

'09

前期日程

## 医学部医学科小論文問題②

### 注 意 事 項

1. 試験開始の合図があるまで問題冊子を開いてはいけません。
2. この問題冊子のページ数は7ページです。問題冊子、答案用紙及び下書き用紙に  
落丁、乱丁、印刷不鮮明などがある場合には申し出てください。
3. 解答は指定の答案用紙に記入してください。
  - (1) 文字はわかりやすく、横書きで、はっきり記入してください。
  - (2) 解答の文字に制限がある場合には、それを守ってください。
  - (3) 訂正、挿入の語句は余白に記入してください。
  - (4) ローマ字、数字を使用するときは、まず目にとらわれなくてもよいです。
  - (5) 日本語の字数制限には、句読点を含みます。
4. 試験時間は90分です。
5. 答案用紙は持ち帰ってはいけません。
6. 問題冊子と下書き用紙は持ち帰ってください。

次の文章を読んで、設問A～Hに答えなさい。星印(\*)のついた単語には、文末に訳注があります。

To most people, Aug. 27 is a day just like any other. Tucked\* in between the carefree yawn of (A—1) and the impending\* rigors\* of (A—2), it straddles\* a bittersweet block of the calendar, but to Karen Dyer, it is much more than that.  
B) Aug. 27, 1994, marked her laborious\* change from typical teen to cancer patient. That was the day doctors removed what they thought was a benign cyst\* above her left hip. Then 15, Dyer learned that her life had changed forever. “Its funny,”  
C) she says. “My main worry then was losing my hair, of looking different from everyone else. I never thought about dying. It really didn’t occur (A—3) me that that was even a possibility.”

It may have sounded naive\* then, but Dyer was on the right track. Along with some 300,000 other young adults in the U.S., she belongs (A—4) the first wave of childhood-cancer survivors\* to benefit from several decades’ worth of research in treating cancer in the young. Now a graduate student at the University of South Florida, Dyer, 28, unlike so many young cancer patients before her, has every expectation of reaching the ordinary milestones\* in life—graduation, first job, marriage—that most of us take for (A—5).

And these young adults are doing much more than merely surviving. Their  
D) medical histories are rich textbooks for teaching doctors and future patients about how to overcome cancer—not just the initial dangers of the disease but also the late-stage complications\* of the surgery, chemotherapy\* and radiation\* that saved those young lives. “We know that we will see more and more long-term survivors,” says Dr. Melissa Hudson of St. Jude Children’s Research Hospital in Memphis, Tenn. “Now we need to monitor them as they age, to understand how we can best help them to preserve and maintain their health.”

It’s a good challenge to face. Until recently doctors did not pay much attention  
E) to the long-term complications that might arise from the powerful poisons they

were throwing at their young patients. They simply didn't have to; at best, only half of those children were expected to see their teens. But today, 1 in 1,000 young adults in the U.S. is a childhood-cancer survivor. Since the 1970s, the chance that a child would live for five years after a diagnosis of leukemia\* or lymphoma\*, the most common childhood cancers, has risen steadily, from an average of 25% to more than 80% today, outpacing\* recovery rates for most adult cancers.

Surprisingly, <sup>F)</sup> that success owes very little to the development of new cancer drugs. Until 2003, there was no law enabling the U.S. Food and Drug Administration\* to require drug companies to test new medicines in children, in part because of concerns that this would endanger the rights and health of youngsters. Even today anticancer\* drugs are approved first in adults, leaving children to make do with older classes of medications. So most of the gains have come from wiser use of existing chemotherapy drugs in innovative\* combinations that are more potent as packages than as individual compounds.

Fortunately for these young patients, however, the strategy turns (A—6) to be extremely effective. Simply increasing the dose of certain agents, (A—7) instance, gives kids an advantage over some rapidly growing cancers. Young hearts, lungs and kidneys\*, it seems, are fairly resilient\* with higher doses of toxic drugs than most adults can tolerate. And better medications for handling the side effects and consequences of chemotherapy and radiation — severe nausea\*, vomiting\*, anemia\* and infections — help children respond better to intensive treatment.

Yet, like any victims of trauma or shock, these youngsters never quite shake the mental and medical legacy\* of their early illness. They know their victory comes at a price, and science won't let them forget. With every new study of childhood-cancer survivors, evidence of the persisting health dangers from their treatments — heart disease, secondary cancers, cognitive\* deficits — continues to mount. "Sometimes I feel like a walking time bomb," says Dyer.

And so doctors are broadening their focus to include the health of not just the child they are treating today but also the adult they could be treating tomorrow. The most extensive study of pediatric\*-cancer survivors, an ongoing survey by the U.S. National Cancer Institute (NCI) that began in 1994, has found they are three times as likely as their cancer-free siblings\* to have a chronic\* health condition.

The most common problem involves the heart. Higher rates of atherosclerosis\*, heart attacks and strokes can stem (A—8) early exposure to chemotherapy agents, specifically anthracyclines\*. Although powerful against tumors, these drugs can weaken the heart muscle and stiffen\* the blood vessels\*, promoting hardening of the arteries\* at a much earlier age than normal.

Serious heart disease, however, can be prevented with the right screening and follow-up care, and the same is true for many of the other severe health problems that can emerge years after cancer treatments. In previous decades, for instance, girls with Hodgkin's lymphoma\* were frequently treated with radiation to the chest, putting them at increased risk of developing breast cancer as young women. Screening them at age 25 instead (A—9) 40, as usually recommended, can pick up the disease sooner and, it is hoped, give doctors the chance to remove small lesions before they grow or spread. (Radiation is now rarely used for children.) Similarly, to stave off\* heart disease in graduates of chemotherapy, doctors can be more aggressive\* in prescribing\* cholesterol-lowering drugs or blood-pressure medications.

