## 香川大学

## 平成 26 年度

### (医学部医学科 推薦入試)

# 問題冊子

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教	科	等	ページ数
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試験開始の合図があるまで、問題冊子を開かないこと。

#### 解答の書き方

- 1. 解答は、すべて別紙解答用紙の所定欄に、はっきりと記入すること。
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### 注意事項

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There's a chilly arithmetic to the way we all get sick. At the end of any year, a fixed and knowable number of us will have developed heart disease, and another number won't have. There will be a different entry in the ledger<sup>1)</sup> for cancer, another for lung disease, another for Parkinson's or dementia<sup>2)</sup> or HIV. The people who study those mortal metrics<sup>3)</sup> — the actuaries<sup>4)</sup>, the epidemiologists<sup>5)</sup> — don't give too much thought to the individuals behind the numbers, and the truth is, they can't. It's no good sentimentalizing math — not if you want to get anything useful out of it.

But sometimes it's impossible not to: sometimes the person who is sick has a very recognizable face. So it was in 1985, when Rock Hudson, Hollywood heart-throb<sup>6)</sup> of an earlier era, died of complications from AIDS and a country that thought it could fence off a disease suddenly realized we were in this together. So it was in 1995, when Christopher Reeve, a man best known for playing a character utterly immune to injury<sup>7)</sup>, was thrown from a horse and suddenly could do nothing at all without ( A ) — and with that, the spinal-injury<sup>8)</sup> community had a point man a lot more powerful than Superman.

And so it was again when Angelina Jolie, the most (B) woman in the world by a lot of people's lights, stepped forward and announced in an op-ed<sup>9)</sup> in the *New York Times* that she had undergone a double mastectomy<sup>10)</sup>, an operation she decided to have after learning that she carried a genetic mutation<sup>11)</sup> that in her case increased the odds of developing breast cancer to a terrible 87% and ovarian cancer<sup>12)</sup> to 50%. She decided to get tested because her mother died of ovarian cancer at age 56. Jolie herself has no current signs of either disease.

She explained her treatment decision with a simple clarity: "Once I knew that this was my reality, I decided to be proactive and minimize the risk as much as I could." She explained it with an eye toward the 12% of all women who will one day develop breast cancer and the 100% who worry about it: "I

hope that other women can benefit from my experience. ( C ) is still a word that strikes fear in people's hearts." And she explained it in a way that went straight to what many were thinking, when a woman whose very name signals beauty and whose profession depends on it makes such a dramatic choice. "On a personal note," she wrote, "I do not feel any less of a ( D ). I feel empowered that I made a strong choice that in no way diminishes my femininity." Jolie, like many other women who have undergone mastectomy, has had successful reconstructive surgery. But as with those other women too — especially the ones who were not yet sick — it took a lot of courage to get to that point in the first place. "It's such an emotional and personal decision," says Sarah Hawley, associate professor of general medicine at the University of Michigan, "particularly because it's the woman's choice."

Jolie, according to most experts who have weighed in<sup>13)</sup> publicly, made a smart choice for her case. "It's one of the truly unique situations where most medical professionals would say if a woman chose to have both breasts removed, it's a pretty reasonable thing to do," says Dr. Eric Winer of the Dana-Farber Cancer Institute. Exceedingly reasonable, judging by the numbers. Jolie's doctor estimates that her cancer risk fell from its 87% high to just 5%.

But the seeming straightforwardness of Jolie's case masks a much murkier<sup>14)</sup> reality, one that involves science, policy and probabilities, not to mention Americans' — indeed everyone's — tendency to observe what the famous do and then conclude that we should do the same. When Katie Couric underwent a televised colonoscopy<sup>15)</sup> in 2000, demand for the procedure jumped — a phenomenon that was promptly dubbed<sup>16)</sup> "the Couric Effect." In that case, many lives were likely saved by the raised awareness. This trendsetting power is exponentially<sup>17)</sup> greater in the case of Jolie, a megawatt star.

(以下省略)

### (注)

1) entry in the ledger: 台帳記入

2) dementia:認知症

3) mortal metrics: 死亡統計

4) actuaries:保険数理学者

5) epidemiologists: 疫学者

6) heart-throb: 憧れの的

7) immune to injury: 怪我に無縁である

8) spinal-injury: 脊髓損傷

9) op-ed: 特集記事

10) mastectomy:乳房切除

11) mutation: 変異

12) ovarian cancer: 卵巢癌

13) weighed in:議論に参加する

14) murkier: 後ろ暗い、怪しい

15) colonoscopy: 大腸内視鏡

16) dubbed: 呼ばれている

17) exponentially:指数関数的に

- 問1 本文にふさわしい題名について、英語で 5 words 以内で答えなさい。
- 問2 本文中の空欄 (A)~(D) に最も適した英単語を答えなさい。
- 問3 下線部、my reality の示す内容について、本文に即して日本語で答えなさい。
- 問4 下線部、<u>a much murkier reality</u> の意味する具体的な内容について、 自分の考えを含めて日本語で答えなさい(自由記述)。

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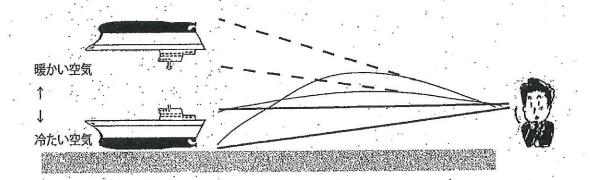
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問1. 富山湾に面する魚津市では、春(4月-5月)になると、海面上の冷たい空気とその上の暖かい空気が重なり合い、空気の温度が連続的に変化する層が形成されて、下図のような蜃気楼が観察されることがある。

- (1)図のような蜃気楼が見えるのは、光や空気のどんな性質によるものか、100字以内で説明せよ。
- (2)水槽、水、砂糖、ゴムホースをつけた漏斗、空のペットボトルを使って、上記の蜃気楼を再現する簡単な実験装置を作りたい。作り方を150字以内で説明せよ。
- (3) 秋期・冬期には、海面上が暖かく上部の温度が下がる、春とは逆の空気層が生じることがある。このとき、蜃気楼の虚像はどのように見えるか、40 字以内で説明せよ。



- 問2. 食品に関する下記の間に答えなさい。
  - (1) 食品の腐敗はなぜ起こるのか,20字以内で述べよ。
  - (2) 食品添加物が使用される目的と種類を200字以内で説明せよ。
  - (3) 食品添加物の必要性と問題点について 150 字以内で考察せよ。