Background

There have been a limited number of clinical trials in patients with cancers of unknown primary over the past 20 years. Many of the original studies focused on the use of broad-spectrum chemotherapeutic agents. More recently trials have been developed to investigate the use of newer imaging techniques to localize a possible primary site. Few studies have been published on the use of molecularly targeted treatments or immunotherapy for cancers of unknown primary.

Objective

To review clinical trials in cancers of unknown primary and determine areas for future research.

Methods

A PubMed search was performed to find published clinical trials for cancers of unknown primary from 1996 - 2016. Trials were excluded if they involved treatment of patients with specific primary sites. Therapeutic and non-therapeutic studies were reviewed.

Results

 Sixty-six clinical trial publications were identified. (Table 1) Most of the trials involved the use of chemotherapeutic agents including paclitaxel, platinum compounds and gemcitabine. Few published studies have explored the use of targeted therapies or immunotherapies. Some trials involved the use of radiation or supportive care.

Conclusions

Despite the availability of next generation sequencing, targeted therapies and immunotherapies, there have been relatively few trials on cancers of unknown primaries specifically involving newer technologies. Results from a Foundation Medicine study are awaited and the NCI-MATCH study is ongoing, but neither is specific for cancers of unknown primary. There remains a need for more specific studies for patients with cancers of unknown primary.

Table 1

Published trials in cancers of unknown primary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Paclitaxel or docetaxel chemotherapy  | Non- paclitaxel chemotherapy  | Chemotherapy plus a targeted agent | Targeted Therapy alone | Gene Expression based |
| Number of trials | 22 | 25 | 3 | 1 | 3 |