Unless exempted by reason of being sick or on a journey, all adult Muslims are required to fast during the ninth month of the lunar (Hijri) year—the holy month of Ramadan. In Ramadan, fasting individuals absolutely refrain from eating, drinking, and sexual intercourse from dawn (called Fajr) until sunset (called Maghreb). As stated in the Holy Quran, “whoever of you sights the crescent on the first night of the month (of Ramadan, i.e., is present at his home), he must observe Saum (fasting) that month, and whoever is ill or on a journey, the same number of days which one did not observe Saum must be made up from other days.”

We believe that addressing the issue of fasting in cancer patients is of global interest and not just to communities where Muslims constitute the majority. The number of Muslims worldwide exceeds 1.5 billion, and they are distributed over the 5 continents in more than 232 countries and territories. Europe and the US combined harbor more than 40 million Muslims. Constituting more than 20% of the world’s population, Muslims have a significant share of the 10.9 million cancer cases diagnosed yearly worldwide.

Despite illness being a religious sanction as a reason for exemption from fasting, almost all Muslim cancer patients wish to fast and feel guilty if they do not. Every year, oncologists often hear the question “Doctor, can I fast?” Most oncologists base their reply on personal experiences and judgment and not on any piece of research. Oncologists, especially the junior ones, may feel...
guilty if they advise patients against fasting and may prefer to be neutral and just say “Look, fast if you can.” Muslims, who firmly believe that those who fast during the holy month of Ramadan will be rewarded either during this life or on the day of resurrection are eager to see research done on fasting in cancer patients. In some situations, fasting can harm cancer patients as for example when the patient needs to fulfill certain intake levels to prevent dehydration, malnutrition, or renal ailments. Besides, fasting may disturb the course of treatment of a curable disease. We carried out this work to study the patterns of fasting among cancer patients at the National Cancer Institute, Cairo University, during Ramadan of 1430 Hijri (August-September, 2009). An in-depth analysis should provide some useful insights and stimulate further research in this area.

SUBJECTS AND METHODS
During the month of Ramadan 1430 Hijri (August and September 2009), 102 Muslim cancer patients were interviewed at the Egyptian National Cancer Institute of Cairo University (NCI-Egypt). Patients were randomly selected from the outpatient and inpatient facilities of the medical oncology, hematology, and radiotherapy departments. As fasting applies only to adults, we did not include pediatric patients. Similarly, we did not include surgical patients as we felt that surgery usually represents a transient event unlike prolonged systemic therapy and radiation therapy courses. This work was carried out in compliance with the rules of good clinical practice and the ethical principles set out in the Declaration of Helsinki. All patients consented to participate in the study.

Patients were asked whether they were fasting on the day of the interview, the total number of days of fasting, whether the oncologist’s advice was sought before undertaking fasting, and what that advice was. They were also asked whether they sought an Imam’s (person well versed in religious matters) advice when considering fasting and what that advice was. For the non-fasting days, they were asked whether they tried to fast or not. The following data were collected for all participants: age, gender, Eastern Cooperative Oncology Group performance status (PS), site of the primary cancer, the stage of the cancer (metastatic vs nonmetastatic), sites of metastases (when applicable), disease activity, the current treatment and the route (if applicable), and concomitant diseases.

Cancer was considered active if, at the time of interview, there was evidence of measurable or evaluable disease that was used in judging the response to therapy (e.g., leukemia and metastatic cancer); cancer was considered inactive in the absence of such evidence (e.g., adjuvant treatment of breast cancer). All cases of hematological malignancies were classified as harboring a widespread metastatic disease. Patients were considered completely fasting, non-fasting, or partial fasting if they fasted 100%, 0%, or 0% to 99% of the days, respectively. For logistic regression analyses, we used the lowest and highest quartiles (≤25% and ≥75%) to label subjects as fasting patients or non-fasting patients, respectively.

The software SPSS for Windows version 13.0 (IBM Corp, Armonk, NY USA) was used for the statistical analysis. Patient characteristics were described using descriptive statistics. Nominal and categorical variables were summarized as percentages while, for numerical data, we calculated the means and standard deviations or medians and the inter-quartile range. Subgroups were compared using the chi-square test when dealing with nominal or categorical variables and the independent t test or analysis of variance when comparing numerical values. Factors that were shown to be significantly different between different fasting groups by the chi-square test were further analyzed by univariate logistic regression. Significant factors in univariate analysis were used in a subsequent multivariate model. P <.05 was considered statistically significant.

