

JVIR Instructions for Authors

Manuscript Preparation: Additional Guidelines

We can move your submission faster through the review and production processes if you use the manuscript preparation guidelines below before submitting your article.

Special Note for Foreign and New Authors

Our publisher, Elsevier, created three webcasts with quick and simple tips on three basic areas of the publishing process.

- [#01 Preparing your Manuscript](#)
- [#02 Using Proper Manuscript Language](#)
- [#03 Structuring an Article](#)

We invite you to watch these webcasts to familiarize yourselves with the publishing process, and get quick and easy tips on peer review, manuscript preparation, and other important aspects of your work on the manuscript.

Based on a checklist format, this how-to guide is designed to help you stay organized while you prepare your submission.

*The checklist items are grouped around a few basic areas that need special attention because they are sometimes neglected. Those of you who appreciate the force of example, can use this document in conjunction with the sections titled **Correct versus Incorrect Examples**, which illustrates recurrent errors in running text, figures and legends, and tables. Each error is corrected, and an explanation is provided. We hope that this method will help you avoid potential errors and/or correct them yourself when making revisions!*

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TEXT DIVISIONS

- **Title:** Does the title accurately reflect content? Is it concise?
- **Abstract:** Does the abstract stand on its own as a summary of the paper? Is its purpose well-articulated? Are the conclusions clear and justified, without being overstated on results?
- **Introduction:** Does this section provide an appropriate rationale, background, and purpose for the topic discussed? Does it explain why this manuscript is important to the existing body of knowledge? Are claims of primacy present? If yes, require authors to renounce them.
- **Materials and Methods (M&M):** Is an institutional review board/ethics statement present in this section? Does it describe patient group and inclusion/exclusion criteria, give outcome measures and other definitions, provide relevant statistical methods, follow reporting standards if available? Could a researcher repeat the study with this information?
- **Results:** Does the manuscript appropriately reflect the endpoints anticipated from the M&M with no "new" unanticipated information? Are numbers consistent with M&M?
- **Discussion:** Is this section concise and focused on the study at hand? Does it state whether any hypotheses are verified or not? Does it appropriately compare/contrast to existent literature? Are any limitations listed, if appropriate? Is there a solid and clear conclusion that is justified by the results of the study?
- **References:** Are the references timely and accurate? Do they follow journal format?

BODY TEXT

HEADINGS/SUBHEADINGS

- Do headings/subheadings describe and support the text that follows?
- Are additional subheadings needed to improve logical structure?

ORGANIZATION

- Are certain areas of the manuscript unnecessarily long and others insufficiently developed? If yes, please advise the author on which areas to develop and which to reduce or eliminate.
- Have you queried any missing information (eg, important facts and figures, tables, illustrations, definitions, references)?

- Is any information redundant? The Discussion section should not restate background or rationale information given in the Introduction.
 - Data collected in a retrospective review (eg, “we reviewed the age, demographics, imaging findings, lab values,” etc.) need not be stated when these very data points are immediately provided within the Results section.
 - Authors should not recap general demographic and incidence data beyond the scope of the paper.
 - Material presented in the Methods section would not be reiterated in the Results section.
 - Material presented within a table (eg, inclusion/exclusion criteria or demographics) should not be restated in body text.
- Is the number of references excessive? If so, suggest which references could be removed.

UNITS OF MEASURE AND ABBREVIATIONS

- Are all measurements and laboratory values given in SI units? If not, please check the site of the International Bureau of Weights and Measures at www.bipm.org/en/si/ or at www.unc.edu/~rowlett/units/sipm.html for standard base and derived SI units. Additional information on standards, references, and guides published by various standards organizations is available on the U.S. Metric Association site at <http://lamar.colostate.edu/~hillger/si-publications.html>. Finally, please note that some of the Reporting Standards documents address the use of specific abbreviations and acronyms in scientific manuscripts.
- Are abbreviations in body text defined at 1st mention? If not, please keep in mind that all abbreviations should be defined at first mention in the manuscript, with the abbreviation following in parentheses. Use the abbreviation thereafter.
- Are abbreviations conventional? Can the number of abbreviations be reduced to improve readability?

“Conical clots ... were used to assess the hemodynamics in the ST and RM IVC.”
(1692)
- Is product manufacturer information complete (manufacturer name, city, state)?
- Are there any incorrectly capitalized, spaced, or hyphenated brand names (eg, Armour trial instead of ARMOUR trial, Maude data instead of MAUDE data, m-RECIST instead of mRECIST, SIRSpheres instead of SIR-Spheres, etc.)?

LANGUAGE AND STYLE

- Is laboratory slang and local clinical jargon present? If yes, please replace with standard written English and, respectively, generally accepted specialized language.
- Does the manuscript read easily? If not, what kind of readability issues did you find? For instance:
 - Do sentences, paragraphs, or sections need to be repositioned for increased coherence? Depending on the situation, revise the text (eg, “move this paragraph to p. 5 and insert here marked passage from p. 2”).
 - Did you identify systematic errors at some level (eg, word choice, grammar, usage, spelling, punctuation, stylistic inconsistencies, references) or miscellaneous errors that would need heavy editing?

You may find the questions listed in the table below helpful for “diagnosing” recurrent types of problems, using the appropriate section of [Body Text: Correct vs Incorrect Examples](#) listed in the right column below. This document provides concrete solutions on how to fix these problems, along with explanations, which may help you detect and fix similar problems in the manuscripts you are evaluating.

Issue	Section to Consult in Body Text: Correct vs Incorrect Examples:
<ul style="list-style-type: none"> • Is word choice appropriate, that is, do words always fit the context? If not, see 	<ul style="list-style-type: none"> • Usage—Poor Word Choice
<ul style="list-style-type: none"> • Is the manuscript written in formal scientific writing style, free of colloquialisms and jargon? If not, see 	<ul style="list-style-type: none"> • Usage— Colloquialisms/Nonscientific Wording/Jargon
<ul style="list-style-type: none"> • Is the language idiomatically correct? If not, see 	<ul style="list-style-type: none"> • Unidiomatic/Awkward Phrasing

- Are any prepositions misused?
Articles unnecessary or omitted?
Adjectives instead of adverbs? If yes, see
 - [Prepositions: Misused](#)
 - [Articles: Unnecessary](#)
 - [Articles: Omitted](#)
 - [Adjectives Instead of Adverbs](#)

- Are there any problems related to verb usage, eg, omitted verbs, incorrect tense use? If yes, see
 - [Verbs: Omitted](#)
 - [Verbs: Incorrect Choice of Past vs Present](#)
 - [Verbs: Wrong Sequence of Tense](#)
 - [Verbs: Incorrect/Unnecessary Use of Passive Constructions](#)

- Are there any syntax-related problems? Can you eliminate wordiness/excessively long constructions? If yes, see
 - [Faulty/Awkward Word Order](#)
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BODY TEXT: CORRECT VS INCORRECT EXAMPLES

Highlighted text in the left column below indicates the incorrect word(s). **Bolded text in the middle column indicates the correction.**

USAGE: POOR WORD CHOICE

Original Incorrect Wording	Corrected Wording	Rationale
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The authors thank Professor [...] for his assistance and **instruction** in manuscript preparation.

Vindesine **given** two times in single doses.

... followed by **2-week systemic therapy** (1656)

Animal experiments **found** that ...

... not very ideal ...

Studies by Gjelland et al (23) ... and Tyrrel et al (24) ... **had** no procedure-related complications.

One patient **grew** *Candida glabrata* **yeast**.

It is the **intention** of the group that adherence to the recommendations will facilitate the main objective.

The procedure was **composed of ...**

The authors thank Professor [...] for his assistance and **guidance** in manuscript preparation.

Vindesine **administered** two times in single doses.

... followed by **2 weeks of systemic therapy** OR a **2-week systemic therapy regimen**

Animal experiments **revealed** or **showed** that ...

... hardly ideal or not ideal

Studies by Gjelland et al (23) ... and Tyrrel et al (24) ... **report** no procedure-related complications.

One patient **developed** *Candida glabrata* yeast **infection**.

It is the **position** of the group that adherence to the recommendations will facilitate the main objective. /opinion/standpoint of the group?

The procedure **consisted of** ...

“guidance” (advice, counseling) is more appropriate in this context than “instruction,” which connotes authoritative orders or directions.

While “given” is not altogether incorrect, the established wording is “administered.”

Usage.

Experiments do not find anything; people do.

“Ideal” is a superlative; therefore, it cannot take an intensifier.

Studies do not have procedure-related complications—patients do.

One does not grow *Candida* yeast.

“intention,” (having a purpose/design), doesn’t fit the context. Suitable alternatives include “position,” “opinion,” “standpoint.”

Both “to compose of” and “to consist” of mean “to make up, to form,” but “to compose” refers to the components of a physical substance, while “to consist of” is mostly used with abstractions, such as “procedure.”

The procedure time ... was **similar between** the two access methods. The procedure time ... was **similar in** the two access methods. Usage.

USAGE: COLLOQUIALISMS/NONSCIENTIFIC WORDING/JARGON

Original Incorrect Wording	Corrected Wording	Rationale
After treatment, the patients were on continued hydration.	After treatment, the patients received continued hydration.	“were on” = jargon
Patients were on antibiotics for an average of 16.1 days.	Patients were placed on antibiotics for an average of 16.1 days.	Same.
A 75-year-old male with a remote history of multiple abdominal surgeries for mesenteric ischemia ... presented to our institution with bright red blood from his rectum.	A 75-year-old male with a remote history of multiple abdominal surgeries for mesenteric ischemia ... presented to our institution with chronic lower GI bleeding.	The original wording is too colloquial for formal writing.
. . . acute abdominal pain imaged after 3 days of broad-spectrum intravenous.	. . . acute abdominal pain imaged after 3 days of broad-spectrum intravenous antibiotic treatment.	Although often used (medical jargon), “intravenous” is by itself grammatically incorrect and imprecise. The context suggests “intravenous antibiotic treatment.”

USAGE: UNIDIOMATIC/AWKWARD PHRASING

Original Incorrect Wording	Corrected Wording	Rationale
Survival time was calculated from the day of procedure until death or the day of the last follow-up before this article was written. ... Cases 31 and 32 were followed up only 33 and 31 days at the time this article was written ...	Survival time was calculated from the day of the procedure until death or the day of the last follow-up before the time of this writing ... Cases 31 and 32 were followed up only 33 and 31 days till the time of this writing.	Awkward turn of phrase.
... successfully treated with stent placement of the IVC.	. . . successfully treated with caval balloon angioplasty and stent placement.	One does not “stent of” the IVC. In the corrected version, this construction is avoided. “Stent” is not a verb.
Second, the intraarterial access method is unsuitable for experiment employing devices such as a stent ... [instead of something like “unsuitable for experimental use of ...]	Second, the intraarterial access method is unsuitable for the experimental use of devices such as a stent.	Awkward.
Patients admitted to our hospital with HCC complicated by tumor thrombus in the MPV were considered to be enrolled in this study.	Patients admitted to our hospital with HCC complicated by tumor thrombus in the MPV were considered for enrollment in the study.	Awkward.

PREPOSITIONS: MISUSED

Original Incorrect Wording	Corrected Wording	Rationale
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... predictors **to** survival ... predictors **of** survival Usage.

... while **eliminating of possible** existence of micrometastasis ... [instead of “eliminating the possibility of” or “the possible presence of”] “ ... while **eliminating the possible** existence of micrometastasis ... “ Usage.

ARTICLES: OMITTED

The issue here is not consistent omission of articles for purposes of brevity but random omission of articles in places where they are prescribed by correct usage. On a superficial level, omitted articles convey an impression of illiteracy, which should be avoided. On another level, omitted articles may disorient the reader. This is because articles are not merely decorative words, so authors may need to be made aware that in English, articles have an essential role in the distribution of old vs new information.

The indefinite article (a, an) should be used to introduce new information. In scientific writing, the indefinite article is mostly used to (1) refer to something for the first time (eg, “An expandable electrode is inserted into the tumor”); (2) introduce nonspecific/nonparticular items (eg, “We used a catheter” = any catheter); or (3) introduce a particular member of a group/class (eg, “This is a Surflo catheter.”).

