italian Region/s involved:	Campania, Lombardia
The title of the manuscript:	N-Acetylcysteine versus fenoldopam mesylate to prevent contrast
	agent-associated nephrotoxicity
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

# Patti 2011<sup>21</sup>

ID:	49
Year of publication:	2011
Italian Region/s involved:	Lazio, Puglia
The title of the manuscript:	Short-term, high-dose Atorvastatin pretreatment to prevent contrast-
	induced nephropathy in patients with acute coronary syndromes
	undergoing percutaneous coronary intervention (from the
	ARMYDA-CIN [atorvastatin for reduction of myocardial damage
	during angioplastycontrast-induced nephropathy] trial
Study design:	Randomized clinical trial
Mono-/Multi-center:	Multi-center
The level of evidence:	П
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

# **Marenzi 2006**<sup>34</sup>

ID:	50
Year of publication:	2006
Italian Region/s involved:	Lombardia
The title of the manuscript:	N-acetylcysteine and contrast-induced nephropathy in primary
	angioplasty
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	Yes
Conflict of interest:	No
External collaboration:	No
Journal:	The New England Journal of Medicine
Topic:	Medicine (miscellaneous)
Ranking:	4

# **Marenzi 2006**<sup>48</sup>

ID:	51
Year of publication:	2006
Italian Region/s involved:	Lombardia
The title of the manuscript:	Comparison of two hemofiltration protocols for prevention of contrast-induced nephropathy in high-risk patients
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	American Journal of Medicine
Topic:	Medicine (miscellaneous)
Ranking:	115

# Biondi-Zoccai 2014<sup>80</sup>

ID:	52
Year of publication:	2014
Italian Region/s involved:	Lazio, Piemonte, Campania
The title of the manuscript:	Nephropathy after administration of iso-osmolar and low-osmolar
	contrast media: evidence from a network meta-analysis
Study design:	Meta-analysis
Mono-/Multi-center:	-
The level of evidence:	I
Funding:	No
Conflict of interest:	No
External collaboration:	Yes
Journal:	International Journal of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	81

# **Barbieri 2014**<sup>28</sup>

ID:	53
Year of publication:	2014
Italian Region/s involved:	Piemonte
The title of the manuscript:	The role of statins in the prevention of contrast-induced nephropathy: a meta-analysis of 8 randomized trials
Study design:	Meta-analysis
Mono-/Multi-center:	-
The level of evidence:	I
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of Thrombosis and Thrombolysis
Topic:	Cardiology and Cardiovascular Medicine Hematology
Ranking:	112

# **Giacoppo 2014**<sup>27</sup>

ID:	54
Year of publication:	2014
Italian Region/s involved:	Calabria
The title of the manuscript:	Meta-analysis of randomized controlled trials of preprocedural statin
	administration for reducing contrast-induced acute kidney injury in
	patients undergoing coronary catheterization
Study design:	Meta-analysis
Mono-/Multi-center:	-
The level of evidence:	I
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of the American College of Cardiology
Topic:	Cardiology and Cardiovascular Medicine
Ranking:	1

#### **Lombardi 2015**<sup>83</sup>

ID:	55
Year of publication:	2015
Italian Region/s involved:	Toscana
The title of the manuscript:	2015 update on acute adverse reactions to gadolinium-based contrast
	agents in cardiovascular mr. large multi-national and multi-ethnical
	population experience with 37788 patients from the eurocmr registry
Study design:	Cohort study
Mono-/Multi-center:	Multi-center
The level of evidence:	III - 2
Funding:	Yes
Conflict of interest:	Yes
External collaboration:	Yes
Journal:	Journal of Cardiovascular Magnetic Resonance
Topic:	Radiological and Ultrasound Technology
Ranking:	1

# **Vallero 2002**<sup>32</sup>

ID:	56
Year of publication:	2002
Italian Region/s involved:	Piemonte
The title of the manuscript:	Contrast nephropathy in cardiac procedures: no advantages with
	prophylactic use of N-acetylcysteine (NAC)
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III - 2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Giornale Italiano di Nefrologia
Topic:	Nephrology
Ranking:	51

# **Russo 1990**<sup>39</sup>

ID:	57
Year of publication:	1990
Italian Region/s involved:	Campania
The title of the manuscript:	Randomized prospective study on renal effects of two different
	contrast media in humans: protective role of a calcium channel
	blocker
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Nephron
Topic:	Nephrology
Ranking:	26