RESULTS
The characteristics of the 102 patients included in the study are shown in Table 1. The mean age was 46 years. Almost half of the patients were males, who had a PS of 0 to 1, and had metastatic disease. Two-thirds of the subjects were being treated on an outpatient basis or had evidence of disease activity. The most common diagnoses were breast cancer, acute leukemia, colorectal cancer, non-Hodgkin lymphoma, bladder cancer, lung cancer, and laryngeal cancer. By definition all cases of hematological malignancies were classified as harboring metastatic disease to multiple sites. Eighteen patients with solid tumors had distant metastases. Sites of metastases were the lungs (6/18), bone (4/18), skin and soft tissue (4/18), lymph nodes (3/18), and liver (1/18). Only two patients with solid tumors (2/18) had multiple metastases. The treatment modalities (in descending order of frequency) were intravenous (IV) chemotherapy, radiotherapy, and nonspecific and oral chemo/hormonal therapies. Of the subjects, 22% had evidence of other concomitant disease (diabetes mellitus in 12 patients; hypertension in 7 patients; and hepatitis C infection, heart failure, ischemic heart disease, calcular cholecystitis, and vertebral disc herniation in 1 patient each).

Forty-five percent of patients were fasting on the day of interview. While 40% of patients did not fast at all,
60% had some fasting experience, either partial (24%) or complete (36%). Of the 41 non-fasting patients, 14 (34%) tried to fast but failed and 27 (66%) did not try at all. Of the 24 partially fasting patients, 21 (87%) tried to fast during all the days of the month but failed on some days, while 3 (13%) just did not make the attempt to fast on some days. Failed attempts at fasting were mainly due to fasting intolerance.

A comparison of the three groups is shown in Table 1. Age and prevalence of comorbidity were similar in the three groups. While males were more numerous than females in the non-fasting group, they were less in the complete fasting group; both sexes were equally represented in the partial fasting group (P = .021). In the non-fasting group, the most common diagnoses were acute leukemia (44%), breast cancer (17%), and gastrointestinal (GIT) cancers (15%). In the complete fasting group, the commonest diagnoses were breast cancer (54%), head and neck cancers (16%), and acute leukemia and lymphoma (8% each). In the partial fasting group, the commonest diagnoses were breast cancer (21%), GIT cancers (17%), and acute leukemia (17%). Nonmetastatic cancers were more common in the complete fasting group, while metastatic diseases were more common in the non-fasting group (P = .004). The active

Table 1. Characteristics of 102 patients.

| Parameter                  | Number (N=102) | Percentage |
|----------------------------|----------------|------------|
| Mean age (SD) year         | 46 (15)        | 46 (15)    |
| Female sex                 | 54             | 53         |
| Performance status         |                |            |
| 0-1                        | 55             | 54         |
| 2                          | 36             | 35         |
| 3-4                        | 11             | 11         |
| Treatment facility         |                |            |
| Outpatient                 | 76             | 75         |
| Inpatient                  | 26             | 25         |
| Primary site               |                |            |
| Solid tumors               | 68             | 67         |
| Breast cancer              | 32             | 31         |
| Gastrointestinal cancer    | 12             | 12         |
| Head and neck cancers      | 9              | 9          |
| Urogenital cancers         | 7              | 7          |
| Lung cancer                | 4              | 4          |
| Brain cancers              | 2              | 2          |
| Bone sarcoma               | 1              | 1          |
| Skin cancer                | 1              | 1          |
| Hematological malignancies | 34             | 33         |
| Acute myeloid leukemia     | 14             | 14         |
| Acute lymphoblastic leukemia| 10            | 10         |
| Non-Hodgkin lymphoma (stages III-IV) | 5 | 5 |
| Chronic leukemia           | 3              | 3          |
| Hodgkin lymphoma (stage III) | 1             | 1          |
| Stage                      |                |            |
| Nonmetastatic              | 50             | 49         |
| Metastatic                 | 52             | 51         |
| Single site                | 16             | 16         |
| Multiple sites             | 36             | 35         |
| Evidence of disease activity|              |            |
| IV chemotherapy            | 43             | 42         |
| Cyclic (e.g., FAC in breast cancer) | 21 | 21 |
| Route                      |                |            |
| Oral                       | 21             | 21         |
| Parenteral                 | 47             | 46         |
| Comorbid diseases          | 22             | 21         |