The definite article (the) should be used to define/identify (1) something or make it uniquely specific (eg, the Michel classification, the Kaplan-Meier survival estimator); (2) information already known to the speaker/reader; or (3) information already mentioned/implied. Thus, something that was used or can be implied as an “a,” becomes a “the” once it’s referenced again (eg, This is the Surflo catheter [i.e., the one I told you about])

It is ok not to use articles in reference to (1) indefinite plurals (eg, “a patient” but “patients”); (2) mass/uncountable/material nouns (eg, “blood,” “urine,” etc.); or (3) things in general/general truths (eg, “Pain experienced during RF ablation of lung cancer is an important concern” [pain is both uncountable and seen in terms of a general truth]).

Original Incorrect Wording	Corrected Wording	Rationale
Diameter and length of	The diameter and length	The definite article is needed to

<p>titanium capsules are 0.8 mm ... Diameter and length of the obstructed MPV were measured.</p>	<p>of titanium capsules are 0.8 mm ... The diameter and length of the obstructed MPV . . .</p>	<p>define/identify a particular thing.</p>
<p>According to European Association for the Study of the Liver ...</p>	<p>According to the European Association for the Study of the Liver ... (1661)</p>	<p>Same</p>
<p>Previous intraarterial infusion of antitumor agent mixed with iodized oil to treat HCC was performed ... To identify all feeding arteries of tumor ...</p>	<p>Previous intraarterial infusion of antitumor agent mixed with iodized oil to treat HCC was performed . . .To identify all feeding arteries of the tumor . . .</p>	<p>The definite article is needed to refer to something previously mentioned or known.</p>
<p>Warfarin was administered orally. Dose was adjusted based on coaguability test.</p>	<p>Warfarin was administered orally. The dose was adjusted based on the coaguability test. (1661)</p>	<p>Same</p>
<p>Timing of surgery was ...</p>	<p>The timing of surgery was ...</p>	<p>Same</p>
<p>In two of these patients, decision to perform salpingo-oophorectomy was made at bowel surgery.</p>	<p>“In two of these patients, the decision to perform salpingo-oophorectomy was made at bowel surgery.</p>	<p>Same</p>
<p>Sequential computed tomography (CT) fluoroscopy images obtained during creation of artificial pneumothorax. (a) Multitined expandable electrode (arrow) is inserted into tumor (arrowhead), and</p>	<p>Sequential computed tomography (CT) fluoroscopy images obtained during the creation of artificial pneumothorax. (a) A multitined expandable electrode (arrow) is</p>	<p>“a” and “the” used to refer to new vs old information.</p>

its tines are fully expanded. (b) **Electrode** is advanced, creating a space (arrow) in the pleural cavity. (c) A 20-gauge intravenous catheter (arrow) is inserted into the pleural cavity. (d) **Pleural cavity** is enlarged by administering carbon dioxide (CO₂) through an intravenous catheter.

inserted into **the** tumor (arrowhead), and its tines are fully expanded. (b) **The electrode** is advanced, creating a space (arrow) in the pleural cavity. (c) A 20-gauge intravenous catheter (arrow) is inserted into the pleural cavity. (d) **The pleural** cavity is enlarged by administering carbon dioxide (CO₂) through an intravenous catheter. (1686)

Interobserver agreement for crossover CO₂ enhancement of the Couinaud segment was evaluated **by *k*** test. Presence of crossover enhancement in patients with and without cirrhosis was analyzed **by X^2 test** ... Type I, celiac trunk gives rise to **hepatic propria**, which in turn bifurcate into **left and right hepatic arteries**; type II, celiac trunk gives rise to **right hepatic artery**, whereas **left hepatic artery is** derived from the left gastric artery; **and** type III, celiac trunk gives rise to the left hepatic artery and the right hepatic artery is replaced **to** the superior mesenteric artery.

Interobserver agreement for crossover CO₂ enhancement of the Couinaud segment was evaluated by **the *k*** test. **The** presence of crossover enhancement in patients with and without cirrhosis was analyzed by **the X^2** test ... Type I celiac trunk gives rise to **the** hepatic propria, which in turn bifurcate into **the** left and right hepatic arteries; type II celiac trunk gives rise to **the** right hepatic artery, whereas **the** left hepatic artery is derived from the left gastric artery; type III celiac trunk gives rise to the left hepatic artery, and the right hepatic artery is replaced **by** the superior mesenteric artery.

To identify all feeding

To identify all feeding

“the” should be used for the “uniquely specific” *k* and X^2 tests.

Other changes: Removed commas after “Type I,” and “type II, and type III”; removed “and” before “type III” because a break is needed between information relating to type II and type III arteries; replaced “to” with “by” before “the artery” at the very end.

“the” is needed to define a specific tumor, previously discussed.

arteries **of tumor**,
angiography ... was
performed.

arteries of **the** tumor,
angiography ... was
performed. (1661)

ARTICLES: UNNECESSARY

Original Incorrect Wording	Corrected Wording	Rationale
. . . thereby, enhancing the survival.	. . . thereby, enhancing survival.	The topic here is survival in general not the survival of a particular person.
Of specific interest was ... whether the left gastric artery contributed to the hepatic circulation.	Of specific interest was ... whether the left gastric artery contributed to hepatic circulation.	The topic here is hepatic circulation in general, not the hepatic circulation of a specific person.

ADJECTIVES INSTEAD OF ADVERBS

Original Incorrect Wording	Corrected Wording	Rationale
... ... 24 tuboovarian abscesses were ultrasound guided (21 transvaginal and three transabdominal).	. . . 24 tuboovarian abscesses were ultrasound guided (21 transvaginally and three transabdominally).	“transvaginal” and “transabdominal” are adjectives; they are incorrectly used to modify the verb “guided.” In the corrected version, the adjectives were converted to adverbs.
. . . would reduce potential confounding variables.	. . . would reduce potentially confounding variables.	“potential” is an adjective, incorrectly used to modify another adjective. An adverb is needed to modify another adjective. In the corrected version, the adjective was replaced by the corresponding adverb.

VERBS: OMITTED

Original Incorrect Wording	Corrected Wording	Rationale
Radiation emitted by the ¹²⁵ I strand distributed homogeneously .	Radiation emitted by the ¹²⁵ I strand was distributed homogeneously.	

VERBS: INCORRECT CHOICE OF PAST VS PRESENT

Original Incorrect Wording	Corrected Wording	Rationale
Since 2003 we complemented the TACE therapy.	Since 2003, we have complemented the TACE therapy.	“Since 2003” implies that the action started in the past and still continues in the present.

VERBS: WRONG SEQUENCE OF TENSES

General rule: Simultaneous or temporally close actions should be expressed by the same tenses (did – did; was doing – was doing; had done – had done; had been doing – had been doing, etc.). When it is important to show that the past actions are consecutive, as it happens when “after” is used, the action preceding another past action should be expressed by the past perfect tense (had done, had been doing), while the more recent past action, by the past tense (did, was doing).

Original Incorrect Wording	Corrected Wording	Rationale
Only nonsteroidal anti-inflammatory drugs were occasionally needed by the patient, and he had returned to work.	Only nonsteroidal anti-inflammatory drugs were occasionally needed by the patient. The patient was able to return to work	In the original wording, the use of “had returned” implies a past action that occurred before another past action; in this case, it incorrectly implies that the patient returned to work <u>before</u> , rather than <u>after</u> , receiving treatment with anti-inflammatory drugs. The context

After ¹²⁵ I seed and self-expandable stent **were** placed in the obstructed MPV, chemoembolization was performed.

After ¹²⁵ I seed and self-expandable stent **had been placed** in the obstructed MPV, chemoembolization was performed.

suggests temporally close past actions; therefore the past tense should have been used for both verbs.

In the original example the past tenses used in “were placed” and “was performed” imply that the actions are simultaneous; however, the use of “after” dictates that seed and stent placement preceded chemoembolization. Hence, “were placed” was changed to “had been placed” in the corrected version.

A diagnosis of insulinoma of the pancreatic head had been made 10 years before, when the patient **presented** with similar symptoms.

A diagnosis of insulinoma of the pancreatic head had been made 10 years prior, when the patient **had presented** with similar symptoms.

In the original version, different tenses are used to indicate consecutive actions while the context indicates that the actions are almost simultaneous. Thus, the use of “presented” (past t.) after “had been made” (past perfect t.) incorrectly suggests that the patient presented with similar symptoms AFTER rather than BEFORE or DURING the time the diagnosis was made. To indicate that the diagnosis was made at the time the patient presented, the same tense needs to be used (“had been made”/“had presented”). (Both actions occurred 10 years before another past action; hence, the past perfect rather than the past t.)

We searched our institutional database for patients who **had** image-guided TOA drainage between 1999 and the end of 2008.

We searched our institutional database for patients who **had had** image-guided TOA drainage between 1999 and the end of 2008.

Since the drainage occurred before the search, “had image-guided drainage” is incorrect because it wrongly states that the actions were simultaneous. To show precedence in the past, “had had” should have been used.

After image-guided drainage, mean follow-up was 48 months in patients who **have not had** related surgery.

After image-guided drainage, mean follow-up was 48 months in patients who **had not had** related surgery.

“have not had” in the original version is incorrect because it is a present tense, while the previous clause sets the action in the past. Since the surgery occurred before another action in the past, “had not had” should have been used.

VERBS: INCORRECT/UNNECESSARY PASSIVE VOICE OR CONSTRUCTIONS WITH PASSIVE MEANING

A passive construction is a construction consisting of a participle and an auxiliary verb (eg, The procedure **was performed** (by the physicians)) instead of “The physicians **performed** the procedure.”). In this context, it is important to make the distinction between grammatical and logical subject. The grammatical subject coincides with the logical subject (i.e., the agent of the action, the doer). However, in a passive construction, the grammatical subject is not the doer of an action, but its undergoer. Since the logical subject is secondary in importance, it is not always expressed (if it is, it is expressed by a “by” construction as “by the physicians”). These distinctions are important in constructions that are active in form but passive in meaning, as in the second example.

Original Incorrect Wording	Corrected Wording	Rationale
Although survival rate for the patients with Wilms tumor has been greatly improved the treatment remains a challenge.	Although survival rate for the patients with Wilms tumor has greatly improved the treatment remains a challenge.	“been” in “has been greatly improved” is not needed (it creates a passive construction in an active context)
Due to the refractory nature of the patient’s lower GI bleed and the presence of venous collaterals identified on prior imaging, the patient underwent an IVC venogram.	Due to the refractory nature of the patient’s lower GI bleed and the presence of venous collaterals identified on prior imaging, we performed an IVC venography.	Note that in formal, i.e., grammatical terms, “the patient underwent an IVC venogram” is not a passive but an active construction, and the grammatical subject of the sentence is the patient. However, the patient is an undergoer, not a doer, and in this context the grammatical subject should have been the doer—we—because it is the “we” not the patient that did something about the

refractory nature of the GI bleed. In the corrected version, the logical subject coincides with the grammatical subject.

FAULTY/AWKWARD WORD ORDER

Original Incorrect Wording	Corrected Wording	Rationale
“is used widely”; “was dissected gently”; “was ligated tightly”; “underwent successfully”	“is widely used”; “was gently dissected”; “was tightly ligated”; “successfully underwent”	Frequent or systematic use of adverbs of manner after the verbs is unidiomatic. Adverbs of manner usually precede verbs; they can be occasionally placed after the verb for emphasis, but the norm is to place them before the verb.
Open surgery still is performed frequently in the aortoiliac segment.	Open surgery is still frequently performed in the aortoiliac segment.	When used with composite verb form (“is performed”), adverbs of manner (“still”) or frequency (“frequently”) should be placed between the auxiliary (“is”) and the main verb (“performed”) as in the corrected version.
Through the 5-F sheath , two 0.035-in wires were inserted into the splenic vein ... Through the outer canula of the NEFF set , the ¹²⁵ I seed strand was inserted to the target position.	Two 0.035-in wires were inserted into the splenic vein through the 5-F sheath ... The ¹²⁵ I seed strand was inserted to the target position through the outer canula of the NEFF set .	A phrase indicating the means by which an action is achieved is usually placed at the end of the sentence, as in the corrected version.
The three physicians each spent on half-day a week ...	Each of the three physicians ...	“each” needs to be placed next to the word it modifies (“physicians”).
The angiographic catheter	The angiographic	A limiting adverb (“only”) should

was directed **into only** the right hepatic artery.

catheter was directed **only into** the right hepatic artery.

precede a preposition (“into”).