# **Lorusso 2001**<sup>82</sup>

ID:	58
Year of publication:	2001
Italian Region/s involved:	Lombardia
The title of the manuscript:	Pharmacokinetics and safety of iomeprol in healthy volunteers and
	in patients with renal impairment or end-stage renal disease
	requiring hemodialysis
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	II
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Investigative Radiology
Topic:	Radiology, Nuclear Medicine, and Imaging
Ranking:	7

# Simonetti 1994<sup>81</sup>

ID:	59
Year of publication:	1994
Italian Region/s involved:	Lazio, Sardegna
The title of the manuscript:	A double-blind comparative study of the safety and efficacy of
	iomeprol in renal intra-arterial digital subtraction angiography
Study design:	Randomized clinical trial
Mono-/Multi-center:	Mono-center
The level of evidence:	П
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	European Journal of Radiology
Topic:	Radiology, Nuclear Medicine, and Imaging
Ranking:	44

#### Morabito 2012<sup>58</sup>

ID:	60
Year of publication:	2012
Italian Region/s involved:	Lazio
The title of the manuscript:	Incidence of contrast-induced acute kidney injury associated with
	diagnostic or interventional coronary angiography
Study design:	Cohort study
Mono-/Multi-center:	Mono-center
The level of evidence:	III-2
Funding:	No
Conflict of interest:	No
External collaboration:	No
Journal:	Journal of Nephrology
Topic:	Nephrology
Ranking:	23

#### S2 Appendix. List of reviews included in the systematic review.

#### References

- 1. Caiazza A, Russo L, Sabbatini M, Russo D. Hemodynamic and tubular changes induced by contrast media. Biomed Res Int United States; 2014;2014:578974.
- 2. Liccardi G, Lobefalo G, Florio E Di, Iorio C Di, Occhiochiuso L, Romano L, Savoia G, Massa RM, D'Amato G. Strategies for the prevention of asthmatic, anaphylactic and anaphylactoid reactions during the administration of anesthetics and/or contrast media. J Investig Allergol Clin Immunol Spain; 2008;18:1–11.
- 3. Stacul F, Molen AJ van der, Reimer P, Webb JAW, Thomsen HS, Morcos SK, Almen T, Aspelin P, Bellin M-F, Clement O, Heinz-Peer G. Contrast induced nephropathy: updated ESUR Contrast Media Safety Committee guidelines. Eur Radiol Germany; 2011;21:2527–2541.
- 4. Aurelio A, Durante A. Contrast-induced nephropathy in percutaneous coronary interventions: pathogenesis, risk factors, outcome, prevention and treatment. Cardiology Switzerland; 2014;128:62–72.
- 5. Briguori C, Donnarumma E, Quintavalle C, Fiore D, Condorelli G. Contrast-induced acute kidney injury: potential new strategies. Curr Opin Nephrol Hypertens England; 2015;24:145–153.
- 6. Liccardi G, Salzillo A, Blasio F De, D'Amato G. Control of asthma for reducing the risk of bronchospasm in asthmatics undergoing general anesthesia and/or intravascular administration of radiographic contrast media. Curr Med Res Opin England; 2009;25:1621–1630.
- 7. Detrenis S, Meschi M, Mar Jordana Sanchez M del, Savazzi G. Contrast medium induced nephropathy in urological practice. J Urol United States; 2007;178:1164–1170.
- 8. Briguori C. Renalguard system in high-risk patients for contrast-induced acute kidney injury. Minerva Cardioangiol Italy; 2012;60:291–297.
- 9. Briguori C, Airoldi F, Morici N, Colombo A. New pharmacological protocols to prevent or reduce contrast media nephropathy. Minerva Cardioangiol Italy; 2005;53:49–58.
- 10. Stacul F, Adam A, Becker CR, Davidson C, Lameire N, McCullough PA, Tumlin J. Strategies to reduce the risk of contrast-induced nephropathy. Am J Cardiol United States; 2006;98:59K–77K.
- 11. Quintavalle C, Donnarumma E, Fiore D, Briguori C, Condorelli G. Therapeutic strategies to prevent contrast-induced acute kidney injury. Curr Opin Cardiol United States; 2013;28:676–682.
- 12. Mautone A, Brown JR. Contrast-induced nephropathy in patients undergoing elective and urgent procedures. J Interv Cardiol United States; 2010;23:78–85.
- 13. Ronco C, Stacul F, McCullough PA. Subclinical acute kidney injury (AKI) due to iodine-based contrast media. Eur Radiol Germany; 2013;23:319–323.
- 14. Stacul F. Reducing the risks for contrast-induced nephropathy. Cardiovasc. Intervent. Radiol. United States; 2005;28 Suppl 2:S12-8.
- 15. Marenzi G, Cabiati A, Milazzo V, Rubino M. Contrast-induced nephropathy. Intern. Emerg. Med. Italy; 2012;7 Suppl 3:S181-3.