FAC: 5-fluorouracil, doxorubicin, cyclophosphamide; ALL: acute lymphoblastic leukemia; BEAM: bleomycin, etoposide, cytosine arabinoside, melphalan; BMT: bone marrow transplantation; 5-FU: 5-fluorouracil.
Table 2. Comparison among non-fasting, partial fasting, and complete fasting subgroups among 102 cancer patients.

| Parameter                  | Non-fasting n (%) | Partial fasting n (%) | Complete fasting n (%) | P*  |
|----------------------------|-------------------|-----------------------|------------------------|-----|
| Number (%)                 | 41 (40)           | 24 (24)               | 37 (36)                |     |
| Mean (SD) age (year)       | 44 (15)           | 46 (17)               | 48 (15)                | .564* |
| Sex                        |                   |                       |                        |     |
| Male                       | 25 (52)           | 12 (25)               | 11 (23)                |     |
| Female                     | 16 (30)           | 12 (22)               | 26 (48)                | .021 |
| Site                       |                   |                       |                        | .006 |
| Hematological              | 21 (62)           | 6 (18)                | 7 (20)                 |     |
| Solid                      | 20 (29)           | 18 (27)               | 30 (44)                |     |
| Stage                      |                   |                       |                        | .004 |
| Nonmetastatic              | 12 (24)           | 14 (28)               | 24 (48)                |     |
| Metastatic                 | 29 (56)           | 10 (19)               | 13 (25)                |     |
| Disease activity           |                   |                       |                        |     |
| NED                        | 3 (9)             | 9 (28)                | 20 (63)                |     |
| Active                     | 38 (54)           | 15 (22)               | 17 (24)                | <.001|
| Performance status         |                   |                       |                        |     |
| 0-1                        | 14 (26)           | 15 (27)               | 26 (47)                |     |
| 2-4                        | 27 (57)           | 9 (19)                | 11 (24)                | .004 |
| Facility                   |                   |                       |                        | .001 |
| Outpatient                 | 20 (26)           | 20 (26)               | 36 (48)                |     |
| Inpatient                  | 21 (81)           | 4 (15)                | 1 (4)                  |     |
| Treatment                  |                   |                       |                        | .005 |
| No IV chemo or radiotherapy| 8 (30)            | 7 (28)                | 12 (44)                |     |
| IV chemotherapy            | 26 (60)           | 9 (21)                | 8 (19)                 |     |
| Radiotherapy               | 7 (22)            | 8 (25)                | 17 (53)                |     |
| Route                      |                   |                       |                        | .004 |
| Non-parenteral             | 14 (26)           | 15 (27)               | 26 (47)                |     |
| Parenteral                 | 27 (57)           | 9 (19)                | 11 (24)                |     |
| Comorbidity                |                   |                       |                        | .563 |
| No                         | 34 (42)           | 19 (24)               | 27 (34)                |     |
| Yes                        | 7 (32)            | 5 (23)                | 10 (45)                |     |

*Pearson chi square; *ANOVA. SD: standard deviation; NED: no evidence of disease; IV: intravenous.

disease was more common in the non-fasting and partial fasting groups, while the non-active disease was more common in the completely fasting group (<i>P</i>≤.001). PS 0 to 1 was more common in completely fasting patients, while PS 2 to 4 were more common among the non-fasting patients (<i>P</i>=.004). The treatment on an outpatient basis was commoner in completely and partially fasting patients, while the inpatient treatment was more common among non-fasters (<i>P</i>≤.001). IV chemotherapy was more common in the non-fasting group, while non-IV chemotherapy was more common in the complete fasting group (<i>P</i>=.005).

The univariate logistic regression analysis (Table 3) showed that female patients, those with solid tumors, those having a nonmetastatic disease, or those with PS 0 to 1 were four times more likely to be fasting than male patients, those with hematologic malignancies, those with a metastatic disease, or those with PS 2 to 4, respectively (<i>P</i>&lt;.05). Patients with non-active disease were nine times more likely to be fasting than those with active disease. Patients attending the outpatient facilities were 18 times more likely to be fasting than those admitted to the inpatient section. Patients not receiving IV chemotherapy were five times more likely to be fasting than those receiving IV chemotherapy. Multivariate logistic regression (Table 4) showed that patients who were females, those with PS 0 to 1, and those being treated in the outpatient clinic were more likely to be fasting than patients who were males, those with PS 2 to 4, and those admitted to the inpatient section.