. . . tumor thrombus provided by the radiation from the ¹²⁵I seed **strand implanted.**

tumor thrombus provided by the radiation from the **implanted** ¹²⁵I seed strand.

Adjectives precede nouns.

LACK OF GRAMMATICAL PARALLELISM

Grammatical parallelism informs logical coordination of ideas. It consists of using parallel forms, that is, the same grammatical patterns, for functionally similar ideas. Simply put, parallel grammatical forms should mirror matching ideas.

Grammatical parallelism is needed in equational statements, such as “that is”/“i.e.” or “A is B” constructions.

Parallelism may include words, phrases, clauses, and sentences. At sentence level, it is often, but not always, signaled by the coordinating conjunctions **and, but, not, or, for, so, yet**, by the correlative conjunctions **both – and, either – or, neither – nor, not only – but also**, or by other constructions, such as ... **rather than**. Faulty parallelism refers to constructions that are faulty in that they signal coordination but don’t “deliver” it, thus incorrectly correlating *unlikes* rather than likes.

Grammatical parallelism is also needed in lists. The items of a well-written list should be grammatically parallel (eg, nouns or noun phrases should be listed with nouns or noun phrases; verbs or verb phrases, with verbs or verb phrases). If the list items should consist of sentences, the sentences should be similarly structured.

Original Incorrect Wording	Corrected Wording	Rationale
EQUATIONAL STATEMENT (“i.e.” type) There is a new concept of flow redistribution (i.e., occlude intrahepatic vessels before radioembolization to cause redistribution of flow.	There is a new concept of flow redistribution (i.e., occlusion of intrahepatic vessels before radioembolization to cause redistribution of flow).	“i.e.” requires that the word following it shares the same grammatical category as the word it explains, in this case a noun. In the corrected version, the parallelism is established by using a noun instead of a verb.

EQUATIONAL STATEMENT (“A” is “B” type) IN LIST: The inclusion criteria were as follows: (i) diagnosis of HCC **was confirmed** by histology, cytology, or persistently elevated serum alpha-fetoprotein (> 400 ng/mL) with typical imaging findings; (ii) according to the Barcelona Clinical Liver Cancer staging classification, HCC **was deemed** unsuitable for resection, liver transplantation, or percutaneous ablation; (iii) tumor thrombus in the MPV **was** diagnosed by the imaging criterion of filling defect with enhancement detected in the MPV on the arterial phase of enhanced computed tomography (CT) or magnetic resonance imaging before therapy; (iv) at least the second-order branch of the intrahepatic portal vein **was** patent in one lobe; (v) no therapy **had been performed** for MPV tumor thrombus (vi) Child-Pugh Classification **was** grade A or B.

The inclusion criteria were as follows: (i) diagnosis of HCC **confirmed** by histology, cytology, or persistently elevated serum alpha-fetoprotein (> 400 ng/mL) with typical imaging findings; (ii) **the unsuitability** of HCC for resection, liver transplantation, or percutaneous ablation according to the Barcelona Clinical Liver Cancer staging classification (17); (iii) **contrast-enhancing tumor thrombus with the MPV on CT or MRI** (iv) at least the second-order branch of the intrahepatic portal vein **being** patent in one lobe; (v) no prior therapy for MPV tumor thrombus and (vi) Child-Pugh classification grade A or B.

Seemingly, the constructions given in the original version are parallel in that all list items are sentences. However, using sentences in this list does not meet the parallelism required by the equational statement “The inclusion criteria were...” This statement dictates that noun phrases need to be used to match “criteria.” For this reason, the verbs (“was” and “had been performed”) were removed. Other changes include the editing of point (ii), which had no criterion expressed in noun form and which includes the incidental prepositional phrase “according to ...” The sentence “HCC was deemed unsuitable ...” was converted into a noun phrase (“the unsuitability of HCC”), and the incidental prepositional phrase was moved to the end of the list item. The convoluted sentence was condensed—in point (iii) to a compact noun phrase, “was” was changed to “being” in point (iv), and the verbs in points (v) and (vi) were deleted.

EQUATIONAL STATEMENT (“A” is “B” type) IN LIST: The inclusion criteria were as follows: (i) diagnosis of HCC confirmed by histology; (ii) **according to the Barcelona Clinical Liver Cancer Staging**

The inclusion criteria were as follows: (i) **diagnosis of** HCC confirmed by histology; (ii) **the unsuitability for resection of** HCC according to the Barcelona Clinical Liver Cancer Staging

The three list items in the original examples present three different grammatical structures. In the corrected wording, the items are grammatical parallel, thanks to the noun phrases (bolded) used in each item.

classification, HCC was deemed unsuitable for resection; (iii) at least the second-order branch of the IPV.

classification; (iii) **the presence of** at least the second-order branch of the IPV.

EQUATIONAL STATEMENT (“A” is “B” type) IN LIST: The exclusion criteria were as follows: intrahepatic portal vein was completely occluded by HCC; (ii) superior mesenteric vein or splenic vein or both were involved by tumor thrombus; (iii) patient had contraindications for chemoembolization.

The exclusion criteria were as follows: intrahepatic portal vein ~~was~~ completely occluded by HCC; (ii) superior mesenteric vein or splenic vein or both ~~were~~ involved by tumor thrombus; (iii) ~~patient had~~ contraindications for chemoembolization.

The three list items in the original examples present three different grammatical structures. In the corrected wording, the items are grammatical parallel, thanks to the noun phrases (bolded) used in each item.

LIST: ... therapies ... should be reported, including (i) nature of additive therapy, (ii) **whether the additive therapy was performed**, (iii) rationale and (iv) timing of additive therapy, and (v) **whether treatment was first-, second-, or third-line in nature**.

“ ... therapies ... should be reported, including (i) nature of additive therapy, (ii) **data on any additive therapy performed**, (iii) rationale and (iv) timing of additive therapy, and (v) **data on the nature of the treatment (first-, second-, or third-line)**.”

In the original version, points (i), (iii), and (iv) consist of noun phrases, while (ii) and (v) consist of subordinate conditional clauses introduced by “whether.” To be parallel, all the list items should either be noun phrases or conditional clauses. In the corrected version, the conditional clauses were eliminated by the replacement of “whether” with a noun phrase—“data on”—and other adjustments.

WORDS CONNECTED BY “AND”: This study includes **the experience of interventional radiology and minimally invasive intervention departments** of three hospitals. (1645)

This study includes the experience **of interventional radiologists and of members of** minimally invasive intervention departments of three hospitals.

In the original sentence, a discipline (“interventional radiology”) is put on the same par with an infrastructure (“minimally invasive intervention departments”) thanks to “and.” To establish grammatical parallelism, the words connected by “and” should have the same grammatical category, as in the revised sentence, where “end”

PHRASES CONNECTED BY “RATHER THAN”: The case-based approach provides the reader with a greater **ability to differentiate** between multiple entities rather than **memorizing** multiple different disorders.

The case-based approach provides the reader with a greater ability **to differentiate** between multiple entities rather than [the ability] **to memorize** multiple different disorders.

connects two noun phrases.

The text compares two abilities: ability to differentiate and to memorize. When it comes to memorizing the word “ability” is not expressed but implied. In the original wording, an infinitive verb is used after “ability” (“to differentiate”) but a gerund (“memorizing”) after “rather than [the ability].” To establish parallelism the same grammatical forms (in this case, infinitives), “ability to differentiate” and “ability to memorize” should have been used.

PHRASES CONNECTED BY “OR”: However, **in patients with** an indwelling T tube or a transcystic catheter, **or when endoscopic retrograde cholangiopancreatography with sphincterotomy is not recommended** or has failed, a percutaneous treatment is a valuable alternative.

However, **in patients with** an indwelling T tube or a transcystic catheter, or **in patients with whom** endoscopic retrograde cholangiopancreatography with sphincterotomy is not recommended or has failed, a percutaneous treatment is a valuable alternative.

In the original sentence, “or” signals the need for a parallel construction; therefore, a noun phrase, not a “when” clause, should have followed it to match “in patients with an indwelling T tube.” The problem is fixed in the corrected version.

SENTENCES CONNECTED BY “EITHER ... OR”: Patients **either were inpatients** at the time of the procedure or **admitted** by **prior arrangement afterwards**.

Patients were **either in-patients** at the time of the procedure **or patients** admitted afterwards by prior arrangement.

In the original example, the “either ... or” construction sets the tone for grammatical parallelism, which is faulty in that “either” is followed by a predicate noun, that is, a noun (“inpatients”) that renames the subject (“patients”) while “or” is followed by a verb in the passive voice (“were admitted”). In the corrected version, “either” and “or” are followed by nouns. In addition, “afterwards” was repositioned for clarity.

EQUATIONAL STATEMENT (“A” is “B” type) IN LIST: The inclusion criteria were as follows: (i) diagnosis of HCC confirmed by histology; (ii) **according to the Barcelona Clinical Liver Cancer Staging classification, HCC was** deemed unsuitable for resection; (iii) at least the second-order branch of the IPV.

The inclusion criteria were as follows: (i) **diagnosis of HCC** confirmed by histology; (ii) **the unsuitability for resection of HCC** according to the Barcelona Clinical Liver Cancer Staging classification; (iii) **the presence of** at least the second-order branch of the IPV.

The three list items in the original examples present three different grammatical structures. In the corrected wording, the items are grammatical parallel, thanks to the noun phrases (bolded) used in each item.

EQUATIONAL STATEMENT (“A” is “B” type) IN LIST: The **exclusion criteria were as follows: (i) intrahepatic portal vein was completely occluded by HCC; (ii) superior mesenteric vein or splenic vein or both were involved by tumor thrombus; (iii) patient had contraindications for chemoembolization.**

The exclusion criteria were as follows: (i) intrahepatic portal vein ~~was~~ completely occluded by HCC; (ii) superior mesenteric vein or splenic vein or both ~~were~~ involved by tumor thrombus; (iii) ~~patient had~~ contraindications for chemoembolization.

The three list items in the original examples present three different grammatical structures. In the corrected wording, the items are grammatical parallel, thanks to the noun phrases (bolded) used in each item.

EXCESSIVELY LONG CONSTRUCTIONS

Original Incorrect Wording	Corrected Wording	Rationale
<p>The vascular center is a 20,000–square foot facility that comprises 52 physicians from the different specialties at our institution that provide vascular care, including vascular medicine, vascular surgery, cardiology, general internal medicine, podiatry, and IR.</p>	<p>The vascular center is a 20,000–square foot facility that comprises 52 physicians from the different specialties at our institution. Our physicians provide vascular care, including vascular medicine, vascular surgery, cardiology, general internal medicine, podiatry, and IR.</p>	<p>In addition to length, this sentence suffers from repetitive structures (... that ... that). The problem can be easily fixed by splitting the sentence in two or by using a “which” clause and making minor adjustments.</p>
<p>A ^{99m}Tc tagged RBC study was performed showing serpentine uptake that followed the transverse and descending colon with no evidence of</p>	<p>OR</p> <p>The vascular center is a 20,000–square foot facility that comprises 52 physicians from the different specialties at our institution, which provides vascular care, including vascular medicine, vascular surgery, cardiology, general internal medicine, podiatry, and IR.</p>	<p>In the corrected version, the text was condensed through the (1) elimination of unnecessary wording (“were performed showing,” “further evaluation, which included,” “tortuous”) or (2) replacement of</p>

active bleeding (Fig 1A). Further evaluation, which included abdominal MRI, computed tomography (CT), and a mesenteric angiogram, confirmed the presence of retroperitoneal fibrosis causing infrarenal IVC occlusion with large tortuous venous collaterals along the colon.

there was no evidence of active bleeding (Fig 1A). Abdominal MRI, computed tomography (CT), and a mesenteric angiography, confirmed ... **with large pericolonc** venous collaterals.

several words (“along the colon”) with one word (“pericolonc”). A semicolon and other adjustments were used to split the sentence in two (“... descending colon; there was no evidence of ...”) Note also that “angiogram” was replaced with “angiography.”