#### References

- 1. Andreucci M. [Radiographic contrast nephropathy]. G Ital Nefrol Italy; 2014;31.
- 2. Meschi M, Detrenis S, Savazzi G. [Contrast-induced nephropathy. Current concepts and propositions for Italian guidelines]. Recenti Prog Med Italy; 2008;99:155–162.
- 3. Savazzi G, Cusmano F, Allegri L, Garini G. [Physiopathology, clinical aspects and prevention of renal insufficiency caused by contrast media]. Recenti Prog Med Italy; 1997;88:109–114.
- 4. Caterina R De, Limbruno U. [Effects on vasomotor tone and hemostatic function of radiologic contrast media used during invasive cardiological procedures]. G Ital Cardiol Italy; 1999;29:1047–1052.
- 5. Andreucci M. [Statins in CIN: a problem at least partly solved?]. G. Ital. Nefrol. Italy; 2013.
- 6. Guastoni C, Servi S De, Covella P, Turri C, Gidaro B, Bellotti N, Stasi A. [Prevention of contrast-induced acute kidney injury]. G Ital Nefrol Italy; 2012;29 Suppl 5:S33-45.
- 7. Marenzi G. [Prevention of contrast-induced nephropathy and management of high-risk patients]. G Ital Cardiol (Rome) Italy; 2009;10:88–96.
- 8. Haen C de, Ferla R La. New aspects of osmotic pressure, flow, load, and bolus in adverse reactions and toxicity of contrast media. Invest Radiol United States; 1991;26 Suppl 1:S26-8-1.
- 9. Andreucci M. [Contrast media and nephrotoxicity: a molecular conundrum]. G Ital Nefrol Italy; 2011;28:355.
- 10. Baralis G, Steffenino G, Dellavalle A, Scala E La, Uslenghi E. [Selection of contrast media for hemodynamic studies and limitation of the associated risk]. Ital Heart J Suppl Italy; 2004;5:142–150.
- 11. Morisetti A, Tirone P, Luzzani F, Haen C de. Toxicological safety assessment of iomeprol, a new X-ray contrast agent. Eur J Radiol Ireland; 1994;18 Suppl 1:S21-31.
- 12. Rizzato G. [Strange but true: acetylcysteine protects against kidney damage caused by iodized contrast media]. Radiol Med Italy; 2001;101:287–289.
- 13. Marenzi G, Bartorelli AL. Recent advances in the prevention of radiocontrast-induced nephropathy. Curr Opin Crit Care United States; 2004;10:505–509.
- 14. Stacul F, Thomsen HS. Safety profile of new non-ionic contrast media: renal tolerance. Eur J Radiol Ireland; 1996;23 Suppl 1:S6-9.
- 15. Stacul F. [Problems with injectable contrast media in the elderly]. Radiol Med Italy; 2003;106:86–87.
- 16. Marenzi G, Briguori C. [The PRATO-ACS study]. G Ital Cardiol (Rome) Italy; 2013;14:803-808.
- 17. Ronco C, Maioli M, Lorusso V, Cruz DN, Stacul F. [Contrast-induced nephropathy: the VIKISAFE study group statement]. G Ital Nefrol Italy; 2012;29:183–204.
- 18. Graziani G, Degnoni V, Oldani S, Buskermolen M, Brambilla G. [Pathophysiology and prevention of contrast-induced acute renal failure]. G Ital Nefrol Italy; 2007;24 Suppl 3:20–24.
- 19. Vercellino M, Bezante GP, Balbi M. Contrast medium induced nephropathy: new insights into prevention and risk management. Cardiovasc Hematol Agents Med Chem Netherlands; 2009;7:166–180.
- 20. Martinelli G, Petrini F, Gamberini E. [Adverse reactions to contrast media: treatment]. Radiol Med Italy; 2004;107:42–52.
- 21. Genovesi E, Romanello M, Caterina R De. [Contrast-induced acute kidney injury in cardiology]. G Ital Cardiol (Rome) Italy; 2016;17:984–1000.
- 22. Giannattasio M. [Contrast-induced acute renal failure]. G Ital Nefrol Italy; 2005;22:217–225.