Only 47 patients (46%) asked their treating physician whether it was alright for them to fast (Table 5). When asked, oncologists tended to discourage fasting in 64% (30/47), were equivocal in 32% (15/47), and agreed to fasting in 4% (2/47) cases. Of the 30 patients whose treating doctors discouraged fasting, 7% (2/30) were completely fasting patients, 30% (9/30) were partially fasting patients, and 52% (21/40) were non-fasting patients. Of the 15 patients whose doctors were equivocal, 60% (9/15) were completely fasting patients, 20% (3/15) were partially fasting patients, and 20% (3/15) were non-fasting patients. Only 4% (2/50) of the patients whose doctors agreed to their fasting, one was completely fasting and the other was partially fasting.

Only 18 patients (18%) asked an Imam whether they could be exempted from fasting. The Imams discouraged fasting in 12 (67%) cases, were equivocal in 5 (28%) cases, and favored fasting in 1 (5%) case. Of the 12 patients who were discouraged from fasting by Imams, 7 (58%) were unable to fast, 3 (25%) were able to partially fast, and only 2 (17%) were able to fast on all days. One patient asked only the Imam for advice (and
not the doctor) and, although the former encouraged fasting, the patient was unable to fast. Of the 5 patients who received equivocal advice from the Imam, 4 (80%) were completely fasting patients and 1 (20%) was a non-fasting patient. Patients asking doctors only or doctors and Imams were more likely to be non-fasting patients than completely fasting patients. Patients asking only the Imam or neither the Imam nor the doctor were more likely to be completely fasting patients than non-fasting patients (Table 5).

DISCUSSION
In general, our sample was fairly representative of the patients at the NCI-Egypt. The median age of 46 years (95% CI: 41-49 years) in our study was very close to that of NCI's patient population (median age of 50 years in males and 53 years in females). The sex distribution of our study population was also similar to that of NCI-Egypt. The most common diagnoses in our study were breast cancer (31%); acute leukemia (24%); colorectal cancer (7%); non-Hodgkin lymphoma (5%); and bladder, lung, and laryngeal cancer (4% each). In comparison, the 6 most common cancers at the NCI in 2002-2003 were breast cancer (37%), lymphoma (6%), leukemia (6%), urinary bladder cancer (4%), ovarian cancer (4%), and colorectal cancer (4%). While the overall trend is similar, diagnoses such as leukemia are over-represented in our sample. This may be because of the fact that our sample did not include any surgical patients, the inclusion of whom would have diluted this effect. The outpatient:inpatient ratio of 3:1 reflects the overall situation in NCI-Egypt as well as in most cancer centers, where the majority of patients are treated on an outpatient basis, especially in the medical oncology and radiotherapy departments.

The equal representation of metastatic and non-metastatic cases is due to the definition we adopted, whereby all the 34 cases of acute and chronic leukemia as well as Hodgkin and non-Hodgkin lymphomas were considered as metastatic diseases. Eighteen out of 68 patients (i.e., 27%) with solid tumors had metastases. We think that this is a fair representation of the overall situation in oncology.

We were surprised by the finding that 60% of cancer patients were fasting individuals (either on all days or on some). We had expected that the proportion of fasters would be in the range of 30% to 40% as illness is grounds for exemption from fasting because of the known disease burdens and the heavy consequences of the treatment. The main reason for the high percentage of fasting individuals was the enthusiasm of the patients. Patients who have routinely fasted during periods of good health probably could not accept the idea of non-fasting at the time of illness; perhaps they would feel guilty if they did not fast. The Holy Quran clearly states that fasting is beneficial to nonexempted subjects: “... and that your fast is better for you if only you know.” Many cancer patients, despite being exempted from fasting, believe that fasting will help them fight their cancers. They probably believe that there could be a direct interaction between fasting and cancer, with cancer cells being deprived of nutrients by fasting.