Ongoing clinical research is evaluating its qualities of radiation protection **and** ergonomics, **and** future analysis will determine how Zgrav impacts the way interventionalists protect themselves from the deleterious effects of radiation **and** helps minimize musculoskeletal problems associated with current garment systems.

Ongoing clinical research is evaluating its qualities of radiation protection and ergonomics. Future analysis will determine how Zgrav impacts the way interventionalists protect themselves from the deleterious effects of radiation and helps minimize musculoskeletal problems associated with current garment systems.

The original sentence is long and includes three “and’s.” It can be easily split in two, as shown in the corrected example. The second “and” was deleted, and a new sentence was created.

He also had a history of recurrent episodes of massive GI bleed from anastomotic varices ... that were treated **on multiple occasions by endoscopy**.

He also had a history of recurrent **upper GI bleeding** from anastomotic varices ... that were treated **endoscopically**.

Five words (highlighted) were condensed to one in the corrected version.

The efficacy and safety of each procedure were ensured by the bolus administration in low doses (0.1– 0.2 mL) of the

The “sandwiched” embolic agents were injected in small boluses administration (0.1– 0.2 mL) under

The original sentence is hard to follow because (1) it is unnecessarily long (hence, it was split in two in the corrected version); (2) it contains

sandwiched embolic agent under fluoroscopic control followed by arteriography and new embolization if occlusion was incomplete or more feeding vessels were found.

fluoroscopy and repeated angiography. Embolization was continued when new feeding vessels or incomplete embolization was seen.

unnecessarily long constructions (eg, “under fluoroscopic control” condensed to “fluoroscopy”); (3) it uses difference clauses when a single one can be used (eg, “if occlusion was incomplete or more feeding vessels were found” was compressed to “when new feeding vessels or incomplete embolization was seen”). Note also the quotation marks used in the corrected version for “sandwiched” to indicate that the word is used in a metaphorical sense.

REPETITIVENESS/REDUNDANCY

Original Incorrect Wording	Corrected Wording	Rationale
Endoscopic studies revealed small jejunal angiodyplasias that were thought to be the cause of his chronic bleeding. These angiodyplasias were treated multiple times by the injection of sclerosing agnts.	Endoscopic studies revealed small jejunal angiodyplasias that were thought to be the cause of his chronic bleeding. They were treated multiple times by the injection of sclerosing agents.	Although not strictly wrong, the second use of “angiodyplasias” is repetitive. Replace a noun by a pronoun whenever the identity or something or someone was made clear earlier in the text.
However, our study ... Also, our study design was not as well suited to the detection of backscatter as those that have reported its significance (20,21). Our study was instead designed to approach the eye exposure problem from	However, our study ... Also, our study design was not as well suited to the detection of backscatter as those that have reported its significance (20,21). Instead, it was designed to approach the eye exposure problem from	Noun replaced by pronoun.

Most liver cysts have an electrolyte composition similar to serum, which is rich in ions such as Na₊ and Cl⁻ (5). ~~In this perspective,~~ ~~Because the tines of the electrode that we used in our case were in contact with both the liver tissue and the fluid inside the cyst, our case may resemble a two-compartment model (liver parenchyma and fluid inside the hepatic cyst) with regions of very different electric conductivity, such as the model developed by Lobo et al (4). In our case the increased conductivity, because of the electrode tines located in contact with the fluid inside the cyst,~~ increased the amount of energy required to heat the target tissue, with the probably consequent inhibition of the roll-off phenomenon.

Most liver cysts have an electrolyte composition similar to serum, which is rich in ions such as Na₊ and Cl⁻ (5). Because the tines of the electrode that we used were in contact with both the liver tissue and the fluid inside the cyst, our case may resemble a two-compartment model (liver parenchyma and fluid inside the hepatic cyst) with regions of very different electric conductivity, such as the model developed by Lobo et al (4). In our case, the increased conductivity increased the amount of energy required to heat the target tissue, with the probably consequent inhibition of the roll-off phenomenon.

The 2nd and 3rd sentences are too long and contain redundant information. The phrase “in this perspective” in the 2nd sentence was deleted because it is implied. In the 3rd sentence, “because” was deleted because it is a verbatim repetition of the same clause in the preceding sentence. A hyphen was added to “roll-off” because that’s the correct spelling.

The institutional review board does not require approval of brief case reports.

The institutional review board does not require approval of case reports.

Either case reports or brief reports but not brief case reports.

OR

The institutional review board does not require approval of brief reports.

... median survival time **of their patients** was 13.7 months.

. . . median survival time was 13.7 months.

“of their patients” is implied, so it doesn’t need to be stated.

WORDINESS

Original Incorrect Wording	Corrected Wording	Rationale
“catheterization of the femoral artery,” “catheterization of the auricular artery,” “study in a pig model,” etc.	“femoral artery catheterization,” “auricular artery catheterization,” “in a pig model study,” etc.	Recurrent use of “of” constructions in a small space is wordy. The text can be easily condensed by using noun + noun constructions, as shown in the corrected version.
Some patients showed lack of response.	Some patients did not respond.	Wordy.
Thirteen of them had not response to the chemotherapy.	Thirteen of them did not respond to chemotherapy.	Wordy.
. . . preoperative chemotherapy for tumors unable to be resected or judged inoperable by imaging [instead of just “unresectable tumors”]	. . . preoperative chemotherapy for unresectable tumors.	Wordiness + incorrect usage.
. . . while eliminating of possible existence of micrometastasis ... “	. . . while eliminating the possibility of micrometastasis ...	Wordiness + incorrect usage.

INCONSISTENT USE OF SUBJECT

Original Incorrect Wording	Corrected Wording	Rationale
Patients are typically treated	Patients are typically treated	In the corrected version, the

until the patient is afebrile.

until **they are** afebrile.

number of the subject and verb of the second clause are made consistent with the first, and the noun is replaced by a pronoun.

UNCLEAR OR INCORRECT REFERENTS

Original Incorrect Wording	Corrected Wording	Rationale
<p>The patient had failed several attempted endoscopic procedures to place drainage catheters into the main pancreatic duct because of difficulty in passing the guide wire through the strictures.</p>	<p>Several attempted endoscopic procedures to place drainage catheters into the main pancreatic duct because of difficulty in passing the guide wire through the strictures had failed.</p>	<p>In the original version, failure is incorrectly attributed to the patient instead of being attributed to the procedure.</p>
<p>Several surgical and nonsurgical techniques have been described in the literature that are used to remove bile duct stones.</p>	<p>Several surgical and nonsurgical techniques that are used to remove bile duct stones have been described in the literature.</p>	<p>In the original sentence, the incorrect placement of the “that” clause causes it to modify “literature,” which is the incorrect referent. The correct referent is “techniques,” which is made clear in the corrected wording.</p>
<p>Ever since that time, different methods have been described, which include balloon-assisted pushing of bile duct stones into the duodenum with or without associated papillary balloon dilation.</p>	<p>Ever since that time, different methods have been described, and they include balloon-assisted pushing of bile duct stones into the duodenum with or without associated papillary balloon dilation.</p>	<p>In the original sentence, “which include” is incorrectly placed after a verb (“described”), making it a false antecedent. However, “which” clauses need nouns as antecedents, not verbs. In the corrected version, the “which” construction is removed, and the text revised to ensure that the information previously introduced by “which” refers to “methods,” not to “described.”</p>

MISPLACED MODIFIERS

A modifier is a word or phrase that gives more information about another word (the subject, verb, or object) in a clause. A modifier is misplaced when intervening words that appear between the modifier and the word that the modifier is meant to be attached to obscure the connection between them, and the statement becomes confusing.

Original Incorrect Wording	Corrected Wording	Rationale
However, the patient continued to have intermittent episodes of lower GI bleeding over a period of 11 months requiring frequent transfusions.	However, for the next 11 months, he continued to experience lower GI bleeding requiring frequent blood transfusions.	“(blood transfusions)” next to “months” incorrectly suggests that they, the months, required frequent transfusions. In the corrected version, the modifier is placed next to the noun it is logically attached to.

STYLING OF ISOTOPES

Isotopes are quite often styled inconsistently, as for instance, Y90, Y-90, 90Y, 90-Y, yttrium 90, Yttrium 90, yttrium-90, Yttrium-90, 90-yttrium, 90-Yttrium, etc. In the following example, three different styles coexist.

Original Incorrect Wording	Corrected Wording	Rationale
Presently, the following radionuclides are available. 90Y ... ¹³¹ I ... rhenium-188, phosphorus-32, , ... and ¹⁶⁶ Ho. [In addition, 90Y was styled as ⁹⁰ Y on a previous page and titanium is styled as 99mTC on a subsequent page.]	Presently, the following radionuclides are available. Yttrium-90 (⁹⁰ Y) ... iodine-131 (¹³¹ I) ... rhenium-188 (¹⁸⁸ Re), phosphorus-32 (³² P), , ... and holmium-166 (¹⁶⁶ Ho).	The corrected version lists the isotopes per <i>JVIR</i> style, which is isotope name (lower-cased), hyphen, isotope number at first mention, with the capitalized letter preceded by the superscripted number in parentheses. The abbreviated form should be used after the first mention.

FIGURES

For technical submission requirements, please see **Technical Submission Requirements for Figures** in the General Information section of the Instructions for Authors.

EDITORIAL REQUIREMENTS

COLOR

Is color used only if necessary? If not, redevelop the figure in a fashion that will not be color dependent (eg, replace, for instance, red lines, with solid lines, blue lines with dotted lines, etc.).

TEXT CITATIONS AND FIGURE NUMBERS

- Are figures cited at the appropriate location in the text?
- Do the figure numbers match the figure text citations?
- Do all the figures have [captions/legends?](#)¹

FIGURE-LEGEND CORRELATION

Some authors do not pay sufficient attention to the correlation between figure content and legends, and serious errors sometimes make their way into the proof stage. Spotting such errors at an earlier stage prevents unnecessary complications and delays. To alert you to the kind of errors you can expect to encounter, we compiled a selection of representative errors from actual manuscripts in **Figures and Legends: Correct vs Incorrect Examples** below. Issues to consider:

- Do the captions/legends correctly describe figure contents?
- Do the captions/legend text duplicate the information given in the text? If yes, suggest ways to improve it or alert the author.
- Are all the abbreviations used in the figure explained in the legend? If not, ask the author to do so.
- In multipart figures

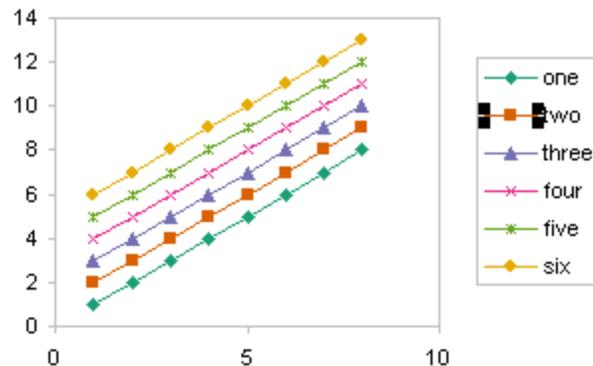
¹ **Caption:** Statement/headline/that identifies the content of a figure in title form. Therefore, the caption should be substantial in form (see example below).

Legend: Statement that describes/explains the contents of the figure in one or more sentences.

Some figures have only captions, others have both captions and legends, while still others just legends. It is preferable for a figure to have both a caption and a legend, but in some instances either one or the other are appropriate. The following example contains both a caption and a legend consisting of four parts (a-d):

Figure 2. Technical steps of urethral stent placement. **(a)** Initial right anterior oblique RUG via a catheter (arrow). Note also the urethra (arrowhead) filled with contrast medium. **(b)** Insertion of a guide wire (arrow) into the urethra and bladder. Note also the perforation of the bladder (arrowhead). **(c)** Insertion of a 4-F sheath (arrow) loaded with a urethral stent (arrowheads) into the urethra. **(d)** Right anterior oblique RUG immediately after stent placement shows patency and expansion of the stent (arrowheads).

