

Table S1 The Search Strategy of MEDLINE

#	Search Strings
1	(cancer* or tumor* or tumour* or neoplas* or malignan* or carcinoma*).ab.
2	(Cachexia or Cachectic or Emaciation or Weight or Weights or Muscle or Muscles or Malnutrition or Undernutrition or Malnourishment or Nutrition*).ab.
3	(Metabolomics or Metabolomic or Metabonomics or Metabonomic or Lipidomics or Lipidomic or Lipidome or Lipidomes).ab.
4	#1 and #2 and #3

Table S2 The Search Strategy of CNKI

#	Search Strings
1	(摘要=肿瘤 + 癌)
2	(摘要=恶病质 + 恶液质 + 消瘦 + 体重 + 肌肉 + 营养)
3	(摘要=代谢组学 + 脂质组学)
4	#1 and #2 and #3

Table S3 The key information of included studies

No.	Author	Year of publication	Cachexia definition	Country/Origin	Study design	Setting	Population and sample size	Biological specimens	Independent variables	Independent variables' measure	Statistical analysis
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Table S4 The significantly differential metabolites in plasma of cancer cachexia patients

No.	Name of metabolites (n=)	Cachectic VS Non-Cachectic	Cachectic VS Pre-Cachectic	Cachectic VS Healthy control	Pre-Cachectic VS Non-Cachectic	Pre-Cachectic VS Healthy control	Non-Cachectic VS Healthy control	References
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Green: Changed; Red: Increased; Blue: Decreased; Tawny: Not reported.

Table S5 The significantly differential metabolites in serum of cancer cachexia patients

No.	Name of metabolites (n=)	Cachectic VS Non-Cachectic	Cachectic VS Pre-Cachectic	Cachectic VS Healthy control	Pre-Cachectic VS Non-Cachectic	Pre-Cachectic VS Healthy control	Non-Cachectic VS Healthy control	References
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Green: Changed; Red: Increased; Blue: Decreased; Tawny: Not reported.

Table S6 The significantly differential metabolites in urine of cancer cachexia patients

No.	Name of metabolites (n=)	Cachectic VS Non-Cachectic	Cachectic VS Pre-Cachectic	Cachectic VS Healthy control	Pre-Cachectic VS Non-Cachectic	Pre-Cachectic VS Healthy control	Non-Cachectic VS Healthy control	References
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Green: Changed; Red: Increased; Blue: Decreased; Tawny: Not reported.

Table S7 The related metabolic pathways of cancer cachexia patients

No.	Name of related metabolic pathways (n=)	References