### Table 3. Univariate logistic regression analysis of factors affecting likelihood of fasting for 75% or more of Ramadan days.

| Parameter                              | OR (95% CI)     | P    |
|----------------------------------------|-----------------|------|
| Gender: female vs male                 | 3.7 (1.6, 8.7)  | .002 |
| Age: >40 vs ≤40 years                  | 0.5 (0.2, 1.1)  | .085 |
| Site: solid vs hematological            | 4.0 (1.6, 10.5) | .003 |
| Stage: non-metastases vs metastases    | 4.1 (1.7, 9.5)  | .001 |
| Disease activity: non-active vs active  | 8.6 (3.1, 24.1) | <.001|
| PS: 0-1 vs 2-4                         | 4.5 (1.9, 10.7) | .001 |
| Treatment facility: outpatient vs inpatient | 17.7 (3.9, 80.9) | <.001|
| Treatment type: no IV chemotherapy vs IV chemotherapy | 5.0 (2.0, 12.3) | <.001|
| Comorbidity: absent vs present         | 0.51 (0.2, 1.4) | .190 |

**OR:** Odds ratio, **CI:** confidence interval, **PS:** performance status, **IV:** intravenous

### Table 4. Multivariate logistic regression analyses of factors affecting likelihood of fasting for 75% or more of Ramadan days.

| Parameter                              | OR (95% CI)     | P    |
|----------------------------------------|-----------------|------|
| Sex: female vs male                    | 4.8 (1.5, 15.6) | .009 |
| Site: solid vs hematological            | 0.4 (0.1, 3.5)  | .406 |
| Stage: non-metastases vs metastases    | 1.1 (0.2, 6.1)  | .888 |
| Disease activity: Non-active vs active  | 3.0 (0.7, 11.9) | .131 |
| PS: 0–1 vs 2–4                         | 4.1 (1.2, 13.9) | .023 |
| Treatment facility: Outpatient vs inpatient | 31.8 (3, 334.5) | .004|
| Treatment type: No IV chemotherapy vs IV chemotherapy | 0.7 (0.2, 2.9) | .651|

**OR:** odds ratio, **CI:** confidence interval.
There is also the belief that Allah will be more merciful to those who fast than those who do not. During Ramadan, there is an atmosphere of fasting, and any apparent non-fasting individual will look out of place and be looked down upon unless he/she has a good reason for not fasting. To avoid such a situation, cancer patients may decide to fast. During Ramadan, food is prepared at homes for the two main meals: after sunset and before dawn. Cancer patients opting not to fast have their regular meal pattern maintained. This may put social and financial burdens on the family, with the need to prepare and provide five meals instead of two. Eating along with the entire family after a whole day of fasting is an enjoyable activity; some patients may choose to go through the rigors of fasting just to experience those moments with their loved ones. There are also those patients who have severe anorexia or are unable to eat for various reasons; such patients may elect to fast as non-fasting is for them almost the same as fasting.

Using univariate analysis, patients that were females, those with solid tumors, those with a nonmetastatic disease, those with PS 0 to 1, and those not receiving IV chemotherapy were four to five times more likely to be fasting than patients who were males, those with hematologic malignancies, those with a metastatic disease, those with PS 2 to 4, or those receiving IV chemotherapy, respectively \( (P<.05) \). Patients with the non-active disease and those attending the outpatient facilities were 9 to 18 times more likely to be fasting than those with the active disease and those admitted to the inpatient section. Using multivariate logistic regression, only patients who were females, had PS 0 to 1, and those being treated in the outpatient clinic were more likely to be fasting when compared to males, those with PS 2 to 4, and those admitted to the inpatient section.

Although sex and treatment facility showed significance in the statistical analysis, they may be associated with the diagnosis; in our study, males were more likely to have a hematological malignancy and females more likely to have breast cancer. The treatment facility may be dependent on the diagnosis and treatment; for example, patients with leukemia and patients receiving IV chemotherapy are more likely to be admitted. Moreover, disease activity and presence or absence of metastases are interlinked.

Surprisingly, not all patients sought their oncologist’s advice regarding fasting (only 46%). This might be because of the busy practice at the NCI-Egypt, where patients may feel that they do not have the time to raise all their doubts. Also, patients may have a clear opinion of their own as to when and whether they can fast. Both possibilities need consideration. Patients should be given ample time and opportunity to ask all their questions. Although the patient is the one to decide whether to fast or not, the physician’s input is of utmost importance. Fasting can be harmful in some situations. For example, a patient with a potential for tumor lysis syndrome should be instructed to have several liters of fluids per day, as fasting can enhance renal shutdown. Patients receiving nephrotoxic therapy are similarly vulnerable. Patients having severe vomiting or diarrhea are susceptible to dehydration, and fasting can enhance volume contraction. There is also the risk that when opting to fast some patients may choose not to attend their regular chemotherapy sessions and defer it until after Ramadan. This can be detrimental if the patient has a curable disease. Similarly detrimental can be the effect of the patient not taking some of his medicines (e.g., omitting the steroids in the CHOP [cyclophosphamide, doxorubicin, vincristine, prednisone] regimen).