- Are all figure part identifiers labeled sequentially in the image files provided—i.e., (a), (b), (c), not (a), (c), (b)? If not, please resubmit correctly labeled images.
- Do figure part identifiers in legend text match the part labels in the figure? If not, please make the necessary adjustments.
- Does legend content for each part adequately describe the corresponding part in the figure? If not, please make the necessary adjustments.
- Are all the arrows, arrowheads, lines (dotted, dashed, solid), shadings, asterisks, boxes, circles or other markers explained in the legend? If not, please do so.
- In charts and graphs
 - Are all [labels²](#) used terminologically consistently with the body text?
 - If you used color or shading, is it explained in a [key³](#) as in the example shown below? If not, please make sure to do so.



- Are the axes, labels, and any headings used in the figure consistently styled in terms of capitalization and use of bold/italics?
- Are figure labels grammatically parallel, that is, are similar grammatical categories or structures used? Please do not use verb phrases in one place, noun phrases in another, sentence structures in one place and nonsentence structures in another. This is especially true of diagrams, flowcharts/decision trees, where definitions of processes, events, steps, etc. should be consistent logically and grammatically.

² **Label:** Word and phrase that defines the data points in a graph or chart (eg, *Time [week 1, weeks 2, week 3]; Adverse effects, %; No. of study participants*).

³ **Key:** Explanation of colors, symbols, shading characteristics, and so forth used for variables in graphs.

CREDITS

Did you give full credit to the original source if a figure has been published previously? If not, make sure to do so. See also **Rights and Permissions** in the General Information section of the Instructions.

FIGURES AND LEGENDS: CORRECT VS INCORRECT EXAMPLES

CORRECT FIGURE-LEGEND CORRELATIONS

CORRECT EXAMPLE 1

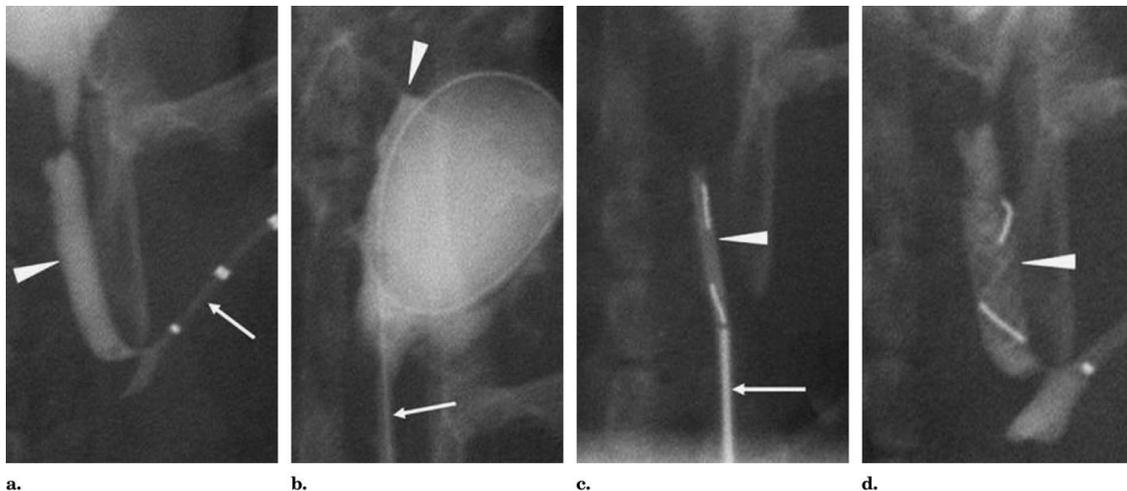


Figure 2. Technical steps of urethral stent placement. **(a)** Initial right anterior oblique RUG via a catheter (arrow). Note also the urethra (arrowhead) filled with contrast medium. **(b)** Insertion of a guide wire (arrow) into the urethra and bladder. Note also the perforation of the bladder (arrowhead). **(c)** Insertion of a 4-F sheath (arrow) loaded with a urethral stent (arrowheads) into the urethra. **(d)** Right anterior oblique RUG immediately after stent placement shows patency and expansion of the stent (arrowheads).

Comment

In this example, the author uses a caption, followed by legends for all figure parts. Each part legend is clearly identified at the beginning of the legend, and no confusion exists as to which legend describes which figure part.

CORRECT EXAMPLE 2

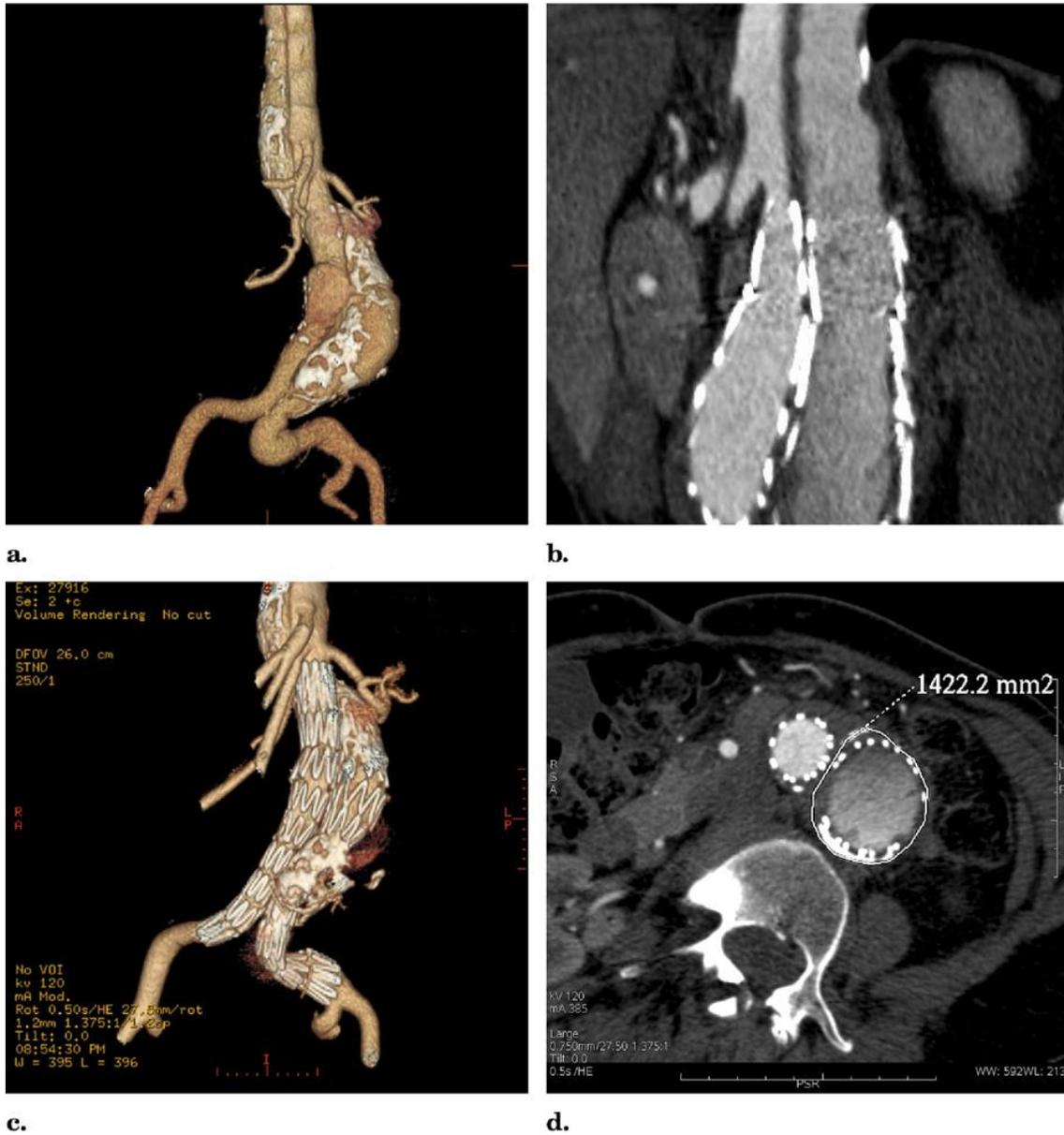


Figure. (a) MDCT three-dimensional reconstruction of dissecting abdominal aortic aneurysm before treatment. (b) Curved plane reconstruction at the level of proximal fixation of the stent grafts. Sealing was achieved in the true lumen and the false lumen. (c) MDCT three-dimensional reconstruction of two unilateral stent grafts implanted in the true lumen and the false lumen. Status at 1-year follow-up after treatment. (d) Decreased false lumen cross-sectional area (1422.2 mm²) after treatment.

Comment

In this example, figure and legend parts match, but it would have been preferable to provide a statement summarizing the entire legend before addressing each figure part.

INCORRECT FIGURE-LEGEND CORRELATIONS

INCORRECT EXAMPLE 1

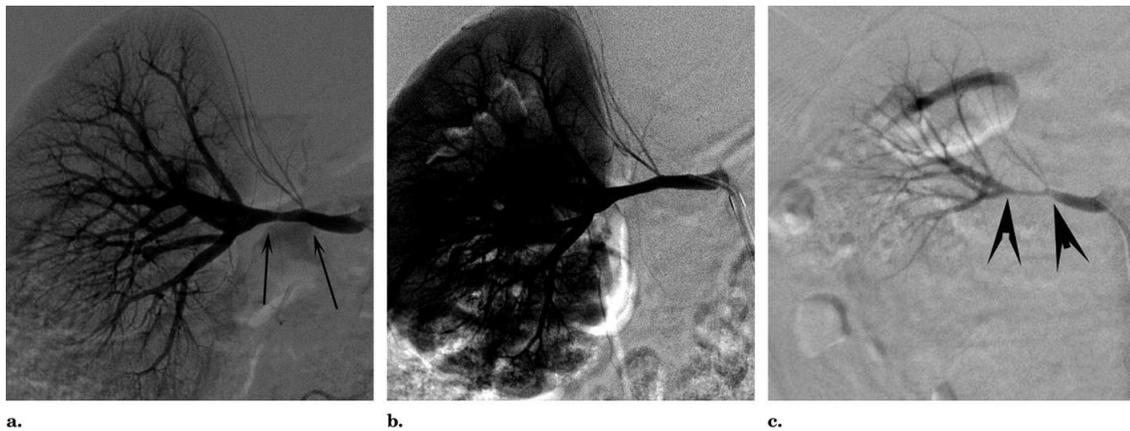


Figure 1. A 7-year-old boy. **(a)** A 50% smooth, long-segment narrowing of the right renal artery (arrows). **(b)** A good result after angioplasty. **(c)** Restenosis shown 3.5 months later (arrowheads). On follow-up, the patient remained on medication and may be a candidate for nephrectomy. A cutting balloon was not used in this patient.

Comment

Problem: In this case, the global legend statement “A 7-year-old- boy” is incorrect because the figure parts do not illustrate a boy but the specific condition he suffers from with the associated treatment narrative.

Solution: The caption can easily be improved by stating something like, “Failed clinical results in a 7-year-old boy with renal artery stenosis.”