A yearly checkup by an internist\* or a general practitioner\* is important to maintain such vigilance\*. But despite the advice of their cancer doctors, only 20% of childhood-cancer survivors take advantage of this simple precaution\*, according to the latest figures from the NCI study. That's why these doctors are aggressively seeking out survivors, many of whom are now reaching their 30s and 40s, when many chronic conditions tend to strike. "We need to stop cataloging what happens to these patients and start introducing therapies that will either combat or prevent any long-term health effects of their cancer treatment", says Dr.

Eugenic Kleinerman, professor of pediatrics at M.D. Anderson Cancer Center in Houston.

At this point, researchers have a good picture of what young patients can expect in the first decade after cancer treatment. But “what we don’t know is what happens to people as they age further out, 20 to 30 years beyond that,” says Dr. Charles Sklar of Memorial Sloan-Kettering Cancer Center in New York City. To fill that gap, Hudson and St. Jude epidemiologist\* Les Robison are launching one of the most ambitious follow-up programs yet. They plan to contact 5,000 patients who have celebrated their 10-year survival anniversary and invite them to come back for free checkups for the rest of their lives. The program, like the hospital, is mainly supported by private donations\*. The first 650 volunteers are expected to inaugurate\* the St. Jude Life Project this month. They will undergo blood tests to evaluate kidney, liver\*, thyroid\* and immune\* function; MRI\* scans to look for abnormal growths; and, depending on the type of treatments they received, consultations with fertility\* and other specialists.

The push for more thorough aftercare screening is already helping survivors who are wrestling with a lot of unknowns about their health. “In my head, I had been expecting to have all the problems you read about—the heart problems, secondary cancers—all that stuff,” says Dyer. But a recent evaluation at Sloan-Kettering indicated that Dyer so (A—10) shows no signs of the complications she had dreaded. “It was a huge relief,” she says. So this Aug. 27, she will celebrate another year of being not only cancer-free but also healthy. Three years ago, to honor a decade of cancer liberation\*, Dyer went skydiving. “I just felt a sense of exhilaration\*, of really living life and not wasting moments by being afraid or questioning myself,” she says. By helping scientists learn from her cancer, Dyer may inspire more survivors in coming years to do the same.

(“Young Survivors” Time, August 6, 2007 より改変)

訳 注

tuck はさみこむ

impending 迫りくる

rigor 厳しさ

straddle またがる

laborious labor の形容詞形

benign cyst 良性のう胞

naive 純真な

survivors persons who survive

milestone 画期的出来事

complication 合併症

chemotherapy 化学療法

radiation 放射線療法

leukemia 白血病

lymphoma リンパ腫

outpace 追い越す

U.S. Food and Drug Administration 米国食品医薬品局

anticancer 抗がん

innovative 刷新的な

kidney 腎 臓

resilient 回復の早い

nausea 嘔 気

vomiting 嘔 吐

anemia 貧 血

legacy 遺 産

cognitive 認知の

pediatric 小児の

sibling 兄弟・姉妹

chronic 慢性の

atherosclerosis 動脈硬化  
anthracycline アントラサイクリン(抗がん剤の一つ)  
stiffen stiff の動詞形  
blood vessel 血管  
artery 動脈  
Hodgkin's lymphoma ホジキン病(悪性リンパ腫の1種)  
stave off 避ける  
aggressive 積極的に  
prescribe 処方する  
internist 内科医  
practitioner 開業医  
vigilance 警戒  
precaution 予防策  
epidemiologist 疫学者  
donation 寄付  
inaugurate 就任させる  
liver 肝臓  
thyroid 甲状腺  
immune 免疫の  
MRI 核磁気共鳴イメージ  
fertility 生殖  
liberation 開放  
exhilaration 快活

設 問

- A. 文中の(A-1)から(A-10)に入る適切な英単語を答案用紙 2-1 のA-1からA-10欄に記入しなさい。
- B. 下線部Bは具体的にどのようなことを意味しているのか、解答用紙 2-1 のB欄に100字以内の日本語で記入しなさい。
- C. Dyerはどうして下線部Cのように言ったのか、解答用紙 2-1 のC欄に50字以内の日本語で記入しなさい。
- D. 下線部Dは具体的にどのようなことを意味しているのか、解答用紙 2-2 のD欄に100字以内の日本語で記入しなさい。
- E. 下線部Eの理由を具体的に、解答用紙 2-2 のE欄に100字以内の日本語で記入しなさい。
- F. 下線部Fの“that success”はどのような理由で得ることができたのか、解答用紙 2-2 のF欄に100字以内の日本語で記入しなさい。
- G. 下線部Gとほぼ同じ意味で使われている表現が本文中にあるが、その中から2つ抜き出し、解答用紙 2-3 のG-1欄に英語で記入しなさい。また、これを実現するために、どのような計画が実際に進められているのか、解答用紙 2-3 のG-2欄に100字以内の日本語で記入しなさい。
- H. 本文中には、小児期に発症したがんに対する現在の治療の特徴が述べられているが、過去の年代に発症した場合と異なる点を中心に、その特徴を解答用紙 2-3 のH欄に150字以内の日本語で記入しなさい。