In our opinion, the oncologist should discuss the is-

### Table 5. Physician’s and Imam’s advice and its relationship to fasting in 102 cancer patients.

|                             | Total number | Non-fasting n (%) | Partial fasting n (%) | Complete fasting n (%) | \( P \) |
|-----------------------------|--------------|-------------------|-----------------------|------------------------|------|
| Seeking physician’s advice regarding fasting | 47           | 22 (47)           | 13 (28)               | 12 (25)                | .113 |
| Physician’s opinion when asked |              |                   |                       |                        |      |
| Discourage fasting          | 30           | 19 (63)           | 9 (30)                | 2 (7)                  | <.001|
| Encourage fasting           | 2            | 0                 | 1 (50)               | 1 (50)                |      |
| Equivocal                   | 15           | 3 (20)            | 3 (20)               | 9 (60)                |      |
| Seeking Imam’s advice regarding fasting: | 18           | 9 (50)            | 3 (17)                | 6 (33)                | .603 |
| Imam’s opinion when asked   |              |                   |                       |                        | .105 |
| Discourage fasting          | 12           | 7 (58)            | 3 (25)               | 2 (17)                |      |
| Encourage fasting           | 1            | 1                 | 0                    | 0                     |      |
| Equivocal                   | 5            | 1 (20)            | 0                    | 4 (80)                |      |
| Asking both the doctor’s and the Imam’s advice regarding fasting | 12 | 7 (58) | 2 (17) | 3 (25) |      |
| Asking the Imam but not the doctor regarding fasting | 6 | 2 (33) | 1 (18) | 3 (50) |      |
| Asking the doctor but not the Imam for fasting | 35 | 15 (43) | 11 (31) | 9 (26) |      |
| Asking neither the doctor’s nor the Imam’s advice regarding fasting | 49 | 17 (35) | 10 (15) | 22 (45) |      |
sue of fasting with the patient even if the latter does not bring up the question. This will avoid the above and other similar scenarios, and the physician and the patient can together find solutions if the patient expresses a sincere wish to fast. For example, giving supplementary IV fluids during the daytime or modifying the treatment schedule so that drugs are given between sunset and dawn might be of help in some situations. Patients may often feel that he/she can safely fast without the physician’s involvement in the decision; however, raising the issue will reassure the patient and strengthen patient-physician relationship. In this study, when the physician advised against fasting, almost two-thirds of the patients were unsuccessful in their fasting, which is to be expected. Physicians should not underestimate their influence and should seek to improve on it. The present work is a step in that direction. When discussing fasting with the patient, physicians can adopt the “safe trial technique,” where they allow the patient to fast, but with instructions as to when they should stop (e.g., when there is severe dizziness, vomiting, diarrhea, or inadequate intake throughout the night). Close contact with the physician is of the utmost importance. If the advice is “fast if you can,” then this should be under medical supervision.

The issue of fasting in cancer patients should be discussed among oncologists and knowledgeable religious authorities to avoid conflicting advice that can harm cancer patients. Oncologists need to be aware of the religious aspects of fasting, particularly issues related to parenteral, inhalational, and per-rectal medications, and the effect of incidents like vomiting on fasting. Religious authorities need to know that fasting can sometimes be harmful to the patient. An ideal practice would involve both the oncologist and the religious person in the decision making. We propose that a knowledgeable religious person (Imam) should attend the oncology facility during Ramadan to help in this regard.

In conclusion, our pioneering work addresses an untouched area in cancer research. Patients who are females, those with PS 0 to 1, those whose disease is a nonmetastatic solid tumor, and those receiving non-IV chemotherapy in the outpatient facilities were more likely to be fasting than their corresponding counterparts. On multivariate analysis, being a female, having PS 0 to 1, and receiving treatment in the outpatient facility were the only factors that retained statistical significance. We hope that this work will draw oncologists’ attention to the issue of fasting in cancer patients so that more research is done in this area.

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