INCORRECT EXAMPLE 2

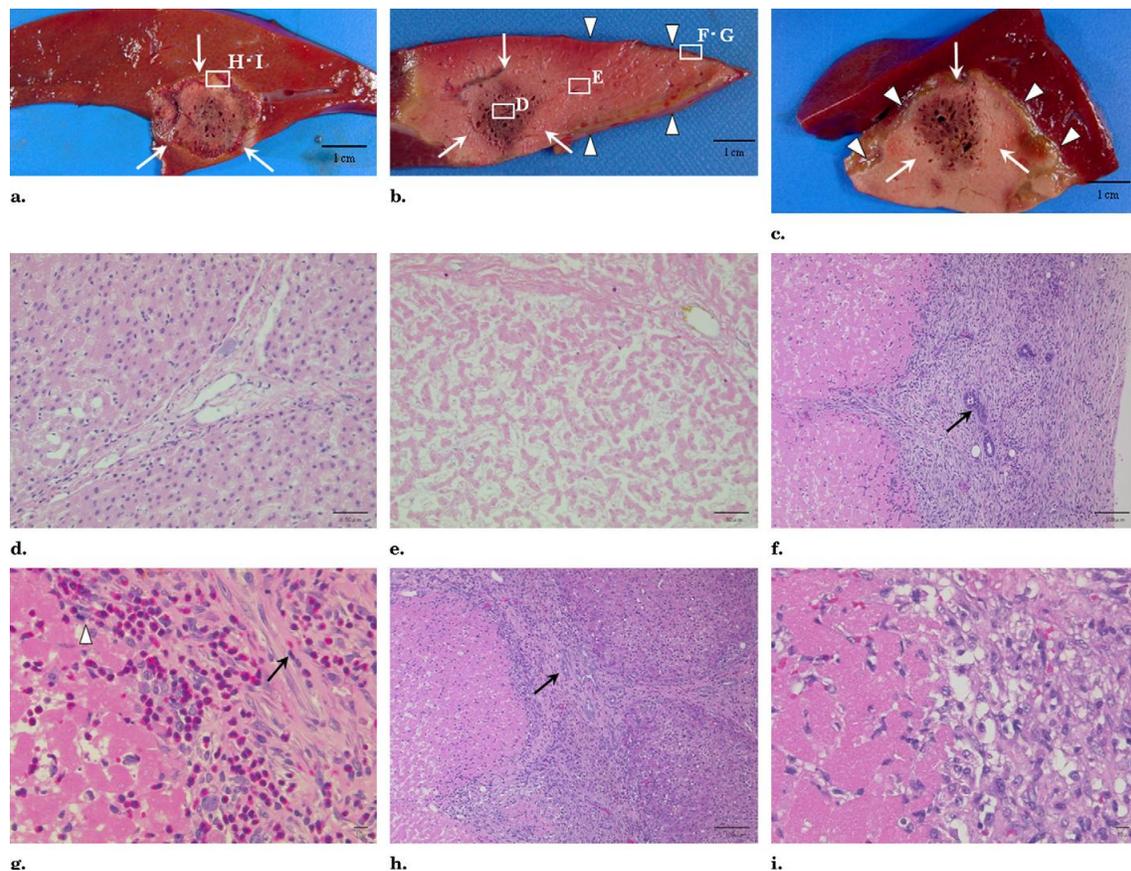


Figure 2. Liver samples obtained 1 week after the procedure. **(a)** Gross examination of the specimens subjected to RF ablation alone. **(b,c)** Gross examination of the specimens subjected to embolization/RF ablation show a wedge-shaped white degenerative area (arrowheads) starting at the ablated zone (arrows) and extending toward the periphery of the liver. **(d)** Microscopic examination of the ablated central zone subjected to embolization/RF ablation shows hepatocytes with homogeneous basophilic staining of the nuclei compared with specimens from normal control animals (**Fig 1c**); however, the stained sections did not meet the definitive histopathologic criteria for coagulation necrosis. (Original magnification, X 100.) **(e)** Microscopic examination of the peripheral degenerative parenchyma adjacent to the ablated zone subjected to embolization/RF ablation. (Original magnification, X 100.) The congestion had disappeared and only the ghosts of the hepatocytes remained; the findings met the histopathologic criteria for coagulative necrosis. **(f)** Microscopic examination of the subcapsular lesion of the peripheral degenerative area subjected to embolization/RF ablation shows fibrous tissue (right) with benign bile duct proliferation (arrow) surrounding the coagulative necrotic area (left). (Original magnification, X 50.) **(g)** High-power magnification shows infiltration of numerous eosinophils into the coagulative area (left). Neutrophils (arrowhead) and lymphocytes (arrow) were also seen in the area. (Original magnification, X 200.) **(h)** Microscopic examination of the lesion edge of the samples subjected to RF ablation alone. The coagulative necrotic area (left) was separated from the normal liver parenchyma (right) by a thin fibrous tissue that included fibroblasts and proliferating bile ducts (arrow). (Original magnification, X 50.) **(i)** High-power magnification

shows that infiltration of neutrophils and eosinophils was less evident compared with the embolization/RF ablation samples (g). (Original magnification, X 200.)

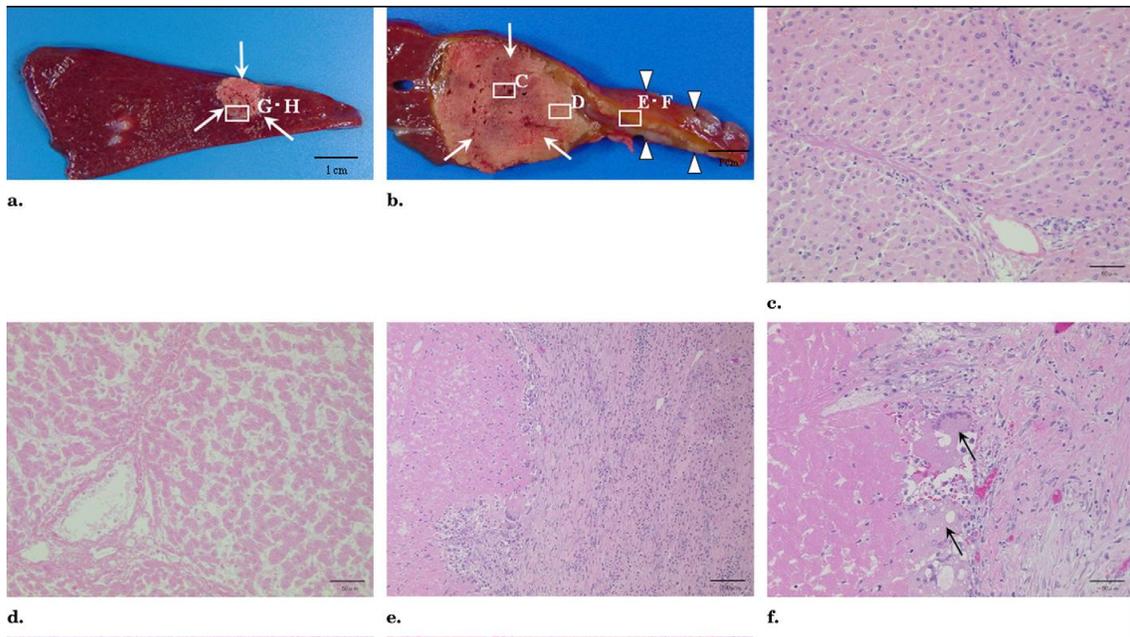
Comment

Problem:

1. In this case, the figure has all the parts listed in alphabetical order (a) through (i) but, in the legends, some parts are duplicated and/or are out of order: there are three separate legends for part (e), the second and third mentions of (e) are placed in sequence after (f), and (g) follows (i).
2. The legends for (a) and (b) do not explain the significance of the labels used (arrows, rectangle, and letters); instead, arrows and arrowheads, which are not shown in figure part (e), are mentioned in the second legend for this figure part.
3. Legend content for the second and third mentions of (e) does not match the image.
4. There is no legend text for (h).

Solution: The legend needs to be revised to ensure that no figure parts are duplicated in the legends, that they are listed in alphabetical order, that legend text for each figure part matches the corresponding image, that any references to arrows in legends match arrows in images and vice versa—any arrows showing in the images are explained in the legends.

.....
INCORRECT EXAMPLE 3



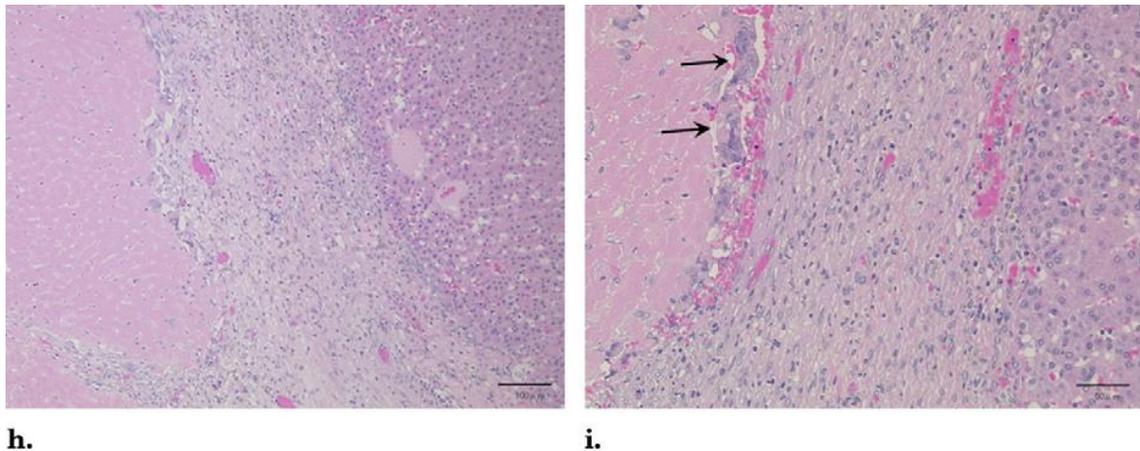


Figure 3. Liver samples obtained 4 weeks after the procedure. **(a)** Gross examination of the specimens subjected to RF ablation alone. The maximum areas of the ablated zones were significantly smaller than those in specimens obtained immediately after (**Fig 1a**) or 1 week after (**Fig 2a**) ablation. **(b)** Gross examination of the specimens subjected to embolization/RF ablation. The margin of the ablated zone (arrows) is vague, and the peripheral parenchyma separate from the ablated zone shows remarkable atrophy (arrowheads). **(c)** Microscopic examination of the ablated central zone subjected to embolization/RF ablation. (Original magnification, X 100.) The staining pattern was similar to that obtained 1 week after the procedure (**Fig 2d**) and did not meet the definitive histopathologic criteria for coagulative necrosis. **(d)** Microscopic examination of the peripheral degenerative parenchyma adjacent to the ablated zone subjected to embolization/RF ablation. (Original magnification, X 100.) The cytoplasmic and nuclear staining of the liver parenchyma was paler, which is a typical characteristic of coagulative necrosis. **(e)** Microscopic examination of the lesion edge of the peripheral degenerative area subjected to embolization/RF ablation. Thick fibrous tissue (right) surrounding the coagulative necrotic area (left) was observed. (Original magnification, X 50.) **(f)** High-power magnification of the lesion edge of the peripheral coagulative area subjected to embolization/RF ablation shows that the infiltration of eosinophils and neutrophils was no longer evident compared with **Fig 2g**, although macrophages and multinucleate giant cells (arrow) were now present. (Original magnification, X 100.) **(g)** Microscopic examination of the lesion edge of the specimens subjected to RF ablation alone. The coagulative necrotic area (left) was separated from the normal liver parenchyma (right) by a thin fibrous tissue layer. (Original magnification, X 50.) **(h)** High-power magnification showed that macrophages and multinucleate giant cells (arrows) were present in the periphery of the coagulative area. (Original magnification, X 100.)

Comment

Problem:

1. In this case, all the parts in the legend are listed in alphabetical order (a) through (h), while the figure skips part (g).

2. The legend for (a) does not explain the significance of the labels used (arrows, rectangle, and letters), and the legend for (b) does not explain the significance of the rectangles and letters.
3. The legend for (b) explains the arrows but not the white rectangles and letters C-F.
4. The legend for (f) mentions one arrow, but the figure has two.

Solution: The figure parts need to be carefully reviewed against the corresponding legends to make sure that they match; the significance of all labels must be explained; the number or arrows mentioned in the legend must match the number of arrows shown in the figure.

INCORRECT EXAMPLE 4

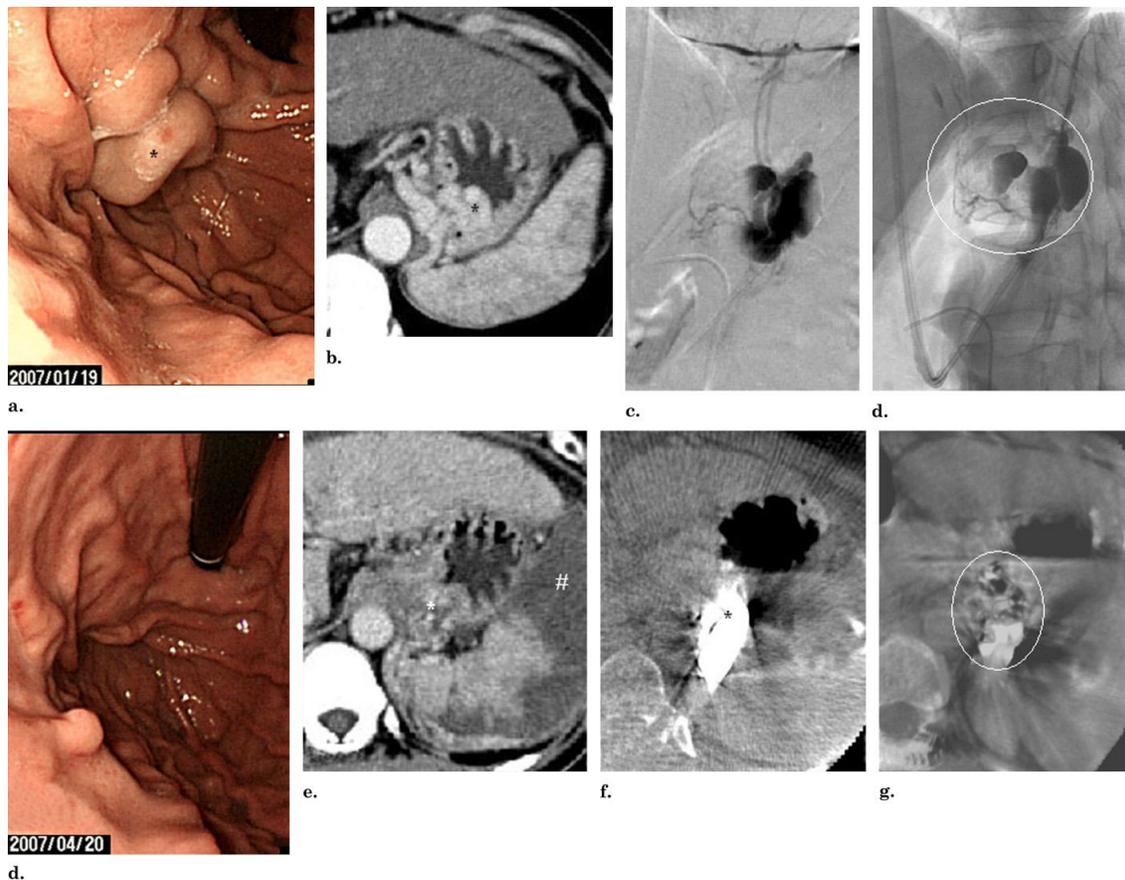


Figure. Case 4. Balloon-occluded retrograde transvenous obliteration using foam polidocanol. Endoscopy (a) and postcontrast CT (b) before balloon-occluded retrograde transvenous obliteration show large gastric varices (asterisk) projecting into the gastric lumen. (c) Balloon-occluded retrograde transvenous venography (left anterior oblique position); 30 mL of contrast media was required to fill the gastric varices, which was confirmed on C-arm CT (d). (e) Balloon-occluded retrograde transvenous obliteration using 6 mL of foam polidocanol (left anterior

oblique position). The light foam is observed to ascend from the more dorsal gastrosplenic shunt into more ventral gastric varices and remains there trapped as an “air pocket” (circle) during balloon-occluded retrograde transvenous obliteration. Foam in the target gastric varices is also apparent on C-arm CT (f). (g) CT 1 week after balloon-occluded retrograde transvenous obliteration reveals the complete thrombosis of the gastric varices (asterisk). Note the splenic infarction (number sign) after partial splenic embolization before balloon-occluded retrograde transvenous obliteration. (h) Endoscopy 3 months after balloon-occluded retrograde transvenous obliteration shows the complete disappearance of the gastric varices. (Available in color online at www.jvir.org.)

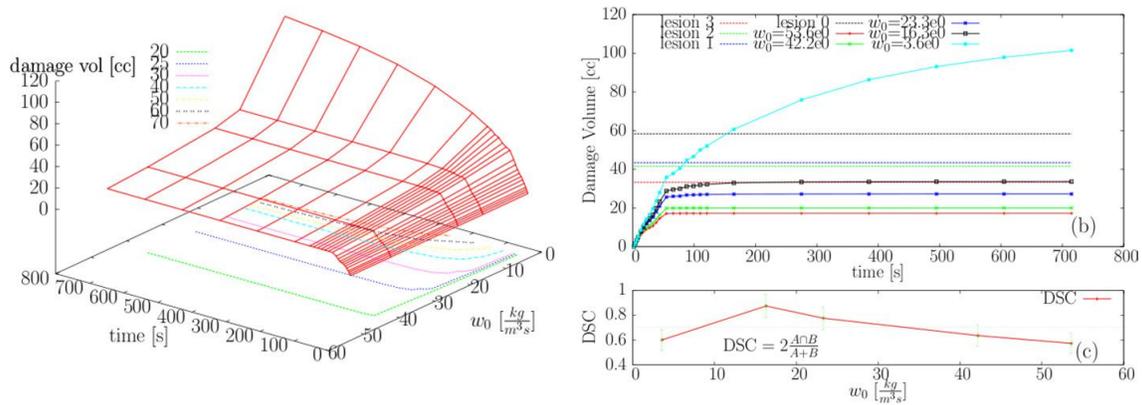
Comment

Problem:

1. In this example, the legend has all the parts in alphabetical order ([a] through [h]), while the figure itself has a duplicated part, part (d).
2. In five legends, the part designators appear at the beginning of the legend—(a), (b), (c), (g), (h)—while in two, they appear at the end—(d) and (f). The lines of demarcation between legends for (d) and (c) and (f) and (e), respectively, are not clear.
3. The legend for part (e) mentions a circle, which is not shown in this figure part.
4. The circles that are shown in parts (d) and (g) are not addressed in the respective legends.
5. The author discusses the * and # signs that are actually shown in part (e) in the legend for part (g).
6. There is a legend for part (h), but no figure part is designated as such because of the duplication of (d). Even so, the white circle in current (g), which should have been (h), is not explained.

Solution: The legends for each part need to be revised correlated with the corresponding figure parts; the circles, asterisks, and number sign need to be explained, and a consistent style needs to be used in the placement of figure part designators in relation to associated legend text.

INCORRECT EXAMPLE 5



a. **b.**
Figure 7. The time evolution of damage volume is shown for each value of perfusion considered. The damage region growth is perfusion limited for $\omega > 16.3$ kg/sec/m³ and has saturated within approximately 2 minutes of the delivery of RF energy. The damage volume of the segmented T1 data is provided as a reference. The damage volume data are provided in cubic centimeters (cc). The DSC correlation between computational prediction and the T1-weighted contrast data shows good agreement.

Comment

Problem: In this example, the author did not designate which part of the legend applies to (a) and which to (b).

Solution: Part designations need to be added in the legend.

INCORRECT EXAMPLE 6

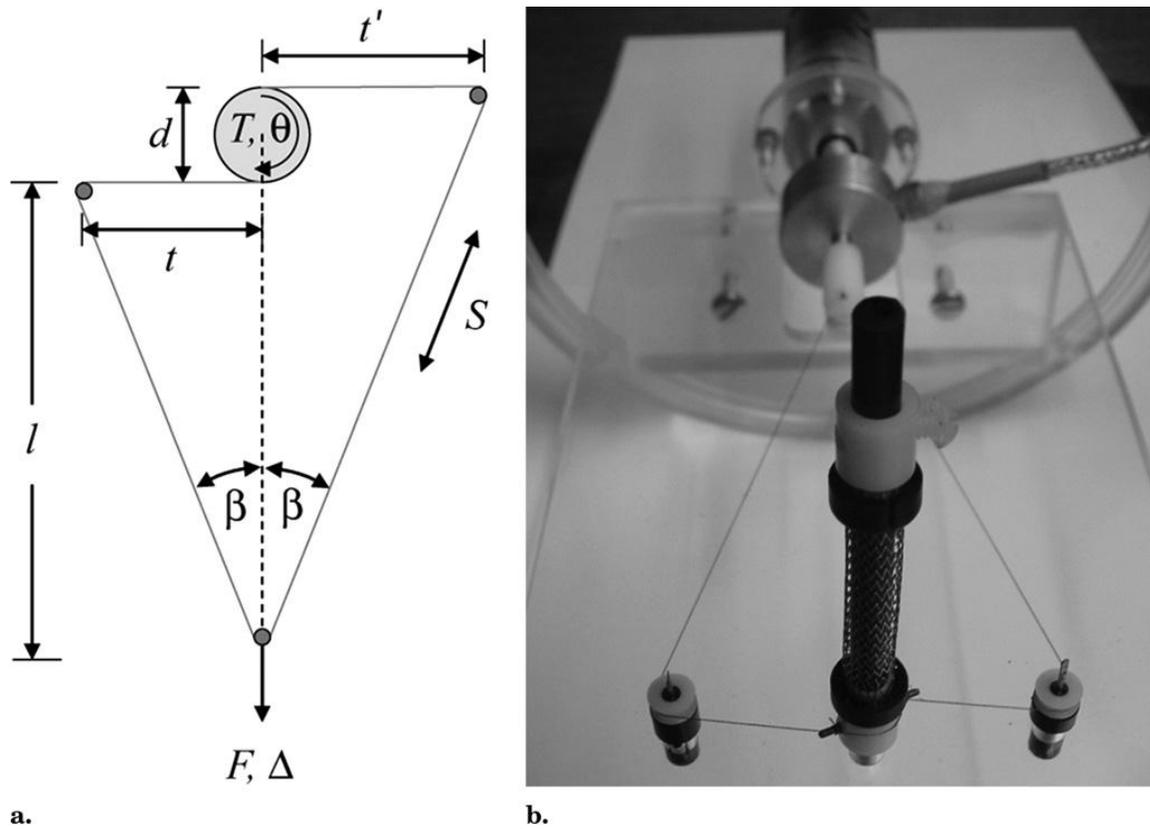


Figure 2. (a) Device for measurement of the effect of torsion on the stent and (b) schematic illustration of the same device showing the dimensional details.

Comment

Problem: In this example, the legends and figure parts are reversed.

Solution: The order of the figure parts should be switched.

INCORRECT EXAMPLE 7

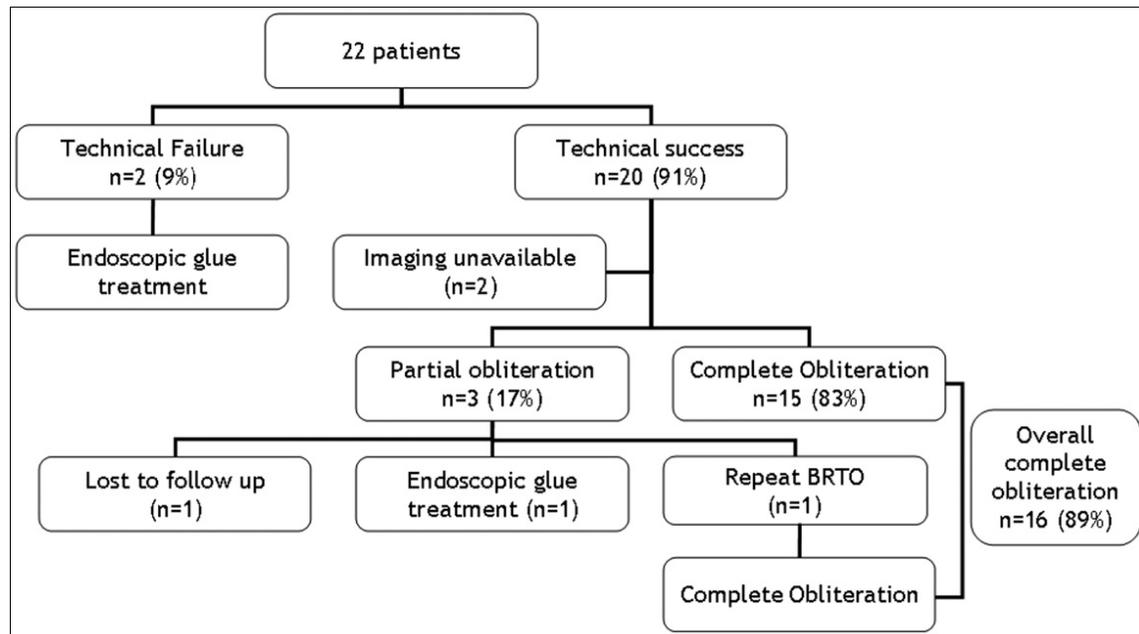


Figure 4. Summary of outcomes.

Comment

Problem:

1. In this example, the caption is too vague because it does not specify what outcomes the figure depicts. Reminder: Figures and tables should be able to stand alone and be understood without immediate reference to the text. Therefore, they need to be specific.
2. In addition, the labels inside the boxes are not consistently styled. In some of them each term has an initial cap, while in others just the first.

Solution:

1. To make the caption specific, the wording could be changed, for instance, to “Outcomes of BRT0 procedure for bleeding gastric varices.”
2. Consistently styled labels are needed—either just the first word in caps or both throughout.

TABLES

TABLE TEXT CITATIONS

We realize that before becoming final, a manuscript goes through several revisions, a process that often involves adding/dropping tables or transposing text. Sometimes text needs to be

adjusted to reflect the addition or deletion of such items and/or the items themselves may need to be renumbered or changed to reflect text revisions.

- Are all the tables submitted with the manuscript referenced in the text and numbered sequentially using Arabic numerals?

TABLE CONTENT VS TEXT CONTENT

- Are tables judiciously used only for occasions where body text would be better and solely represented in a table—that is, are they used only when an at-a-glance, tabular display would convey the desired information in a faster and clearer way?
- Does the material presented within a table (eg, inclusion/exclusion, or demographics) duplicate data provided in the body text? If yes, make the necessary adjustments to avoid redundancy.
- Are any text references to information provided in the table body consistent with the information provided in the table body (eg, are any numbers or percentages given in the text consistent with the numbers and percentages listed in the table body)?

TABLE TITLES

- Do the table titles briefly identify the tables?
- Are the table titles specific enough to make the tables understandable as stand-alone elements?
- Are the titles substantival in form (i.e., titles that do not include verbs, relative clauses, etc.)?

TABLE COLUMN HEADINGS AND ENTRIES

- Does each column have a heading?
- Are column headings substantival in form and parallel grammatically (i.e., structurally similar)?
- Are column entries parallel grammatically (i.e., structurally similar)?
- Are two kinds of information (eg, numbers and percentages) mixed in the same column? If each row lists both, place the percentage in parentheses, and indicate this in the column head. If the two kinds of information do not appear in each row, please restructure the table to assign a specific column to each kind of information.
- Are more than two kinds of information mixed in the same column? If yes, please restructure the table to assign a specific column to each kind of information.

TABLE BODY

If the answer to any of these questions is negative, please revise the table to make the necessary adjustments.

- Does any column include mixed information (eg, numbers and percentages)? If yes, align vertically numbers with numbers and percentages with percentage or separate them in two columns.
- Are column items listed consistently logically and grammatically?
- Are any units of measure given in SI units throughout? If not, please make the necessary conversions.
- Are any symbols stated and listed consistently? Double-check for consistency any letter/number combinations, including hyphens and superscripts (eg, not **Gy-cm2** in one place and **Gy cm²** in another).
- Is any column redundant?
- Are indentations used for hierarchical elements grouped under a hierarchically higher category?
- If quantitative information is used, do totals add up?
- Are periods used if the table column entries are sentences?

TABLE FOOTNOTES

- Are any footnotes needed to explain parts of the table?
- Are all abbreviations used in the table defined here?
- Are appropriate source notes/credits included?
- Do symbols used in the table for footnotable material match the symbols used in the footnotes? For instance, if the letters a, b, c, etc. are used for footnoted information in the table, but other symbols appear in the footnote itself, the inconsistency should be corrected. We recommend that the footnote symbols appear in the following order: *, †, ‡, §. When more symbols are needed, double or triple the basic symbols. (**, ††, etc.)
- Are superscripts used consistently?
- Is capitalization used consistently?

TABLES: CORRECT VS INCORRECT EXAMPLES

TABLE CONTENT VS TEXT CONTENT

There should be no discrepancies between information provided in the table and the text, as in the text below where 92 polyurethane catheters are mentioned in the text, while 94 are listed in the table.

[TEXT] Nine of the 117 silicone catheters (85) showed a breakage, compared with none of the 92 polyurethane catheters.

Table 3. Breakage Compared by Catheter Material

Catheter Type	No.	Breakage	
		No	Yes
Silicone	117	108 (92)	9 (8)
Polyurethane	94	94 (100)	0
Total	211	202	9

Note – Values in parentheses are percentages.

Author: Please make sure that numbers are consistent. Please keep in mind that if the numbers in the tables are changed, the totals need to be adjusted.

TABLE TITLES

SUBSTANTIVAL

Ideally, table titles should be stated in substantival form. The example below illustrates how a table title in sentence form (with verbs) can be converted to a table title in substantival form (without verbs)

Original Table Title	Revised Table Title
----------------------	---------------------

The Operative Procedures **that Were** Performed among the Patients with Bowel Obstructions **Included** the Following

Operative Procedures Performed among the Patients with Bowel Obstructions

Occasionally, verbs cannot be avoided, as in the following title: *Average Ages Sexual Information Was Acquired Compared with the Youngest and Oldest Ages when Subjects Believed that Information Should Be Acquired*

SPECIFIC

Although tables are related to the text in which they are cited, ideally they should be specific enough to also function as stand-alone units. As such they should provide at-a-glance understanding of what the tables are about without recourse to the context in which the text is cited.

In the examples below, context-related information is not specific enough. Therefore, the table title is insufficiently informative. The improved wording demonstrates how nonspecific table titles can be revised to be made more specific using the immediate context in which the tables are cited.

Original Wording	Improved Wording	Rationale
Baseline Patient and Catheter Characteristics	Baseline Patient and Catheter Characteristics for Tenecteplase Study	Original table title is too vague because it does not tell the reader what kind of catheter characteristics are listed.
Characteristics of Patients	Characteristics of Patients with Gastric Varices between April 2006 and January 2009	“Characteristics of Patients” is too vague because it doesn’t tell the reader what kind of patients is discussed.
Details of 243 Patients in Study	Details of Patients with Skeletal Metastases in NBCA Selective Embolization Study” (the number of patients can be placed in the table footnote)	“Details of 243 Patients in Study” is too vague because it doesn’t tell the reader what kind of patients and what kind of study are considered.
Definition of Terms	Definition of Terms Relating to Reduction of Peak Skin Dose	“Definition of Terms” is too vague because the title doesn’t indicate what kind of terms is defined.

TABLE COLUMN HEADINGS AND ENTRIES

EXAMPLE 1

[No table heading provided]

Pelvic inflammatory disease

Gastrointestinal conditions

Appendicitis

Related to gynecology surgery

Comment

Problem: The table column lacks a heading and includes an item that is not grammatically parallel⁴ with the previous items—in this case, the fourth item (highlighted).

Solution: Column heading added and wording of unparallel element revised (in bold):

CLINICAL CONDITION

Pelvic inflammatory disease

Gastrointestinal conditions

Appendicitis

Gynecologic surgery

Note that the table column is substantival in form. Other good table column headings would be “Diagnosis,” “Number,” “Study Subjects at Baseline, %,” etc.

EXAMPLE 2

**OCCUPATIONAL HEALTH AND SAFETY ISSUES AND GOALS FOR THE
DESIGN OF INTERVENTIONAL FLUOROSCOPY EQUIPMENT AND SUITES**

1. Occupational Radiation Dose

⁴ That is, an item that has a grammatical structure inconsistent with the grammatical structure used in the other table items. In the original wording, the 4th item is grammatically inconsistent with the preceding ones.

- a. Reduce or eliminate scatter from the patient

2. Ergonomic Design Issues

- a. The interventionalist's spine needs to be maintained in a neutral position
- b. Ceiling mounted shields/other equipment mounted shields are intrusive and inconvenient
- c. The need for protective eyeglasses should be eliminated
- d. The need for protective thyroid collar should be eliminated
- e. Minimize the weight of, or eliminate, lead aprons
- f. Minimize head rotation for viewing monitors
- g. Greater range of adjustment of table height needed to allow for variability in physical characteristics of the physician
- h. Need to be able to get closer to the patient's side at all points along the patient
- i. The design of fluoroscopic equipment needs to permit reaching supplies and equipment in a manner that minimizes stress on the physician and assistant (eg, twisting backwards or to the side)
- j. Manual aspect of panning the table needs to be improved; the manual effort of moving the table needs to be minimized
- k. Equipment controls need to be ergonomically placed for physicians of differing arm lengths
- l. Consideration of designs that allow physicians to work from a sitting position with no increase in occupational radiation dose
- m. Improved methods for patient transfer on to and off of the procedure table.

3. Safety Hazards

- a. Eliminate tripping hazards
- b. Concern about hitting ceiling-mounted or ceiling-suspended objects

4. System Design Issues

- a. Minimize the number of pieces of equipment that need to be individually positioned (eg, radiation protection shielding, surgical lights, ceiling shield, monitor, etc.). Ideally, these should move automatically with system preprogrammed angles of the C-arm and all other equipment
- b. Ergonomic design of, number of, and difficulty in distinguishing among foot pedals.
- c. Most equipment is designed for optimal use from only one side of the patient-support table; need to be able to work from both sides of the table with equal ease
- d. Architectural design of room layouts, to improve ergonomics and address issues listed above:

Comment

Problem: In this table, column entries are not grammatically parallel (i.e., they are not structurally similar). Thus,

- Some entries have sentence structure, while others do not (eg, 3b, 4b, 4d).
- Imperative sentences are used in some entries (eg, 1a, 2e and 2f), while declarative sentences are used elsewhere (2a-d and 2g-m; 3a but not 3b; and 4a but not 4b-d).
- Modal verbs (eg, “need”/“need(s) to be ... ”/“is needed” and “should”/“should be ...”) are used in some places (eg, 2a, 2c, 2d, 2g-k, second part of 4a, 4c, 4d), while nonmodal verbs are used elsewhere.

Solution: Since the content of this table is goal-oriented, it makes sense to use imperative structures throughout. These structures are commonly used in guideline-centered contexts. Below is the corrected table, which was edited for grammatical parallelism of all the table entries. The entries have also been edited for conciseness. Relative or additional clauses have been eliminated and, in 4a, a footnote was created because the footnoted material looks like a comments relating to table entries. Such comments should not be included in the table body. Finally, periods were added at the end of the sentences (they would not be needed for entries that are not sentences), and the letter *a* was removed from entry under **Occupational Radiation Dose** because it is unnecessary. Numbers and letters in lists are needed only when the entries are elements in a series.

OCCUPATIONAL HEALTH AND SAFETY ISSUES AND GOALS FOR THE DESIGN OF INTERVENTIONAL FLUOROSCOPY EQUIPMENT AND SUITES

1. Occupational Radiation Dose

- a. Reduce or eliminate scatter from the patient.

2. Ergonomic Design Issues

- a. Maintain spine in a neutral position.
- b. Position ceiling-mounted shields/other equipment-mounted shields in less intrusive and inconvenient places.
- c. Eliminate the need for protective eyeglasses.
- d. Eliminate the need for protective thyroid collars.
- e. Minimize the weight of, or eliminate, lead aprons.
- f. Minimize head rotation for viewing monitors.

- g. Acquire/solicit tables with greater range of adjustment of table height to allow for variability in physician's physical characteristics.
- h. Create a space allowing operator to get closer to the patient's side at all points along the patient's body.
- i. Use fluoroscopic equipment designed to permit reaching supplies and equipment that minimizes stress on the physician and assistant (eg, twisting backwards or to the side).
- j. Improve manual aspect of panning the table to minimize manual effort of moving the table.
- k. Place equipment control ergonomically for physicians of differing arm lengths.
- l. Consider designs that allow physicians to work from a sitting position, with no increase in occupational radiation dose.
- m. Consider improving methods for patient transfer on, to, and off of the procedure table.

3. Safety Hazards

- a. Eliminate tripping hazards.
- b. Avoid hitting ceiling-mounted or ceiling-suspended objects.

4. System Design Issues

- a. Minimize the number of pieces of equipment that need to be individually positioned, (eg, radiation protection shielding, surgical lights, ceiling shield, monitor, etc.).*
- b. Consider ergonomic design of, number of, and difficulty in distinguishing among foot pedals.
- c. Consider equipment enabling operator to work from both sides of the table with equal ease.
- d. Consider architectural design of room layouts able to improve ergonomics and address issues listed above.

Footnote

* Ideally, these should move automatically with system-preprogrammed angles of the C-arm and all other equipment.